

बिड दस्तावेज़ / Bid Document

बिड विवरण/Bid Details	
बिड बंद होने की तारीख/समय /Bid End Date/Time	19-06-2026 14:00:00
बिड खुलने की तारीख/समय /Bid Opening Date/Time	19-06-2026 14:30:00
बिड पेशकश वैधता (बंद होने की तारीख से)/Bid Offer Validity (From End Date)	90 (Days)
मंत्रालय/राज्य का नाम/Ministry/State Name	Ministry Of Petroleum And Natural Gas
विभाग का नाम/Department Name	Contract & Procurement
संगठन का नाम/Organisation Name	Bengal Gas Company Limited
कार्यालय का नाम/Office Name	Kolkata
शिकायत निवारण के संपर्क विवरण/ Contact details of Grievance redressal	buycon274.gil.mp@gembuyer.in
कुल मात्रा/Total Quantity	12
वस्तु श्रेणी /Item Category	Online 1200 SCMH EMD Compressor including erection commissionning, transportation, Operation and C , Online 1200 SCMH GED Compressor including erection commissionning, transportation, Operation and
GeMARPTS में खोजी गई स्ट्रिंग्स / Searched Strings used in GeMARPTS	Online 1200 SCMH GED Compressor including erection commissionning , transportation , Operation and Comprehensive maintenance for 5 years
GeMARPTS में खोजा गया परिणाम / Searched Result generated in GeMARPTS	Category not available on GeM for the text string uploaded by the buyer
अधिसूचना के लिए चयनित प्रासंगिक श्रेणियाँ / Relevant Categories selected for notification	- CNG Compressor (HPCL) - Compressed Natural Gas (CNG) Compressor As per HPCL Specification (V2)
एमएसएमई के लिए अनुभव के वर्षों और टर्नओवर से छूट प्रदान की गई है/MSE Relaxation for Years of Experience and Turnover	No
स्टार्टअप के लिए अनुभव के वर्षों और टर्नओवर से छूट प्रदान की गई है /Startup Relaxation for Years of Experience and Turnover	No

बिड विवरण/Bid Details	
विक्रेता से मांगे गए दस्तावेज़/Document required from seller	Experience Criteria,Certificate (Requested in ATC),Additional Doc 1 (Requested in ATC),Additional Doc 2 (Requested in ATC),Additional Doc 3 (Requested in ATC),Additional Doc 4 (Requested in ATC) *In case any bidder is seeking exemption from Experience / Turnover Criteria, the supporting documents to prove his eligibility for exemption must be uploaded for evaluation by the buyer
क्या आप निविदाकारों द्वारा अपलोड किए गए दस्तावेज़ों को निविदा में भाग लेने वाले सभी निविदाकारों को दिखाना चाहते हैं? संदर्भ मेनू है/Do you want to show documents uploaded by bidders to all bidders participated in bid?	No
बिड लगाने की समय सीमा स्वतः नहीं बढ़ाने के लिए आवश्यक बिड की संख्या। / Minimum number of bids required to disable automatic bid extension	1
दिनों की संख्या, जिनके लिए बिड लगाने की समय-सीमा बढ़ाई जाएगी। / Number of days for which Bid would be auto-extended	3
ऑटो एक्सटेंशन अधिकतम कितनी बार किया जाना है। / Number of Auto Extension count	1
बिड से रिवर्स नीलामी सक्रिय किया/Bid to RA enabled	No
बिड का प्रकार/Type of Bid	Two Packet Bid
प्राथमिक उत्पाद श्रेणी/Primary product category	Online 1200 SCMH EMD Compressor including erection commissioning, transportation, Operation and C
तकनीकी मूल्यांकन के दौरान तकनीकी स्पष्टीकरण हेतु अनुमत समय /Time allowed for Technical Clarifications during technical evaluation	7 Days
निरीक्षण आवश्यक (सूचीबद्ध निरीक्षण प्राधिकरण /जेम के साथ पूर्व पंजीकृत एजेंसियों द्वारा)/Inspection Required (By Empanelled Inspection Authority / Agencies pre-registered with GeM)	No
Payment Timelines	Payments shall be made to the Seller within 30 days of issue of consignee receipt-cum-acceptance certificate (CRAC) and on-line submission of bills (This is in supersession of 10 days time as provided in clause 12 of GeM GTC)
मूल्यांकन पद्धति/Evaluation Method	Item wise evaluation
मध्यस्थता खंड/Arbitration Clause	No
सुलह खंड/Mediation Clause	No

ईएमडी विवरण/EMD Detail

एडवाइजरी बैंक/Advisory Bank	PUNJAB NATIONAL BANK

Schedule 1 ईएमडी राशि/EMD Amount (In INR)	2000000
Schedule 2 ईएमडी राशि/EMD Amount (In INR)	504099

ईपीबीजी विवरण /ePBG Detail

एडवाइजरी बैंक/Advisory Bank	PUNJAB NATIONAL BANK
ईपीबीजी प्रतिशत (%) /ePBG Percentage(%)	5.00
ईपीबीजी की आवश्यक अवधि (माह) /Duration of ePBG required (Months).	87

(a). जेम की शर्तों के अनुसार ईएमडी छूट के इच्छुक बिडर को संबंधित कैटेगरी के लिए बिड के साथ वैध समर्थित दस्तावेज प्रस्तुत करने है। एमएसई कैटेगरी के अंतर्गत केवल वस्तुओं के लिए विनिर्माता तथा सेवाओं के लिए सेवा प्रदाता ईएमडी से छूट के पात्र हैं। व्यापारियों को इस नीति के दायरे से बाहर रखा गया है।/EMD EXEMPTION: The bidder seeking EMD exemption, must submit the valid supporting document for the relevant category as per GeM GTC with the bid. Under MSE category, only manufacturers for goods and Service Providers for Services are eligible for exemption from EMD. Traders are excluded from the purview of this Policy.

(b). The EMD Amount will be applicable for each schedule/group selected during Bid creation.

(c). ईएमडी और संपादन जमानत राशि, जहां यह लागू होती है, लाभार्थी के पक्ष में होनी चाहिए। / EMD & Performance security should be in favour of Beneficiary, wherever it is applicable.

लाभार्थी /Beneficiary :

BENGAL GAS COMPANY LIMITED

1st Floor, Block A, Finance Centre, CBD, Action Area - II B, Newtown, North 24 Parganas, Kolkata, West Bengal, India, Pin: 700161

(Bengal Gas Company Limited)

विभाजन/Splitting

विभाजन/Splitting Applied	Yes
बोलीदाताओं की अधिकतम संख्या, जिनके बीच ऑर्डर विभाजित किया जा सकता है। / Maximum No. Of Bidders Amongst Which Order May Be Split	2
विभाजन मानदंड इस बात पर आधारित है कि कौन सी क्वांटिटी को वितरित किया जाएगा / Split Criteria based on which quantity will be distributed	As per Tender Terms

एमआईआई खरीद वरीयता / MII Purchase Preference

एमआईआई खरीद वरीयता / MII Purchase Preference	Yes

मेक इन इंडिया विक्रेताओं को खरीद में प्राथमिकता, यदि उनका मूल्य L1+X% तक की सीमा में है / Purchase Preference to MII sellers available upto price within L1+X%	20
मेक इन इंडिया खरीद में प्राथमिकता के लिए बिड की मात्रा का अधिकतम प्रतिशत / Maximum Percentage of Bid quantity for MII purchase preference	50
सार्वजनिक खरीद (मेक-इन-इंडिया को प्राथमिकता) आदेश 2017 के अनुसार केवल क्लास 1/क्लास 2 के स्थानीय आपूर्तिकर्ताओं को ही भागीदारी की अनुमति है दिनांक 16.09.2020 (समय-समय पर संशोधित एवं लागू) / Allow participation only from Class 1/Class 2 local suppliers as per the Public procurement(Preference to Make-in-india) order 2017 date 16.09.2020(as amended and applicable time to time)	Yes, in compliance with the MII ORDER : DPIIT Order(as amended and applicable time to time)

एमएसई खरीद वरीयता/MSE Purchase Preference

एमएसई खरीद वरीयता/MSE Purchase Preference	Yes
सूक्ष्म और लघु उद्यम मूल उपकरण निर्माताओं/सेवा प्रदाता को खरीद में प्राथमिकता, यदि उनका मूल्य L1+X% / Purchase Preference to MSE OEMs/ Service Provider available upto price within L1+X%	15
सूक्ष्म और लघु उद्यम मूल उपकरण निर्माता/सेवा प्रदाता को खरीद में प्राथमिकता के लिए बिड की मात्रा का अधिकतम प्रतिशत / Percentage of Bid quantity/amount for MSE OEMs/ Service Provider Purchase preference	25

ट्रेड्स भुगतान संबंधी विवरण/TReDS Payment Details

This Bid provides for Trade Receivables Discounting System (TReDS) as Preferred mode of payment. For MSME sellers, payments may be processed through a TReDS exchange in which the Buyer is registered, subject to applicable policy and regulatory guidelines. Accordingly, sellers intending to avail payment through TReDS are required to be registered with at least one TReDS exchange in which the buyer is registered.

1. Preference to Make In India products (For bids < 200 Crore):Preference shall be given to Class 1 local supplier as defined in public procurement (Preference to Make in India), Order 2017 as amended from time to time and its subsequent Orders/Notifications issued by concerned Nodal Ministry for specific Goods/Products. The minimum local content to qualify as a Class 1 local supplier is denoted in the bid document. If the bidder wants to avail the Purchase preference, the bidder must upload a certificate from the OEM regarding the percentage of the local content and the details of locations at which the local value addition is made along with their bid, failing which no purchase preference shall be granted. In case the bid value is more than Rs 10 Crore, the declaration relating to percentage of local content shall be certified by the statutory auditor or cost auditor, if the OEM is a company and by a practicing cost accountant or a chartered accountant for OEMs other than companies as per the Public Procurement (preference to Make-in -India) order 2017 dated 04.06.2020. Only Class-I and Class-II Local suppliers as per MII order dated 4.6.2020 will be eligible to bid. Non - Local suppliers as per MII order dated 04.06.2020 are not eligible to participate. However, eligible micro and small enterprises will be allowed to participate .The buyers are advised to refer the OM No.F.1/4/2021-PPD dated 18.05.2023.

[OM_No.1_4_2021_PPD_dated_18.05.2023](#) for compliance of Concurrent application of Public Procurement Policy

for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017 and its subsequent Orders/Notifications issued by concerned Ministry .Benefits of MSE will be allowed only if seller/service provider is validated on-line in GeM profile as well as validated and approved by Buyer after evaluation of documents submitted.

2. Purchase preference to Micro and Small Enterprises (MSEs): Purchase preference will be given to MSEs having valid Udyam Certificate and whose credentials are validated online through Udyam Registration portal as defined in Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012 dated 23.03.2012 issued by Ministry of Micro, Small and Medium Enterprises and its subsequent Orders/Notifications issued by concerned Ministry. If the bidder wants to avail themselves of the Purchase preference, the bidder must be the manufacturer / OEM of the offered product on GeM. In respect of bid for Services, the bidder must be the Service provider of the offered Service. Traders are excluded from the purview of Public Procurement Policy for Micro and Small Enterprises and hence resellers offering products manufactured by some other OEM are not eligible for any purchase preference. Relevant documentary evidence in this regard shall be uploaded along with the bid in respect of the offered product or service, and Buyer will decide eligibility for purchase preference based on documentary evidence submitted in case of product bids, whereas in case of services the eligibility is automatically validated. If L-1 is not an MSE and MSE Seller (s) has / have quoted price within L-1+ 15% (Selected by Buyer) of margin of purchase preference /price band defined in relevant policy, such MSE Seller shall be given opportunity to match L-1 price and contract will be awarded for 25% (selected by Buyer) percentage of total quantity. The buyers are advised to refer the [OM No.1 4 2021 PPD dated 18.05.2023](#) for compliance of Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017. Benefits of MSE will be allowed only if seller is validated on-line in GeM profile as well as validated and approved by Buyer after evaluation of documents submitted.

3. Estimated Bid Value indicated above is being declared solely for the purpose of guidance on EMD amount and for determining the Eligibility Criteria related to Turn Over, Past Performance and Project / Past Experience etc. This has no relevance or bearing on the price to be quoted by the bidders and is also not going to have any impact on bid participation. Also this is not going to be used as a criteria in determining reasonableness of quoted prices which would be determined by the buyer based on its own assessment of reasonableness and based on competitive prices received in Bid / RA process.

Pre Bid Detail(s)

मूल्य भिन्नता खंड दस्तावेज़/Pre-Bid Date and Time	प्री-बिड स्थान/Pre-Bid Venue
02-06-2026 12:00:00	Virtual Mode through MS -Teams and same may be joined through following link: https://teams.microsoft.com/meet/42724974737103?p=A1YZ282jVIWRsWUGz4 Meeting ID: 427 249 747 371 03 Passcode: ha3kG25B

मूल्यांकन विधि(मदवार मूल्यांकन विधि) / Evaluation Method (Item Wise Evaluation Method)

Contract will be awarded schedule wise and the determination of L1 will be done separately for each schedule. The details of item-consignee combination covered under each schedule are as under:

मूल्यांकन अनुसूचियां / Evaluation Schedules	वस्तु/श्रेणी / Item/Category	मात्रा / Quantity
Schedule 1	Online 1200 Scmh Emd Compressor Including Erection Commissioning, Transportation, Operation And C	11
Schedule 2	Online 1200 Scmh Ged Compressor Including Erection Commissioning, Transportation, Operation And	1

Online 1200 SCMH EMD Compressor Including Erection Commissioning, Transportation, Operation And C (11 set)

(क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक/Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively)

तकनीकी विशिष्टियाँ /Technical Specifications

क्रेता विशिष्टि दस्तावेज़ /Buyer Specification Document	Download

परेषिती/रिपोर्टिंग अधिकारी तथा मात्रा/Consignees/Reporting Officer and Quantity

क्र.सं./S.N o.	परेषिती/रिपोर्टिंग अधिकारी /Consignee Reporting/Officer	पता/Address	मात्रा /Quantity	डिलीवरी के दिन/Delivery Days
1	Sourabh Sarkar	700161,1st Floor, Block A, Finance Centre, CBD Action Area - II B, Newtown, North 24 Parganas, Kolkata, West Bengal, India,700161	11	2190

Online 1200 SCMH GED Compressor Including Erection Commissioning, Transportation, Operation And (1 set)

(क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक/Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively)

तकनीकी विशिष्टियाँ /Technical Specifications

क्रेता विशिष्टि दस्तावेज़ /Buyer Specification Document	Download

परेषिती/रिपोर्टिंग अधिकारी तथा मात्रा/Consignees/Reporting Officer and Quantity

क्र.सं./S.N o.	परेषिती/रिपोर्टिंग अधिकारी /Consignee Reporting/Officer	पता/Address	मात्रा /Quantity	डिलीवरी के दिन/Delivery Days
1	Sourabh Sarkar	700161,1st Floor, Block A, Finance Centre, CBD Action Area - II B, Newtown, North 24 Parganas, Kolkata, West Bengal, India,700161	1	2190

क्रेता द्वारा जोड़ी गई बिड की विशेष शर्तें/Buyer Added Bid Specific Terms and Conditions**1. Buyer Added Bid Specific ATC**

Buyer Added text based ATC clauses

The ARC Contract is for 2 Years with 5 Years AMC (Including 1 Year Warranty).

Due to lack of GeM Functionality, Delivery Days reflects as 2190 days, however the actual deliver plus AM C will be 2 Years (ARC) + 5 Years (AMC) = 7 years (2556 days).

In the event that terms and conditions stipulated in the GeM Bid Document deviate from terms and conditions stipulated in the ATC document, the ATC document shall prevail.

2. Buyer Added Bid Specific ATC

Buyer uploaded ATC document [Click here to view the file.](#)

अस्वीकरण/Disclaimer

The Additional Terms and Conditions (ATC) have been incorporated by the Buyer after approval of their Competent Authority. The Buyer is solely responsible for the impact of these clauses on the bidding process, its outcome, and consequences thereof including any restriction arising in the bidding process due to these ATCs and including the modification of technical specifications and / or terms and conditions governing the bid. All representations / grievances pertaining to the ATC clauses shall be raised with the buyer organization directly and not with GeM. If any of the clause(s) is/are incorporated by the Buyer regarding the following, the bid & resultant contract shall be treated as null & void. Further, GeM reserves the right, at its sole discretion, to cancel the bid forthwith, without issuance of any prior notice or intimation :-

1. Publishing Custom / BOQ bids for items for which regular GeM categories are available (unless such Custom / BOQ item is bunched with the major regular product Category Item).
2. Mandating procurement of / from specific Brand / Make / Model / Manufacturer / Dealer except in case of Single Bid / Proprietary Article Certificate (PAC) Buying.
3. Inclusion of disqualification criteria related to suspension of seller / service provider, where such suspension period has already expired.
4. Mandating submission of documents in physical form as a pre-requisite to qualify bidders.
5. Publishing bids on GeM for procurement of works.
6. Procurement of Goods by creating a Service bid on GeM & vice-versa.
7. Seeking sample with bid or approval of samples during bid evaluation process. However, trial / sample, as the case may be, shall be permitted in cases where trial / sample are allowed as per approved and published procurement policy of the Buyers' controlling Ministry / Department / State / Public Sector Enterprises Headquarters. If there is any violation of trial / sample clause with regard to approved policy of the Buyers' Ministry / Department / State / Public Sector Enterprises Headquarters, then this is to be determined and redressed by the concerned Buyer Organisation only.
8. Seeking experience from specific organization / department / institute only or from foreign / export experience.
9. Creating bid for items from incorrect categories.
10. Reference of conditions published on any external site or reference to external documents/clauses.
11. Asking for any Tender fee / Bid Participation fee, as the case may be.
12. Buyer added ATC Clauses which are in contravention of clauses defined in bid detail section, including specifications, EMD Detail, ePBG Detail and MII and MSE Purchase Preference sections of the bid, unless otherwise allowed by the applicable GeM GTC.
13. Any ATC clause in contravention with GeM GTC Clause 4 (xiii) (h) will be invalid. In case of multiple L1 bidders against a service bid, the buyer shall place the Contract by selection of a bidder amongst the L-1 bidders through a Random Algorithm executed by GeM system.
14. In a category based bid, adding additional items, through buyer added, additional scope of work/ additional terms and conditions/or any other document. If buyer needs more items along with the main item, the same must be added through bunching category based items or by bunching custom catalogues or bunching a BoQ with the main category based item, the same must not be done through ATC or Scope of Work.

Further, if any seller has any objection/grievance against these additional clauses or otherwise on any aspect of this bid, they can raise their representation against the same by using the Representation window provided in

the bid details field in Seller dashboard after logging in as a seller. Buyer is duty bound to reply to all such representations and would not be allowed to open bids if he fails to reply to such representations.

All GeM Sellers/Service Providers shall ensure full compliance with all applicable labour laws, including the provisions, rules, schemes and guidelines under the four Labour Codes i.e. the Code on Wages, 2019; the Industrial Relations Code, 2020; the Occupational Safety, Health and Working Conditions Code, 2020; and the Code on Social Security, 2020 as and when notified and brought into force by the Government of India.

For all provisions of the Labour Codes that are pending operationalisation through rules, schemes or notifications, the corresponding provisions of the pre-existing labour enactments (such as The Minimum Wages Act, 1948, The Payment of Wages Act, 1936, The Payment of Bonus Act, 1965, The Equal Remuneration Act, 1976, The Payment of Gratuity Act, 1972, etc. and relevant State Rules) shall continue to remain applicable.

The Seller/ Service Providers shall, therefore, be responsible for ensuring compliance under:

- **All notified and enforceable provisions of the new Labour Codes as mentioned hereinabove; and**
- **All operative provisions of the erstwhile Labour Laws until their complete substitution.**

All obligations relating to wages, social security, safety, working conditions, industrial relations etc. and any other statutory requirements shall be strictly met by the Seller/ Service Provider. Any non-compliance shall constitute a breach of the contract and shall entitle the Buyer to take appropriate action in accordance with the contract and applicable law.

This Bid is governed by the General Terms and Conditions, conditions stipulated in Bid and Service Level Agreement specific to the Service, as the case may be, as provided in the Marketplace.

However, in case of Service, if any condition specified in General Terms and Conditions is contradicted by the conditions stipulated in Service Level Agreement specific to said Service, then it will over-ride the conditions in the General Terms and Conditions.

[यह बिड सामान्य शर्तों के अंतर्गत भी शासित है /This Bid is also governed by the General Terms and Conditions](#)

जेम की सामान्य शर्तों के खंड 26 के संदर्भ में भारत के साथ भूमि सीमा साझा करने वाले देश के बिडर से खरीद पर प्रतिबंध के संबंध में भारत के साथ भूमि सीमा साझा करने वाले देश का कोई भी बिडर इस निविदा में बिड देने के लिए तभी पात्र होगा जब वह बिड देने वाला सक्षम प्राधिकारी के पास पंजीकृत हो। बिड में भाग लेते समय बिडर को इसका अनुपालन करना होगा और कोई भी गलत घोषणा किए जाने व इसका अनुपालन न करने पर अनुबंध को तत्काल समाप्त करने और कानून के अनुसार आगे की कानूनी कार्यवाई का आधार होगा।/In terms of GeM GTC clause 26 regarding Restrictions on procurement from a bidder of a country which shares a land border with India, any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. While participating in bid, Bidder has to undertake compliance of this and any false declaration and non-compliance of this would be a ground for immediate termination of the contract and further legal action in accordance with the laws.

---धन्यवाद/Thank You---



बंगाल गैस कंपनी लिमिटेड BENGAL GAS COMPANY LIMITED
(गेल एवम जीसीजीएससीएल का संयुक्त उद्यम) (A JV Company of GAIL and GCGSCL)



बंगाल गैस कंपनी लिमिटेड

(गेल एवम जीसीजीएससीएल का संयुक्त उद्यम)

सी आई एन : U40300WB2019GOI229618

पहला तल, ब्लॉक - ए, वित्त केंद्र, सी बी डी, एक्शन एरिया -II बी, न्यू टाउन, कोलकाता -700161

Bengal Gas Company Limited

(A JV of GAIL and GCGSCL)

CIN: U40300WB2019GOI229618

1st Floor, Block A, Finance Centre, CBD, Action Area – II B, Newtown, North 24
Parganas,
Kolkata, West Bengal, India, Pin: 700161

TENDER DOCUMENT FOR

**ARC FOR SUPPLY, INSTALLATION AND COMMISSIONING 1200SCMH
ONLINE COMPRESSOR (EMD & GAS) FOR A PERIOD OF 2 YEARS
ALONG WITH CAMC FOR FIVE YEARS (INCLUDING 1 YEAR
WARRANTY PERIOD)**

**GEM BIDDING DOCUMENT NO: [GEM/2026/B/7578512](#)
TENDER THROUGH GEM-PORTAL**

Contact Person:

- Shri Sourabh Sarkar, Head (C&P)
Ph.: 033 23248161, Email: hodcnp@bgcl.co.in





CONTENT OF BIDDING DOCUMENT

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बंगाल गैस कंपनी लिमिटेड BENGAL GAS COMPANY LIMITED
(गेल एवम जीसीजीएससीएल का संयुक्त उद्यम) (A JV Company of GAIL and GCGSCL)

SECTION-I

INVITATION FOR BID (IFB)



SECTION-I
“INVITATION FOR BID (IFB)”

Ref No: [GEM/2026/B/7578512](#)

Date: 29.05.2026

To,

[PROSPECTIVE BIDDERS]

SUB: ARC FOR SUPPLY, INSTALLATION AND COMMISSIONING 1200SCMH ONLINE COMPRESSOR(EMD & GAS) FOR A PERIOD OF 2 YEARS ALONG WITH CAMC FOR FIVE YEARS (INCLUDING 1 YEAR WARRANTY PERIOD)

Dear Sir/Madam,

- 1.0 Bengal Gas Company Limited, Kolkata [having Registered Office at 1st Floor, Block A, Finance Centre, CBD, Action Area – II B, Newtown, North 24 Parganas, Kolkata, West Bengal, India, Pin: 700161] CIN: U40300WB2019GOI229618 invites bids from bidders for the subject supply/job, in complete accordance with the following details and enclosed Tender Documents.
- 2.0 The brief details of the tender are as under:

(A)	BRIEF SCOPE OF SERVICE /JOB	ARC FOR SUPPLY, INSTALLATION AND COMMISSIONING 1200SCMH ONLINE COMPRESSOR(EMD & GAS) FOR A PERIOD OF 2 YEARS ALONG WITH CAMC FOR FIVE YEARS (INCLUDING 1 YEAR WARRANTY PERIOD)		
(B)	GEM BID NO. & DATE	GEM/2026/B/7578512 DATE 29.05.2026		
(C)	CONTRACT PERIOD	2 YEARS ALONG WITH CAMC FOR FIVE YEARS (INCLUDING 1 YEAR WARRANTY PERIOD)		
D)	BID SECURITY / EARNEST MONEY DEPOSIT (EMD)	APPLICABLE	☒	
		NOT APPLICABLE	☐	
		Item Description	EMD/ Bid Security Amount (Rs.)	
		ONLINE 1200 SCMH EMD COMPRESSOR	20,00,000/-	
		ONLINE 1200 SCMH GAS ENGINE DRIVEN COMPRESSOR	5,04,099/-	
		Note: In case bidder quotes for more than one item, the requirement of bid security amount shall be on cumulative basis for the quoted items. In case of short fall in submitted bid security, complete offer shall be liable for rejection. (Refer clause no.16 of ITB)		
(D1)	DECLARATION FOR BID SECURITY	Bidders who are allowed for exemption as per clause no. 16.8 are required to submit Declaration for Bid Security in bid as per proforma at Form F-2A.		



बंगाल गैस कंपनी लिमिटेड BENGAL GAS COMPANY LIMITED
(गेल एवम जीसीजीएससीएल का संयुक्त उद्यम) (A JV Company of GAIL and GCGSCL)

(E)	DATE, TIME & VENUE OF PRE-BID MEETING	Date: 02.06.2026 Time: 12:00 Hours Venue: Virtual Mode through MS –Teams and same may be joined through following link: https://teams.microsoft.com/meet/42724974737103?p=A1YZ282jVIWRsWUGz4 Meeting ID: 427 249 747 371 03 Passcode: ha3kG25B Download Teams Join on the web
(F)	CONTACT DETAILS OF TENDER DEALING OFFICER	Name : Shri Sourabh Sarkar Designation: Head (C&P) Phone No.: 033 2324 8161 BSe-mail : hodcnp@bgcl.co.in
(G)	DEALING BGCL'S OFFICE ADDRESS	BENGAL GAS COMPANY LIMITED 1st Floor, Block A, Finance Centre, CBD, Action Area – II B, Newtown, North 24 Parganas, Kolkata, West Bengal, India, Pin: 700161 Phone: 033 2324 8161

In case of the days specified above happens to be a holiday in BGCL, the next working day shall be implied w.r.t bid opening (mentioned in GeM bid) and pre-bid meeting etc.

- 3.0 Bids must be submitted strictly in accordance with Clause No. 11 of ITB (Section-III). The IFB is an integral and inseparable part of the bidding document.
- 4.0 Bid must be submitted only on GeM portal (<https://gem.gov.in>). Further, the following documents in addition to uploading the bid on GeM portal shall also be submitted in Original (in physical form) within 7 (seven) days from the bid due date provided the scanned copies of the same have been uploaded in GeM portal by the bidder along with bid within the due date and time to the address mentioned in Bidding Data Sheet (BDS) [Annexure-II to Section-III]: -
 - i) EMD/Bid Security (if applicable)/Declaration for Bid Security
 - ii) Power of Attorney
 - iii) Integrity Pact
- 5.0 Bidder(s) are advised to quote strictly as per terms and conditions of the tender documents and not to stipulate any deviations/exceptions.
- 6.0 Any bidder, who meets the Bid Evaluation Criteria and wishes to quote against this Tender Document, may download the complete Tender Document along with its amendment(s) if any from GeM portal and submit their Bid complete in all respect as per terms & conditions of Tender Document on or before the Due Date & Time of Bid Submission.
- 7.0 Bid(s) received from bidders to whom tender/information regarding this Tender Document has been issued as well as offers received from the bidder(s) by downloading Tender Document from GeM portal shall be taken into consideration for evaluation & award provided that the Bidder is found responsive subject to provisions contained in Clause No. 2 of ITB (Section-III).



The Tender Document calls for offers on single point “Sole Bidder” responsibility basis (except where Consortium bid is allowed pursuant to clause no. 3.0 of ITB) and in total compliance of Scope of Works as specified in Tender Document.

- 8.0 Any revision, clarification, corrigendum, time extension, etc. to this Tender Document will be hosted on the GeM portal only. Bidders are requested to visit the GeM portal regularly to keep themselves updated.
- 9.0 All bidders including those who are not willing to submit their bid are required to submit F-6 (Acknowledgement cum Consent letter) duly filled within 7 days from the date of receipt of tender information.
- 10.0 Request for Quotation (RFQ), if any shall also form an integral part of the Tender Document.
- 11.0 This document shall be read in conjunction with GeM bid document no. GEM/2026/B/7578512.
- 12.0 **Bidders are required to update their GST registration details on GeM portal to enable evaluation of bids after considering ITC of GST, wherever applicable. However, evaluation of bids will be based on the confirmations & documents submitted by the bidder in their bid irrespective of the status/evaluation on GeM portal. BGCL’s decision in this regard shall be final.**
- 13.0 **As per GEM policy/guidelines, MSE bidders have to update their status in their Profile and declare whether they are participating as MSE on GeM Portal (including updating their status in Profile) while submitting the bid on GeM tender. Further, MSE are required to upload relevant documents in bid as per provision of tender. However, evaluation and applicability of EMD exemption and purchase preference policy will be based on the confirmations & documents submitted by the bidder in their bid irrespective of selection/option made on GeM portal.**
- 14.0 **Bidders are required to select the applicable purchase preference (i.e. preference category) option while submitting the bid on GeM portal. However, evaluation and applicability of purchase preference policy will be based on the confirmations & documents submitted by the bidder in the their bid irrespective of selection/option made on GeM portal.**

This is not an Order.

For & on behalf of

Bengal Gas Company Limited

(Authorized Signatory)

Name : Sourabh Sarkar

Designation : Head (C&P)

E-mail ID : hodcnp@bgcl.co.in

Contact No. : 033 2324 8161



बंगाल गैस कंपनी लिमिटेड BENGAL GAS COMPANY LIMITED
(गेल एवम जीसीजीएससीएल का संयुक्त उद्यम) (A JV Company of GAIL and GCGSCL)

DO NOT OPEN - THIS IS A QUOTATION

GeM Bid No. :

Description :

Due Date& Time :

From:

To:

.....	

(To be pasted on the envelope containing Physical documents)

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बंगाल गैस कंपनी लिमिटेड BENGAL GAS COMPANY LIMITED
(गैल एवम जीसीजीएससीएल का संयुक्त उद्यम) (A JV Company of GAIL and GCGSCL)

SECTION-II

BID EVALUATION

CRITERIA & EVALUATION

METHODOLOGY



SECTION-II

BID EVALUATION CRITERIA & EVALUATION METHODOLOGY

[A] BID EVALUATION CRITERIA-TECHNICAL

[A.1] 1200 SCMh ELECTRIC MOTOR DRIVEN COMPRESSOR

A.1.1 The bidder shall be a regular manufacturer/ packager and supplier of Electric Motor driven reciprocating compressor packages handling natural gas with single point responsibility.

A.1.2 The bidder, in the last seven (07) years from the due date of submission of bid, shall have engineered, manufactured/ packaged, tested and supplied to customers from the proposed facility of manufacturing / packaging, at least **ONE number 600 SCMh or more capacity Electric Motor driven compressor packages and with discharge pressure of 250 kg/cm²** and individually compressor package should have been **operating satisfactorily in the field for a period of 4000 hours** as on the bid due date.

[A.2] 1200 SCMh GAS ENGINE DRIVEN COMPRESSOR

A.2.1 The bidder shall be a regular manufacturer/ packager and supplier of gas engine driven reciprocating compressor packages handling natural gas with single point responsibility.

A.2.2 The bidder, in the last seven (07) years from the due date of submission of bid, shall have engineered, manufactured/ packaged, tested and supplied to customers from the proposed facility of manufacturing / packaging, **at least one number 600 SCMh or more capacity gas engine driven compressor package with discharge pressure of 250 kg/cm²** and individually compressor package should have been operating satisfactorily in the field for a period of minimum 4000 hours as on the bid due date.

Note: For Bidders quoting for more than one part, the BEC value (i.e., Minimum order value Requirement to Qualify) will be on cumulative basis in addition to satisfying the condition pertaining to specifications mentioned at A.1 & A.2 above.

[A.3] One manufacturer can quote through one supplier and a supplier shall offer product of only one manufacturer for particular type of CNG Compressor with reference to instant tender. The bid shall be liable for rejection in case of change of the proposed manufacturer after the submission of offer.

[B] BID EVALUATION CRITERIA (BEC) – FINANCIAL

[B.1] AVERAGE ANNUAL TURNOVER

The minimum Average Annual Financial Turnover during the three preceding financial years of the bidder should be as under:

Item No.	Description	Minimum Average Annual Turnover Requirement (in Rs)
1	Online 1200 SCMh EMD Compressor	3,35,81,856 /-
2	Online 1200 SCMh Gas Engine Driven Compressor	63,01,235 /-

Note to B.1: Average Annual Turnover: Preceding 3 financial years mentioned in aforesaid BEC refer to immediate 3 preceding financial years wherever the closing date of the bid is



after 30th Sept. of the relevant financial year. In case the tenders having the due date for submission of bid up to 30th September of the relevant financial year and audited financial results of the immediate 3 preceding financial years are not available, the audited financial results of the 3 years immediately prior to that will be considered. Wherever the closing date of the bid is after 30th Sept. of the relevant financial year, bidder has to compulsorily submit the audited financial results for the immediate 3 preceding financial years. Further, bidder has to submit F-10 accordingly.

In case the date of constitution/incorporation of the bidder is less than 3 years old, the average turnover in respect of the completed financial years after the date of constitution/incorporation shall be taken into account for minimum Average Annual Financial Turnover criteria.

[B.2] NET WORTH

Net worth of the bidder should be positive as per the immediate preceding audited financial statement of financial year. For the purpose of net worth for this tender, the same shall be as defined in “Format for Chartered Accountant Certificate/ Certified Public Accountant (CPA) for Financial Capability of the Bidder” enclosed in the tender document.

Note to B.2: In case the tenders having the bid closing date up to 30th September of the relevant financial year, and audited financial results of the immediate preceding financial year is not available, in such case the audited financial results of the year immediately prior to that year will be considered as last financial year for Net worth calculation. Wherever the closing date of the bid is after 30th Sept. of the relevant financial year, bidder has to compulsorily submit the audited financial results for the immediate preceding financial years. Further, bidder has to submit F-10 accordingly.

[B.3] WORKING CAPITAL

The Minimum Working Capital of the bidder as per the last audited financial statement should be as under:

Item No.	Description	Working Capital
1	Online 1200 SCMH EMD Compressor	67,16,371 /-
2	Online 1200 SCMH Gas Engine Driven Compressor	12,60,247 /-

Note to B.3: In case the tenders having the bid closing date up to 30th September of the relevant financial year, and audited financial results of the immediate preceding financial year is not available, in such case the audited financial results of the year immediately prior to that year will be considered as last financial year for Working Capital calculation. Wherever the closing date of the bid is after 30th Sept. of the relevant financial year, bidder has to compulsorily submit the audited financial results for the immediate preceding financial years. Further, bidder has to submit F-10 accordingly.

If the bidder's working capital is negative or inadequate, the bidder shall submit a letter (in prescribed format) from their bank having net worth not less than Rs.100 Crores, confirming the availability of line of credit for at least working capital requirement as stated above. The original document for “Line of credit” should be submitted along with the other physical



documents required as per tender conditions or in response to commercial query failing which bid shall be rejected.

[B.4] Bidder who intend to qualify for more than one part shall meet the qualifying Average Annual Turnover & Working Capital requirement on cumulative basis for the quoted parts.

[C] **RELAXATION OF PRIOR EXPERIENCE FOR STARTUPS (AS DEFINED IN GAZETTE NOTIFICATION NO. D.L-33004/99 DATED 18.02.2016 AND 23.05.2017 OF MINISTRY OF COMMERCE AND INDUSTRY), AS AMENDMED TIME TO TIME**

Not Applicable

[D] **General**

D.1 Joint Venture/Consortium bids are **not acceptable**.

D.2 A job executed by a bidder for its own plant / project cannot be considered as experience for the purpose of meeting the BEC requirement of the tender. However, jobs executed for Subsidiary / Fellow subsidiary / Holding company will be considered as experience for the purpose of meeting BEC subject to submission of tax paid invoice(s) duly certified by statutory auditor of the bidder towards payments of statutory taxes in support of the job executed for the Subsidiary / Fellow subsidiary / Holding company. Such Bidder should submit these documents in addition to the documents specified to meet BEC.

D.3 In case the bidder is executing a rate contract which is still running and the quantity executed till one day prior to the due date of submission is equal to or more than the minimum prescribed quantity as mentioned in the BEC (at A.1(ii) & A.2 above), such experience will also be taken into consideration provided that the bidder has submitted satisfactory execution certificate to this effect issued by the end user/owner/ Authorized consultant.

D.4 Experience of bidder acquired as a subcontractor can be accepted against submission of certificate from end user by such bidder along with other specified documents related to the respective work order.

D.5 Only documents (Purchase Order, Completion certificate, Execution Certificate etc.) which have been referred/ specified in the bid shall be considered in reply to queries during evaluation of Bids. After submission of bid, only related shortfall documents will be asked for in TQ/CQ and considered for evaluation. For example, if the bidder has submitted a contract without its completion/ performance certificate, the certificate will be asked for and considered. However, no new reference/ PO/WO/LOA is to be submitted by bidder in response to TQ/CQ so as to qualify and such documents will not be considered by BGCL for evaluation of Bid. Any new document submitted against representation option provided on GeM portal shall also be not considered for re-valuation of bid.

In GeM, there is provision for representation against disqualification of bidder within the specified period after disqualifying the bidder against GeM Bid. Disqualified bidders should not upload new/additional documents against representation on GeM as the same shall not be evaluated.



Any shortfall information / documents on the Audited Annual Report / Financial Statement of the Bidder and/or line of credit for working capital issued on or before the final bid due date can only be sought against BGCL query. Any information/ documents issued post final bid due date shall not be considered for evaluation.

- D.6** Apart from above, Bidder must submit all other relevant documents/ information as specified in the Scope of Work/SCC for Technical Evaluation of bid or specified elsewhere in the Tender Document, towards proof of its responsiveness.

[E] Exchange rate for Conversion of Currency for evaluation of documents submitted by bidders for BEC which are in other currency than specified in BEC shall be as follows:

- (a) **BEC (Technical Criteria):** Bill Selling (foreign exchange) Rate of State Bank of India as prevailing on the date of award of contract submitted by bidder.
- (b) **BEC (Financial/Turnover Criteria):** The average of Bill Selling (foreign exchange) Rate of State Bank of India as prevailing on the First date and Last date of the respective Financial Year.
- (c) In case, the SBI Selling rate is not available as on the date of conversion as specified above for respective cases, the exchange rate for conversion of currency shall be taken from the internet, such as:

<https://www.xe.com/currencyconverter>

<https://economictimes.indiatimes.com/markets/forex/currency-converter>

<https://www.oanda.com/currency/converter>

[F] Documents/Documentary Evidence required to be provided (upload in GeM-portal) by participating bidder along with the un-priced bid to qualify/ meet the requirements of BEC:

BEC Clause no.	Description	Documents required for qualification
A	Documents Required-Technical Criteria	
A.1 & A.2	Proof of Manufacturer / Packager [A.1.1 & A.2.1]	Copy of Factory registration certificate / Excise registration certificate / NSIC certificate indicating as Manufacturer / Packager of CNG compressor in scope or any other document evidencing the bidder as manufacturer / packager of CNG Compressor Copy of PESO approval and factory registration certificate / Excise registration certificate / NSIC certificate indicating as Manufacturer of CNG Compressor in scope or any other document evidencing the bidder as manufacturer of CNG Compressor. Documents must be duly certified / attested by a Chartered Engineer and Notary Public with legible Stamp.
	Experience criteria For the bidder	Copies of a) Detailed Letter of Award/Purchase Order / Contract



BEC Clause no.	Description	Documents required for qualification
	(Quantity) [A.1.2 & A.2.2]	with SOR. b) Inspection Release Note/Completion Certificate issued by End user/Owner (or their consultant who has been duly authorized by them to issue such certificate), indicating year of supply, no. of packages; only after completion of work/supply in all respect. Documents must be duly certified / attested by a Chartered Engineer and Notary Public with legible Stamp.
A.3	Undertaking as per BEC	Bidder in their letter head shall furnish the declaration Documents must be duly certified / attested by a Chartered Engineer and Notary Public with legible Stamp.
B	Documents Required-Financial Criteria	
B.1, B.2 & B.3	Average Annual Turn-over, Net Worth, Working Capital	Bidder(s) shall submit copy of Audited Annual Financial Statement [Balance Sheet and Profit & Loss Account Statement] along with Audit Report of three (03) preceding Financial Year(s) along with un-price bid. Submitted Documents must be duly certified / attested by a Chartered Accountant and Notary Public with legible Stamp. Further, Bidder shall submit “Details of financial capability of Bidder” in prescribed format (F-10) duly signed and stamped by a chartered accountant/ Certified Public Accountant (CPA).
D	General	
D.2	Jobs executed for Subsidiary / Fellow subsidiary/ Holding company	Tax paid invoice(s) duly certified by statutory auditor of the bidder towards payments of statutory tax in support of the job executed for Subsidiary/ Fellow subsidiary/ Holding company.
D.3	In case of rate contract	Bidder to comply the documents as mentioned under A.1 & A.2 above. Regarding execution, bidder to submit satisfactory work execution certificate issued by End User/Owner/Authorized Consultant. Documents must be duly certified / attested by a Chartered Engineer and Notary Public with legible Stamp.

[G] AUTHENTICATION OF DOCUMENTS TO BE SUBMITTED IN SUPPORT OF BID EVALUATION CRITERIA:

(i) Technical Criteria of BEC:



All documents submitted in support of Technical Criteria of BEC shall be duly certified/ attested by Chartered Engineer & Notary public with legible stamp

(ii) Financial/ Turnover Criteria of BEC:

Bidder shall submit “Details of financial capability of Bidder” in prescribed format (F-10) duly signed and stamped by a chartered accountant/ Certified Public Accountant (CPA).

Further, copy of audited annual financial statements submitted in bid shall be duly certified/ attested by chartered accountant/ Certified Public Accountant (CPA) and Notary Public with legible stamp.

Practicing Chartered Accountants shall generate Unique Document Identification Number (UDIN) for all certificates issued by them as per provisions of tender document.

H. ELIGIBILITY CRITERIA IN CASE BID IS SUBMITTED ON THE BASIS OF TECHNICAL EXPERIENCE OF FOREIGN BASED ANOTHER COMPANY (SUPPORTING COMPANY) WHICH HOLDS MORE THAN FIFTY PERCENT OF THE PAID UP SHARE CAPITAL OF THE BIDDER COMPANY OR VICE VERSA:

Offers of those bidders (not under consortium arrangement) who themselves do not meet the technical experience criteria as stipulated in the BEC and are quoting based on the experience of Foreign based another company (Supporting Company) can also be considered. In such case the supporting company should hold more than fifty percent of the paid up share capital of the bidding company or vice versa.

However, the supporting company should on its own meet the technical experience as stipulated in the BEC and should not rely on any other company or through any other arrangement like Technical collaboration agreement.

In that case as the bidding company is dependent upon the technical experience of another company with a view to ensure commitment and involvement of the companies involved for successful execution of the contract, the participating bidder should enclose the following Agreements/ Guarantees/ Undertakings along with the techno-commercial bid:

- (i) An Agreement (*as per format enclosed at Appendix- A1 to Section II*) between the bidder and the supporting company.
- (ii) Guarantee (*as per format enclosed at Appendix- A2 to Section II*) by the supporting company to BGCL for fulfilling the obligation under the Agreement along with certificate issued by Company Secretary as per *Appendix- A2A to Section II*.
- (iii) Undertaking by Supporting Company to provide a Performance Bank Guarantee (*as per format and instructions enclosed at Appendix- A3 to Section II*), equivalent to 50% of the value of the PBG which is to be submitted by the bidding company, in case of being the successful bidder.



In cases where foreign based supporting company does not have Permanent Establishment in India as per Indian Income Tax Act, the bidding company can furnish Performance Bank Guarantee for an amount which is sum of PBG amount to be submitted by the bidder and additional PBG amount required to be submitted by the supporting company subject to the condition that supporting company have 100% paid up equity share capital of the bidder either directly or through intermediate subsidiaries or vice versa.

In such case bidding company shall furnish an undertaking that their foreign based supporting company is not having any Permanent Establishment in India in terms of Income Tax Act of India.

- (iv) Undertaking from the supporting company to the effect that in addition to invoking the PBG submitted by the bidding company, the PBG provided by supporting company shall be invoked by BGCL due to non-performance of the bidding company.

Note:

1. In case Supporting Company fails to submit Bank Guarantee as per (iii) above, EMD/SD submitted by the bidder shall be forfeited/Action will be taken as per Bid Security declaration.
2. The Financial BEC of tender is to be met by bidder on their own.
3. The Supporting Company shall meet conditions of 'Eligible Bidder', as per clause no. 2 of Section-III (ITB).
4. The clause I as below shall be applicable to above supporting company also.

I. Apart from above, Bidder must submit all other relevant documents/ information as specified in the Scope of Work/SCC for Technical Evaluation of bid or specified elsewhere in the Tender Document, towards proof of its responsiveness.

[J] PROCUREMENT FROM A BIDDER WHICH SHARES A LAND BORDER WITH INDIA

- 1 OM no. 7/10/2021-PPD (1) dated 23.02.2023, Department of Expenditure, Ministry of Finance, Govt. of India refers. The same are available at website <https://doe.gov.in/procurement-policy-division>
- 2 Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. For details of competent authority refer to Annexure I of Order (Public Procurement no. 4) dated 23.02.2023.

Further, any bidder (including bidder from India) having specified Transfer of Technology (ToT) arrangement with an entity from a country which shares a land border with India, shall also require to be registered with the same competent authority.



Further the above will not apply to bidders from those countries (even if sharing a land border with India) to which the Government of India has extended lines of credit or in which the Government of India is engaged in development projects. Updated lists of countries to which lines of credit have been extended or in which development projects are undertaken are given in the website of the Ministry of External Affairs, Govt. of India.

- 3 **"Bidder"** (including the term 'tenderer', 'consultant' 'vendor' or 'service provider' in certain contexts) **for purpose of this provision** means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency, branch or office controlled by such person, participating in a procurement process.
- 4 **"Bidder from a country which shares a land border with India"** for the purpose of this:
- An entity incorporated, established or registered in such a country; or
 - A subsidiary of an entity incorporated, established or registered in such a country; or
 - An entity substantially controlled through entities incorporated, established or registered in such a country; or
 - An entity whose beneficial owner is situated in such a country; or
 - An Indian (or other) agent of such an entity; or
 - A natural person who is a citizen of such a country; or
 - A consortium or joint venture where any member of the consortium or joint venture falls under any of the above

5. **"Beneficial owner"** for the purpose of above (4) will be as under:

- In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person(s), has a controlling ownership interest or who exercises control through other means.

Explanation—

- "Controlling ownership interest" means ownership of, or entitlement to, more than twenty-five per cent of shares or capital or profits of the company;
 - "Control" shall include the right to appoint the majority of the directors or to control the management or policy decisions, including by virtue of their shareholding or management rights or shareholders agreements or voting agreements;
- In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;
 - In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or



more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;

iv) Where no natural person is identified under (i) or (ii) or (iii) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;

v) In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

6. "Agent" for the purpose of this Order is a person employed to do any act for another, or to represent another in dealings with third persons

Note:

- (i) A person who procures and supplies finished goods from an entity from a country which shares a land border with India will, regardless of the nature of his legal or commercial relationship with the producer of the goods, be deemed to be an Agent for the purpose of this Order.
- (ii) However, a bidder who only procures raw material, components etc. from an entity from a country which shares a land border with India and then manufactures or converts them into other goods will not be treated as an Agent.

7. "Transfer of Technology" means dissemination and transfer of all forms of commercially usable knowledge such as transfer of know-how, skills, technical expertise, designs, processes and procedures, trade secrets, which enables the acquirer of such technology to perform activities using the transferred technology independently. (Matters of interpretation of this term shall be referred to

the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade, and the interpretation of the Committee shall be final.)

8. "Specified Transfer of Technology" means a transfer of technology in the sectors and/ or technologies, specified at Schedule-I, II & 3 of this order.

9. SUBMISSION OF CERTIFICATE IN BIDS:

Bidder shall submit a certificate in this regard as Form-I-A.

For cases falling under the category of Transfer of Technology, Bidder shall submit a certificate in this regard as Form-I-B.

If such certificate given by a bidder whose bid is accepted is found to be false, this would be a ground for immediate rejection of the bid/termination and further action as per "Procedure for Action in case of Corrupt/Fraudulent/ Collusive / Coercive Practices" of tender document.

10. The registration, wherever applicable, should be valid at the time of submission of bids and at the time of acceptance of bids. In respect of supply otherwise than by tender, registration should be valid at the time of placement of order. If the bidder



was validly registered at the time of acceptance / placement of order, registration shall not be a relevant consideration during contract execution.

11. PROVISION TO BE IN WORKS CONTRACTS, INCLUDING TURNKEY CONTRACTS:

The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority. The definition of "contractor from a country which shares a land border with India" shall be as in Para 4 herein above. A Certificate to this regard is to be submitted by bidder is placed at Form-II.

[Note: Procurement of raw material, components, etc. does not constitute sub- contracting]

[K] **BID EVALUATION METHODOLOGY:**

1. The price bid of only techno-commercially acceptable bidders shall be opened and will be considered for evaluation.
2. Price bid shall be evaluated on **INDIVIDUAL ITEM** basis (including GST) in GeM Portal.
3. The evaluated price of bidders shall include the following:
 - (a) FOT price quoted by the bidder including
 - (i) Packing, forwarding, Insurance, unloading, stacking, cost of Inspection by Third Party Agency, mandatory spares etc. (wherever applicable) and GST on each component and raw materials) -For supply items of MR/SOR.
 - (ii) Inland transportation price up to Delivery location and other costs incidental to delivery of goods (inclusive of GST) for the respective item.
 - (iii) Charges for incidental services like Installation & Commissioning, transportation/retransportation, services for operation, repair & comprehensive maintenance etc., as per MR/ SOR, including GST (CGST & SGST/UTGST or IGST) on these services
 - (iv) Other loading, if any, as specified in Tender Document.
4. A bidder may quote for all or any items (s) of the Price Schedule. Bidder quoting for any item shall have to quote for entire quantity of that item otherwise their bid will not be considered. Evaluation of the Price Bids shall be carried out ITEM WISE (i.e. separately for Schedule Title as per GeM Portal - **Procurement of EMD Compressor, Procurement of Gas Engine Driven Compressor** lowest cost to BGCL (L-1 offer) basis i.e. considering total quoted price for all components including GST as per schedules in GeM.

Based on the evaluation of techno-commercially qualified bidders, the contract will be awarded to Item wise L-1 bidder.

5. Purchase preference as per PPP-2012 & PPP-MII policy as mentioned in ITB of tender document shall be applicable considering Items being tendered as split-able. Matching with



L1 Price is to be done by way of uniform percentage reduction on each quoted SOR of the items for which price matching is offered.

6. In case of a tie at the lowest bid (L1) position between two or more bidders, then contract will be awarded to the agency amongst the L1-bidders through a Random Algorithm run by GeM system.

[L] DISTRIBUTION OF WORK/ METHODOLOGY OF AWARD OF WORK

BGCL intends to distribute the tendered scope of work among two (02) techno- commercially acceptable bidders as per Table 1 or Table 2 below, as the case be for each

SOR Items A.1 - **Procurement of EMD Compressor**

SOR Items A.2 **Procurement of Gas Engine Driven Compressor.**

Bidder will quote total cost of supply, installation and 5 years' AMC. Payment will be made as per payment terms of SCC.

Complete work shall be awarded to Two (02) Techno-commercially accepted bidders as per Table 1 or Table 2 below, as the case be:

Table 1: Case where no bidder is eligible for purchase preference as per conditions of PPP-MII or PPP - 2012 Policy given in tender.

S. No.	Bidder	Online 1200 SCMH EMD Compressor (SOR Sl. No. A.1.1, A.1.1.a & A.1.1.b, B)	Online 1200 SCMH Gas Engine Driven Compressor (SOR Sl. No. A.2.1 & A.2.1.a, C)
		Quantity (Nos.)	Quantity (Nos)
1	L1 Bidder	6	1
2	L2 Bidder*	5	0

(*): Upon matching with Price as quoted by L1 bidder.

Table 2: Case where bidder is eligible for purchase preference as per conditions of PPP- MII or PPP 2012 Policy given in tender.

S.	Bidder	Online 1200 SCMH EMD Compressor (SOR Sl. No A.1.)	Online 1200 SCMH Gas Engine Driven Compressor (SOR Sl. No. A.2)
		Quantity (Nos.)	Quantity (Nos)
1	Class I local supplier Eligible for purchase preference as per conditions of PPP-MII Policy or PPP-2012 (*)	6	1
2	L1	5	0

(*): Upon matching with Price as quoted by L1 bidder.

The contract shall be treated as 'divisible contract' for application of Purchase preference i.e. quantity in a part shall not be further divisible.



NOTE:

- i. All the Techno-commercially acceptable bidders other than L-1 (irrespective of their ranks) shall be asked to confirm matching their price with L1 bidder in a single step to save time and order shall be placed (in addition to L1 bidder) on one (01) bidder who has agreed to match the L1 price, in order of their ranking, while giving preference to bidder eligible for purchase preference as per conditions of PPP-MII Policy & PPP 2012.
- ii. Matching with L1 Price is to be done by way of uniform percentage reduction on respective bidder's quoted Price. Upon matching, all the rates of individual groups quoted by respective bidder shall be reduced by the uniform percentage reduction, to match their price with L1 price. While distributing the work as per above, quantities shall be rounded off suitably (wherever required) and the decision of BGCL shall be final in this regard.
- iii. In case total scope could not be awarded by following the above methodology, the balance left over work shall be re-tendered, if required.

[M] RESTRICTING PARTICIPATION OF NCLT REFERRED BIDDERS:

- i. Offer from the following type of bidders / members of consortium will not be considered:
 - a) Bidders who are undergoing insolvency resolution process or liquidation or bankruptcy proceeding under Insolvency and Bankruptcy Code, 2016 (Code).
 - b) Bidders whose resolution process or liquidation or bankruptcy proceeding is initiated under the Code at any stage of evaluation of bid.
- ii. It will be responsibility of the bidder/contractor/vendor to inform BGCL within 15 (Fifteen) days from the date of order of insolvency resolution process or liquidation or bankruptcy proceeding passed by the Adjudicating Authority namely National Company Law Tribunal (NCLT) or Debt Recovery Tribunal (DRT) under the Code.
- iii. If bidder fails to share the information regarding their status of insolvency resolution process or liquidation or bankruptcy proceeding in their bid or at any latter stage, their offer is liable to be rejected by BGCL/PMC. iv. BGCL reserve the right to cancel / terminate the contract without any liability on the part of BGCL immediately on the commencement of insolvency resolution process or liquidation or bankruptcy proceeding of any party under the contract. A declaration in this regard shall be furnished by the bidder as per proforma enclosed as Annexure-II to Section-II.



UNDERTAKING ON LETTERHEAD

To,

M/s BENGAL GAS COMPANY LIMITED

SUB:

TENDER NO:

REF: OM No. 7/10/2021-PPD (1) dated 23.02.2023 of Dept. of Expenditure, Ministry of Finance, Government of India

(<https://doe.gov.in/procurement-policy-division>)

Dear Sir

We, M/s _____ (Name of Bidder), have read the clause regarding restrictions on Procurement from a Bidder of a country which shares a land border with India as mentioned in the tender document in line with the above referred guidelines dated 23.02.2023 for Procurement from a bidder which shares a land border with India and We certify that

- (i) Not from such a country []
- (ii) If from such a country, has been registered []
with the Competent Authority.
(Evidence of valid registration by the
Competent Authority shall be attached)

(Bidder is to tick appropriate option (✓) above).

We hereby certify that bidder M/s _____ (***Name of Bidder***) fulfills all requirements in this regard and is eligible to be considered against the tender.

Place:

[Signature of Authorized Signatory of Bidder]

Date:

Name:

Designation:

Seal:



UNDERTAKING ON LETTERHEAD
(Applicable in case of Transfer of Technology cases only)

To,

M/s BENGAL GAS COMPANY LIMITED

SUB:

TENDER NO:

REF: OM No. 7/10/2021-PPD (1) dated 23.02.2023 of Dept. of Expenditure, Ministry of Finance, Government of India

(<https://doe.gov.in/procurement-policy-division>)

Dear Sir

We, M/s _____ (Name of Bidder), have read the clause regarding restrictions on Procurement from a Bidder of a Country having Transfer of Technology (ToT) arrangement as mentioned in the tender document in line with the above referred guidelines dated 23.02.2023 for Procurement from a bidder which shares a land border with India and We certify that

- (i) Does not have ToT with such a country []
- (ii) If having ToT from such a country, has been registered []
with the Competent Authority.
(Evidence of valid registration by the
Competent Authority shall be attached)

(Bidder is to tick appropriate option (✓) above).

We hereby certify that bidder M/s _____ (***Name of Bidder***) fulfills all requirements in this regard and is eligible to be considered against the tender.

Place:

[Signature of Authorized Signatory of Bidder]

Date:

Name:

Designation:

Seal:



Form-II

**CERTIFICATE FOR TENDERS FOR WORKS INVOLVING POSSIBILITY OF
SUB-CONTRACTING**

To,

M/s BENGAL GAS COMPANY LIMITED

SUB:

TENDER NO:

Dear Sir

We have read the clause regarding Provisions for Procurement from a Bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries; we certify that, bidder M/s _____ (*Name of Bidder*) is:

- (i) not from such a country []
- (ii) if from such a country, has been registered []
with the Competent Authority.
(Evidence of valid registration by the
Competent Authority shall be attached)

(Bidder is to tick appropriate option (✓) above).

We further certify that bidder M/s _____ (*Name of Bidder*) will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority.

We hereby certify that bidder M/s _____ (*Name of Bidder*) fulfills all requirements in this regard and is eligible to be considered.

Place:

Date:

[Signature of Authorized Signatory of Bidder]

Name:

Designation:

Seal:



बंगाल गैस कंपनी लिमिटेड BENGAL GAS COMPANY LIMITED
(गेल एवम जीसीजीएससीएल का संयुक्त उद्यम) (A JV Company of GAIL and GCGSCL)

Annexure-I to Section-II

Format for Undertaking from TPIA
(on TPIA letter head duly stamped & signed)

Ref.:

Date :

To,

BENGAL GAS COMPANY LIMITED

SUB:

TENDER NO:

Dear Sir,

Subject: Verification and certification of documents pertaining to Technical Bid Evaluation Criteria (BEC)

Ref: Tender no. for

M/s. having Registered office at.....intend to participate in above referred tender of Bengal Gas Company Limited having registered office at 1st Floor, Block A, Finance Centre, CBD, Action Area – II B, Newtown, North 24 Parganas, Kolkata, West Bengal, India, Pin: 700161

The tender conditions stipulates that the BIDDER shall submit Documents pertaining to Technical Bid Evaluation Criteria (BEC) duly verified and certified by designated independent Third Party Inspection Agency.

In this regard, this is to certify that copies of documents pertaining to Technical Bid Evaluation Criteria (BEC) submitted to us by the bidder have been verified and certified by us with the originals and found to be genuine. We have signed and stamped on the copies of all the verified and certified documents.

(Signature of a person duly authorized to Sign on behalf of the TPIA)

(Seal of the Company)

Name:

Contact No.....



Appendix-A1 to Section II

FORMAT OF AGREEMENT TO BE EXECUTED BETWEEN BIDDER AND THEIR FOREIGN BASED SUPPORTING COMPANY ON INDIAN NON-JUDICIAL STAMP PAPER OF REQUISITE VALUE DULY NOTARIZED.

This agreement made this ____ day of ____ month ____ year by and between M/s. _____ (Fill in Bidder's full name, constitution and registered office address) _____ hereinafter referred to as bidder on the first part and M/s. _____ (Fill in full name, constitution and registered office address company which hold more than fifty percent of the paid up share capital of the bidding company or vice versa) hereinafter referred to as "Supporting Company" of the second part.

Whereas

M/s. Bengal Gas Company Limited (hereinafter referred to as BGCL) has invited offers vide their tender No. _____ for _____ and M/s. _____ (Bidder) intends to bid against the said tender and desires to have technical support of M/s. _____ [Supporting Company]

And whereas Supporting Company represents that they have gone through and understood the requirements of the subject tender and are capable and committed to provide the services as required by the bidder for successful execution of the contract, if awarded to the bidder.

Now, it is hereby agreed to by and between the parties as follows:

- a) M/s. _____ (Bidder) will submit an offer to BGCL for the full scope of work as envisaged in the tender document as a main bidder and liaise BGCL directly for any clarifications etc. in this context.
- b) M/s. _____ [Supporting Company] undertakes to provide technical support and expertise, expert manpower and project management including financial support, if so required, to the bidder to discharge its obligations as per the Scope of Work of the tender / Contract for which offer has been made by the bidder and accepted the BGCL.
- c) The Bidder/ Supporting Company holds more than 50% paid up equity capital of the Supporting Company/ Bidder.
- d) This agreement will remain valid till the validity of bidder's offer to BGCL including extension if any and till satisfactory performance of the contract, the same is awarded by BGCL to the bidder.
- e) Supporting Company undertakes that this agreement shall remain enforceable even if their stake in Bidder is diminished during the execution of works under the contract between the Bidder and BGCL.
- f) The bidder shall have the overall responsibility of satisfactory execution of the contract awarded by BGCL, however without prejudice to any rights that BGCL might have against the Supporting Company.



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(गैल एवम जीसीजीएससीएल का संयुक्त उद्यम) (A JV Company of GAIL and GCGSCL)

g) It is further agreed that, if contract pursuant to Supporting Company shall be jointly and severally responsible to BGCL for the performance of works during contract period and for the satisfactory execution of the contract, and for all the consequences for non-performance thereof.

In witness whereof the parties hereto have executed this agreement on the date mentioned above.

For and on behalf of
(Bidder)
M/s.

Witness:

- 1)
- 2)

For and on behalf of
(Supporting Company)
M/s.

Witness:

- 1)
- 2)



Appendix-A2 to Section II

GUARANTEE BY THE FOREIGN BASED SUPPORTING COMPANY/ GUARANTOR
(to be executed on plain paper)

THIS DEED OF GUARANTEE executed at this day of by M/s (mention complete name) a company duly established and existing under the laws of (insert country), having its Registered Office at hereinafter called “the Guarantor and/ or the Supporting Company” which expression shall, unless excluded by or repugnant to the subject or context thereof, be deemed to include its successors and permitted assignees.

FOR

M/s (bidder) a company duly established and existing under the laws of (insert country), having its Registered Office at hereinafter called the “Bidder” which expression shall, unless excluded by or repugnant to the subject or context thereof, be deemed to include its successors and permitted assignees.

TOWARDS

M/s Bengal Gas Company Limited, a company duly registered under the law of India having its Registered Office at 1st Floor, Block A, Finance Centre, CBD, Action Area – II B, Newtown, North 24 Parganas, Kolkata, West Bengal, India, Pin: 700161, India, and having Purchase center at hereinafter called “BGCL” which expression shall unless excluded by or repugnant to the context thereof, be deemed to include its successor and assignees

WHEREAS BGCL has invited tender number for on, and the bidder has submitted its bid number..... in response to the above mentioned tender invited by BGCL.

AND WHEREAS the bidder/ Guarantor Company holds more than 50% paid up equity capital of the Supporting Company/ Bidder.

AND WHEREAS one of the condition for acceptance of Bidder’s bid against said tender is that in case the bidder is seeking to qualify upon the technical credentials of its Guarantor Company, then the bidder shall arrange a guarantee from its Guarantor Company guaranteeing due and satisfactory performance of the work covered under the said tender including any change therein as may be deemed appropriate by the BGCL at any stage.

The Guarantor represents that they have gone through and understood the requirement of the above said tender and are capable of and committed to provide technical and such other supports as may be required by the Bidder for successful execution of the same.

The Bidder and the Guarantor have entered into an agreement dated as per which the Guarantor shall be providing technical, financial and such other supports as may be necessary for performance of the work under the tender, if the contract is awarded to the Bidder.

Accordingly, at the request of the Bidder and in consideration of and as a requirement for the BGCL to enter into agreement(s) with the Bidder, the Guarantor hereby guarantees and undertakes that upon award of Contract to Bidder against bid number, made by the Bidder under tender number.....:



1. The Guarantor unconditionally agrees that in case of non-performance by the Bidder of any of its obligations in any respect, the Guarantor shall, immediately on receipt of notice of demand by the BGCL, take up the job without any demur or objection, in continuation and without loss of time and without any cost to the BGCL and duly perform the obligations of the Bidder to the satisfaction of the BGCL.
2. The Guarantor agrees that the Guarantee contained herein shall remain valid till the satisfactory execution and completion of the work (including discharge of the warranty obligations) awarded to the Bidder.
3. The Guarantor shall be jointly and severally responsible to BGCL for satisfactory performance of works during contract period and for the satisfactory execution of the contract, and for all consequences for non-performance thereof.
4. The liability of the Guarantor, under the Guarantee, is limited of the Bidder for non-performance under the contract entered between BGCL and the Bidder. This will, however, be in addition to the forfeiture of the Performance and Advance Guarantees furnished by the Bidder.
5. The Guarantor agrees to execute a Corporate Guarantee in favour of BGCL, guaranteeing the performance of obligations by the Bidder, in case the Contract is awarded to the Bidder by BGCL.
6. The Guarantor represents that this Guarantee has been issued after due observance of the appropriate laws in force in India. The Guarantor hereby undertakes that the Guarantor shall obtain and maintain in full force and effect all the governmental and other approvals and consents that are necessary and do all other acts and things necessary or desirable in connection therewith or for the due performance of the Guarantor's obligations towards BGCL.
7. Any dispute arising out of or in connection with this contract, including any question regarding its existence, validity or termination, shall be referred to and finally resolved by arbitration. It is further agreed that Claims by and against the Guarantor, the Bidder and BGCL under the different contract to be entered pursuant to their relationship can be brought under a single reference and there shall be no bar on the consolidation of such proceedings before the same arbitral tribunal. The governing law shall be the laws of India and seat of arbitration shall be Kolkata, India. The language of arbitration shall be English.
8. The Guarantor hereby declares and represents that this Guarantee has been given without any undue influence or coercion, and that the Guarantor has fully understood the implications of the same.
9. In case of award of contract to the bidder, the Guarantor shall provide Performance Bank Security to BGCL, equivalent to 50% of the value of Performance Bank Security to be submitted by the bidding company, in the prescribed format within 15 days from the date of Fax of Acceptance, as guarantee for performance by the bidder/Supplier. The Guarantor hereby expressly agrees that if in the opinion of BGCL, the Bidder / Supplier has failed to perform its obligations under the contract in any manner, BGCL shall have unfettered right to invoke the said Bank guarantee. The guarantor hereby agrees that decision of BGCL about performance of the bidder



/ Supplier shall be final and shall not be questioned by the Guarantor. Guarantor shall have no objection to invocation of the Performance Bank Guarantee submitted by the Guarantor

OR

(applicable, subject to meeting the conditions stipulated in BEC in respect of additional Performance Bank Security)

In case of award of contract to the bidder, the bidder on behalf of the Guarantor shall provide additional Performance Bank Security to BGCL, equivalent to 50% of the value of Performance bank Security to be submitted by the bidding company, in the prescribed format within 15 days from the date of Fax of Acceptance, as guarantee for performance by the bidder/Supplier. The Guarantor hereby expressly agrees that if in the opinion of BGCL, the Bidder / Supplier has failed to perform its obligations under the contract in any manner, BGCL shall have unfettered right to invoke the said Bank guarantee. The Guarantor hereby agrees that decision of BGCL about performance of the bidder / Supplier shall be final and shall not be questioned by the Guarantor. Guarantor shall have no objection to invocation of the Performance Bank Security submitted by the Bidder on behalf The Guarantor represents and confirms that the Guarantor has the legal capacity, power and authority to issue this Guarantee and that giving of this Guarantee and the performance and observations of the obligations hereunder do not contravene any existing laws.

(Strike through the clause whichever is not applicable)

10. The Guarantor represents and confirms that the Guarantor has the legal capacity, power and authority to issue this Guarantee and that giving of this Guarantee and the performance and observations of the obligations hereunder do not contravene any existing laws.

For & on behalf of (Supporting Company)

M/s _____

Signature _____

Name _____

Designation _____

official seal _____

Witness:

1. Signature _____

Full Name _____

Address _____

2. Signature _____

Full Name _____

Address _____

INSTRUCTIONS FOR FURNISHING GUARANTEE

1. The official(s) executing the guarantee should affix full signature(s) on each page.
2. Resolution passed by Board of Directors of the guarantor company authorizing the signatory(ies) to execute the guarantee, duly certified by Company Secretary should be furnished along with Guarantee.



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(गेल एवम जीसीजीएससीएल का संयुक्त उद्यम) (A JV Company of GAIL and GCGSCL)

Appendix-A2A to Section II

**CERTIFICATE ISSUED BY COMPANY SECRETARY OF THE GUARANTOR
COMPANY**

“Obligations contained in deed of guarantee No. _____ furnished against tender No. _____ are enforceable against the Guarantor Company and the same do not, in any way, contravene any law of the country of which the Guarantor Company is the subject.”

The above certificate should be enclosed alongwith the Guarantee.



Appendix-A3 to Section II

**PROFORMA OF "BANK GUARANTEE" TOWARDS PERFORMANCE SECURITY /
SECURITY DEPOSIT BY FOREIGN BASED SUPPORTING COMPANY OF THE BIDDING
COMPANY**
CONTRACT PERFORMANCE SECURITY / SECURITY DEPOSIT
(ON NON-JUDICIAL STAMP PAPER OF APPROPRIATE VALUE)

To,

To, M/s Bengal Gas Company Limited _____	Bank Guarantee No.	
	Date of BG	
	BG Valid up to (Expiry date)	
	Claim period up to (indicate date of expiry of claim period which includes minimum three months from the expiry date)	
	Stamp Sl. No./e-Stamp Certificate No.	

Dear Sir(s),

M/s. _____ having registered office at _____ (herein after called the "CONSULTANT" which expression shall wherever the context so require include its successors and assignees) have been placed/awarded the job/work of _____ vide PO/LOA /FOA No. _____ dated _____ (herein after called CONTRACT) for Bengal Gas Company Limited having registered office at 1st Floor, Block A, Finance Centre, CBD, Action Area – II B, Newtown, North 24 Parganas, Kolkata, West Bengal, India, Pin: 700161 (herein after called the "BGCL" which expression shall wherever the context so require include its successors and assignees).

Further, M/s _____ (Name of the Supporting company) having its registered/head office at _____ based on whose experience/technical strength, the CONSULTANT has qualified for award of contract (hereinafter referred to as the 'SUPPORTING COMPANY') which expression shall, unless repugnant to the context or meaning thereof include all its successors, administrators, executors and assignees) has agreed to provide complete technical and other support to the CONSULTANT for successful completion of the contract as mentioned above, entered between BGCL and the CONSULTANT and BGCL having agreed that the 'SUPPORTING COMPANY' shall furnish to BGCL a performance guarantee for Indian Rupees/US\$ towards providing complete financial and other support to the CONSULTANT for successful completion of the contract as mentioned above,

The said M/s. _____ (Supporting Company) has approached us and at their request and in consideration of the premises we having our office at _____ have agreed to give such guarantee as hereinafter mentioned.

1. We (name of the bank) _____ registered under the laws of _____ having head/registered office at _____ (hereinafter referred to as "the Bank", which expression shall, unless repugnant to the context or meaning thereof, include all its successors, administrators, executors and permitted assignees) do hereby guarantee and undertake to pay immediately on first demand in writing any/all moneys to the extent of Indian Rs./US\$ (in figures) _____ (Indian Rupees/US Dollars (in words) _____) without any demur, reservation, contest or protest



and/or without any reference to the 'SUPPORTING COMPANY'. Any such demand made by BGCL on the Bank by serving a written notice shall be conclusive and binding, without any proof, on the bank as regards the amount due and payable, notwithstanding any dispute(s) pending before any Court, Tribunal, Arbitrator or any other authority and/or any other matter or thing whatsoever, as liability under these presents being absolute and unequivocal. We agree that the guarantee herein contained shall be irrevocable and shall continue to be enforceable until it is discharged by BGCL in writing. This guarantee shall not be determined, discharged or affected by the liquidation, winding up, dissolution or insolvency of the 'SUPPORTING COMPANY' and shall remain valid, binding and operative against the bank.

2. The Bank also agrees that BGCL at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance, without proceeding against the 'SUPPORTING COMPANY' and notwithstanding any security or other guarantee that BGCL may have in relation to the 'SUPPORTING COMPANY's liabilities.
3. The Bank further agrees that BGCL shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said CONTRACT or to extend time of performance by the said CONSULTANT from time to time or to postpone for any time or from time to time exercise of any of the powers vested in BGCL against the said CONSULTANT and to forbear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said CONSULTANT or for any forbearance, act or omission on the part of BGCL or any indulgence by BGCL to the said CONSULTANT(s) or any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.
4. The Bank further agrees that the Guarantee herein contained shall remain in full force during the period that is taken for the performance of the CONTRACT and all dues of BGCL under or by virtue of this CONTRACT have been fully paid and its claim satisfied or discharged or till BGCL discharges this guarantee in writing, whichever is earlier.
5. This Guarantee shall not be discharged by any change in our constitution, in the constitution of BGCL or that of the 'SUPPORTING COMPANY'.
6. The Bank confirms that this guarantee has been issued with observance of appropriate laws of the country of issue.
7. The Bank also agrees that this guarantee shall be governed and construed in accordance with Indian Laws and subject to the exclusive jurisdiction of Indian Courts of the place from where the purchase CONTRACT has been placed.
8. Notwithstanding anything contained hereinabove, our liability under this Guarantee is limited to Indian Rs./US\$ (in figures) _____ (Indian Rupees/US Dollars (in words) _____ only) and our guarantee shall remain in force until (indicate the date of expiry of bank guarantee) _____.
9. We have power to issue this guarantee in your favor under Memorandum and Articles of Association and the undersigned has full power to do under the Power of Attorney, dated _____ granted to him by the Bank.



10. Notwithstanding anything contained herein:

- a) The Bank's liability under this Guarantee shall not exceed (currency in figures)
. (currency in words only)
- b) This Guarantee shall remain in force upto _____ (this date should be expiry date of defect liability period of the Contract) and any extension(s) thereof; and
- c) The Bank shall be released and discharged from all liability under this Guarantee unless a written claim or demand is issued to the Bank on or before the midnight of(indicate date of expiry of claim period which includes minimum three months from the expiry of this Bank Guarantee) and if extended, the date of expiry of the last extension of this Guarantee. If a claim has been received by us within the said date, all the rights of BGCL under this Guarantee shall be valid and shall not cease until we have satisfied that claim.

Details of next Higher Authority of the Officials who have issued the Bank Guarantee:

Name

Designation

Yours faithfully,

Bank by its Constituted Attorney

Signature of a person duly
Authorized to sign on behalf of the Bank
E-mail :
Telephone/Mobile No. :

INSTRUCTIONS FOR FURNISHING
"PERFORMANCE SECURITY / SECURITY DEPOSIT " BY "BANK GUARANTEE"

1. The Bank Guarantee by successful Bidder(s) will be given on non-judicial stamp paper as per 'stamp duty' applicable. The non-judicial stamp paper should be in name of the issuing bank. In case of foreign bank, the said Bank Guarantee to be issued by its correspondent bank in India on requisite non-judicial stamp paper and place of Bid to be considered as Kolkata.
2. A letter from the issuing bank of the requisite Bank Guarantee confirming that said Bank Guarantee and all future communication relating to the Bank Guarantee shall be forwarded to Purchaser as per format appended below.
3. The Bank Guarantee shall be from any Indian scheduled bank (excluding Co-operative banks and Regional Rural bank) or a branch of an International bank situated in India and registered with Reserve bank of India as scheduled foreign bank. However, in case of bank guarantees from banks other than the Nationalised Indian banks, the bank must be a commercial bank having net worth in excess of Rs 100 crores and a declaration to this effect shall be made by such commercial bank either in the Bank Guarantee itself or separately on its letterhead.
4. In case BG is issued directly by a bank outside India (if allowed), it should be executed on Letter Head of the Bank and should be advised and made payable through their Indian Branch/Corresponding Bank in India.



बंगाल गैस कंपनी लिमिटेड BENGAL GAS COMPANY LIMITED
(गैल एवम जीसीजीएससीएल का संयुक्त उद्यम) (A JV Company of GAIL and GCGSCL)

MATTER TO BE MENTIONED IN COVERING LETTER TO BE SUBMITTED BY VENDOR ALONG WITH BANK GUARANTEE

1	BANK GUARANTEE NO	:				
2	VENDOR NAME / VENDOR CODE	:	NAME			
			VENDOR CODE			
3	BANK GUARANTEE AMOUNT	:				
4	PURCHASE ORDER/ LOA NO	:				
5	NATURE OF BANK GUARANTEE (Please Tick (√) Whichever is Applicable)	:	PERFORMANCE BANK GUARANTEE	SECURITY DEPOSIT	EMD	ADVANCE
6	BG ISSUED BANK DETAILS		(A) EMAIL ID :			
			(B) ADDRESS :			
			(C) PHONE NO :			



Schedule I

List of Category-I Sensitive sectors:

Sr. No.	Sector
(i)	Atomic Energy
(ii)	Broadcasting/ Print and Digital Media
(iii)	Defence
(iv)	Space
(v)	Telecommunications

Schedule II

List of Category-II Sensitive sectors:

Sr. No.	Sector
(i)	Power and Energy (including exploration/ generation/transmission/ distribution/ pipeline)
(ii)	Banking and Finance including Insurance
(iii)	Civil Aviation
(iv)	Construction of ports and dams & river valley projects
(v)	Electronics and Microelectronics
(vi)	Meteorology and Ocean Observation
(vii)	Mining and extraction (including deep sea projects)
(viii)	Railways
(ix)	Pharmaceuticals & Medical Devices
(x)	Agriculture
(xi)	Health
(xii)	Urban Transportation



Schedule III

List of Sensitive Technologies:

Sr. No.	Sensitive Technologies
(i)	Additive Manufacturing (e.g. 3D Printing)
(ii)	Any equipment having electronic programmable components or autonomous systems (e.g. SCADA systems)
(iii)	Any technology used for uploading and streaming of data including broadcasting, satellite communication etc.
(iv)	Chemical Technologies
(v)	Biotechnologies including Genetic Engineering and Biological Technologies
(vi)	Information and Communication Technologies
(vii)	Software



GUIDELINES FOR IMPLEMENTATION OF RECENT GST RATE REFORMS 2025

This has reference to next generation GST reforms approved by 56th GST Council (held on 03rd Sep 2025, New Delhi) which includes simplified two-slab rate structure (5% merit & 18% standard) with a special 40% de-merit rate for specified goods/services. Consequently, the existing GST rates of 12% & 28% have been abolished and all goods and services previously under these slabs have been realigned to either 5%, 18% or 40% as per the revised schedules. Reforms in Goods and Services Tax (GST) regime effective from 22nd September 2025.

The bidder is required to take into account the following while submitting the bid:

- (i) Change in GST on input tax credits on raw Materials/ Services contributing to end Product / Services, arising from the revised GST rates effective from 22.09.2025
- (ii) Statutory changes in GST rates effective from 22.09.2025 on finished goods or services.

Other provisions of the tender shall apply.

The bidder is required to submit a copy of this clarification duly signed by them along with the bid.



बंगाल गैस कंपनी लिमिटेड BENGAL GAS COMPANY LIMITED
(गेल एवम जीसीजीएससीएल का संयुक्त उद्यम) (A JV Company of GAIL and GCGSCL)

UNDERTAKING

(To be submitted on Vendor's / Contractor's / Service Provider's Letterhead)

To
BENGAL GAS COMPANY LIMITED
.....

Subject: Undertaking regarding impact of reduction in GST rates w.e.f. 22.09.2025 on input materials / services used in the execution / supply of Goods or Services against the above-referred PO / LOA.

Ref.: Purchase Order / Letter of Acceptance (LOA) No. _____ dated _____

Sir / Madam,

With reference to the above referred Purchase Order / LOA, we have reviewed the Ordered Basic Price (excluding GST), due to change in input tax credits or reduction in GST rates on input materials / services used in the execution / supply of Goods or Services and hereby undertake the following:

1. We confirm that consequent to the revision in GST rates effective from 22.09.2025, the reduction in Ordered Basic Price due to change in input tax credits or reduction in GST rates on input materials / services used in the execution / supply of Goods or Services is Rs.
2. Accordingly, the details of reduced Basic Price (excluding GST) for the items / services under the said PO / LOA is as under (attach a separate sheet if necessary):

Sl. No.	Description of Item / Service	Existing Basic Price (₹)	Reduced Basic Price (₹)	Remarks

Note: The provisions w.r.t. Statutory variations as mentioned in Tender / PO / LOA shall be applicable.

Signature

Name of Authorized Signatory: _____

Name of Organization: _____

Designation: _____

Official Seal: _____

Date: _____

Place: _____



UNDERTAKING

(To be submitted on Vendor's / Contractor's / Service Provider's Letterhead)

To

BENGAL GAS COMPANY LIMITED

.....

Subject: Undertaking regarding revision of Basic Price (excluding GST) due to change in GST rates effective from 22.09.2025.

Ref.: Tender No. _____ dated _____ having due date of bid submission _____

Sir / Madam,

With reference to the above Tender, we understand subsequent to the due date of bid submission, Govt. of India notified the revision in Goods and Services Tax (GST) rates effective from 22.09.2025. Accordingly, GAIL (India) Limited has sought confirmation regarding reduction in the Basic Price (excluding GST) of goods / services quoted by us, owing to reduction in input GST rates or change in input tax credits on raw materials / services contributing to the end product / service.

We hereby undertake the following:

1. We have examined the impact of the revised GST rates effective from 22.09.2025 on our input materials / services to be used for execution / supply of the goods / services quoted under the above referred Tender.
2. We confirm that consequent to the revision in GST rates effective from 22.09.2025, the reduction in Ordered Basic Price due to change in input tax credits or reduction in GST rates on input materials / services to be used in the execution / supply of Goods or Services is Rs.
3. Accordingly, the details of reduced Basic Price (excluding GST) for the items / services under the said Tender are furnished below (attach separate sheet if necessary):

Sl. No.	Description of Item / Service	Existing Basic Price (₹)	Reduced Basic Price (₹)	Remarks

4. We further confirm that the GST rate applicable on the finished goods / services shall be as per the revised rates effective from 22.09.2025, as notified by the Govt. of India.

Signature

Name of Authorized Signatory: _____

Name of Organization: _____

Designation: _____

Official Seal: _____

Date: _____

Place: _____



बंगाल गैस कंपनी लिमिटेड BENGAL GAS COMPANY LIMITED
(गैल एवम जीसीजीएससीएल का संयुक्त उद्यम) (A JV Company of GAIL and GCGSCL)

SECTION-III

INSTRUCTION TO BIDDERS

(TO BE READ IN CONJUNCTION WITH

BIDDING DATA SHEET (BDS)



SECTION-III

INSTRUCTION TO BIDDERS

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INSTRUCTIONS TO BIDDERS [ITB]
(TO BE READ IN CONJUNCTION WITH BIDDING DATA SHEET (BDS))

[A] – GENERAL

1 SCOPE OF BID

- 1.1 The Employer as defined in the "General Conditions of Contract [GCC]", wishes to receive Bids as described in Invitation For Bid (the “**Tender Document /Bid Document**”) issued by Employer. Employer/Owner/BGCL occurring herein under shall be considered synonymous.
- 1.2 **SCOPE OF BID:** The scope of work/ Services shall be as defined in the Tender documents.
- 1.3 The successful bidder will be expected to complete the scope of Bid within the period stated in Special Conditions of Contract.
- 1.4 Throughout the Tender Documents, the terms 'Bid', 'Tender', 'Offer' & 'Proposal' and their derivatives [Bidder/Tenderer, Bid/Tender/Offer etc.] are synonymous. Further, 'Day' means 'Calendar Day' and 'Singular' also means 'Plural'.

2 ELIGIBLE BIDDERS

- 2.1 The Bidder shall not be under a declaration of ineligibility by Employer for Corrupt/ Fraudulent/ Collusive/ Coercive practices, as defined in "Instructions to Bidders [ITB], Clause No. 39” (Action in case Corrupt/ Fraudulent/ Collusive/ Coercive Practices).
- 2.2 The Bidder is not put on ‘Holiday’ by GAIL/BGCL or Public Sector Project Management Consultant (like EIL, Mecon only due to “poor performance” or “corrupt and fraudulent practices”) or banned/blacklisted by Government department/ Public Sector on due date of submission of bid. Further, neither bidder nor their allied agency/(ies) (as defined in the Procedure for Action in case of Corrupt/ Fraudulent/ Collusive/ Coercive Practices) are on banning list of BGCL or the Ministry of Petroleum and Natural Gas.

Bidders marked “Suspended” on GeM (but eligible as per BGCL’s Tender Document) will be evaluated as per terms & conditions of the Tender Document.

If the bidding documents were issued inadvertently/ downloaded from website, offers submitted by such bidders shall not be considered for opening/ evaluation/Award and will be returned immediately to such bidders.

In case there is any change in status of the declaration prior to award of contract, the same has to be promptly informed to BGCL by the bidder.

It shall be the sole responsibility of the bidder to inform about their status regarding para 1 of clause 2.2 herein above on due date of submission of bid and during the course of finalization of the tender. Concealment of the facts shall tantamount to misrepresentation of facts and shall lead to action against such Bidders as per clause 39 of ITB.

- 2.3 The Bidder should not be under any liquidation court receivership or similar proceedings on due date of submission of bid. In case there is any change in status of the declaration prior to award of contract, the same has to be promptly informed to BGCL by the bidder.



It shall be the sole responsibility of the bidder to inform BGCL there status on above on due date of submission of bid and during the course of finalization of the tender. Concealment of the facts shall tantamount to misrepresentation of facts and shall lead to action against such Bidders as per clause no.39 of ITB.

- 2.4 Bidder shall not be affiliated with a firm or entity:
- (i) that has provided consulting services related to the work to the Employer during the preparatory stages of the work or of the project of which the works/services forms a part of or
 - (ii) that has been hired (proposed to be hired) by the Employer as an Engineer/ Consultant for the contract.
- 2.5 Neither the firm/entity appointed as the Project Management Consultant (PMC) for a contract nor its affiliates/ JV'S/ Subsidiaries shall be allowed to participate in the tendering process unless it is the sole Licensor/Licensor nominated agent/ vendor.
- 2.6 Pursuant to qualification criteria set forth in the bidding document, the Bidder shall furnish all necessary supporting documentary evidence to establish Bidder's claim of meeting qualification criteria.
- 2.7 **Power of Attorney:**
Power of Attorney (POA) to be issued by the bidder in favour of the authorized employee(s), in respect of the particular tender, for purpose of signing the documents including bid, all subsequent communications, agreements, documents etc. pertaining to the tender and act and take any and all decision on behalf of the bidder (including Consortium). Any consequence resulting due to such signing shall be binding on the Bidder (including Consortium).

The Power of Attorney shall be issued as per the constitution of the bidder as below:

- a) **In case of Proprietorship:** by Proprietor
- b) **In case of Partnership:** by all Partners or Managing Partner
- c) **In case of Limited Liability Partnership:** by any bidder's employee authorized in terms of Deed of LLP
- d) **In case of Public / Limited Company:** PoA in favour of authorized employee(s) by Board of Directors through Board Resolution or by the designated officer authorized by Board to do so. Such Board Resolution should be duly countersigned by Company Secretary / MD / CMD / CEO.

The Power of Attorney should be valid till award of contract / order to successful bidder.

- 2.8 In case of change of constitution of bidder after submission of bid, the same shall be informed by the bidder to BGCL promptly. Failure to same shall be considered as misrepresentation by the bidder.

3 BIDS FROM CONSORTIUM"- NOT APPLICABLE

4 ONE BID PER BIDDER

- 4.1 A Bidder shall submit only 'one [01] Bid' in the same Bidding Process either as single entity or as a member of any consortium (wherever consortium bid is allowed). A Bidder who submits or participates in more than 'one [01] Bid' will cause all the proposals in which the Bidder has participated to be disqualified.



- 4.2 A bidder shall not have conflict of interest with other bidders. Such conflict of interest can lead to anti-competitive practices. The bidder found to have a conflict of interest shall be disqualified. A bidder shall be considered to have a conflict of interest with one or more bidders in this bidding process, if:
- a) they have controlling partner (s) in common; or
 - b) they receive or have received any direct or indirect subsidy/ financial stake from any of them; or
 - c) they have the same legal representative/authorized signatory/agent for purposes of this bid; or
 - d) they have relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder; or
 - e) Bidder participates in more than one bid in bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all bids in which the parties are involved. However, this does not limit the inclusion of the components/ sub-assembly/ Assemblies from one bidding manufacturer in more than one bid.
 - f) a Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid;
 - g) In case of a holding company having more than one independently manufacturing units, or more than one unit having common business ownership/management, only one unit should quote. Similar restrictions would apply to closely related sister companies. Bidders must proactively declare such sister/ common business/ management units in same/ similar line of business.
- Bidders are required to submit a confirmation for no conflict of interest with other bidders in Format F-5.
- Failure to comply this clause during tendering process will disqualify all such bidders from process of evaluation of bids.
- 4.3 Alternative Bids shall not be considered.
- 4.4 The provisions mentioned at sl. no. 4.1 and 4.2 shall not be applicable wherein bidders are quoting for different Items / Sections / Parts / Groups/ SOR items of the same tender which specifies evaluation on Items / Sections / Parts / Groups/ SOR items basis.
- 4.5 Bidders are required to provide complete details of all Directors/Partners/Proprietors etc. including Father's name, Residential address, AADHAR, PAN Card details. & DIN Nos. in Form F-1 of ITB and corresponding documents duly notarized by Notary Public.

It is the responsibility of the participating Bidder(s) to assess the relationship as mentioned above. In case any undertaking/declaration given by a Bidder(s) in this regard is found to be false, this would be a sufficient ground for rejection of Bid(s) /termination of contract and also initiation of further action as per "Procedure for Action in case of Corrupt/Fraudulent/ Collusive / Coercive Practices" of tender document.

5 COST OF BIDDING

The Bidder shall bear all costs associated with the preparation and submission of the Bid including but not limited to Documentation Charges, Bank charges, all courier charges, translation charges, authentication charges and any associated charges including taxes & duties thereon. Further, BGCL will in no case, be responsible or liable for these costs, regardless of the outcome of the bidding process.



6 SITE VISIT

- 6.1 The Bidder is advised to visit and examine the site of works and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the Bid and entering into a Contract for the required job. The costs of visiting the site shall be borne by the Bidder.
- 6.2 The Bidder or any of its personnel or agents shall be granted permission by the Employer to enter upon its premises and land for the purpose of such visits, but only upon the express conditions that the Bidder, its personnel and agents will release and indemnify the Employer and its personnel, agents from and against all liabilities in respect thereof, and will be responsible for death or injury, loss or damage to property, and any other loss, damage, costs, and expenses incurred as a result of inspection.
- 6.3 The Bidder shall not be entitled to hold any claim against BGCL for non-compliance due to lack of any kind of pre-requisite information as it is the sole responsibility of the Bidder to obtain all the necessary information with regard to site, surrounding, working conditions, weather etc. on its own before submission of the bid.

[B] – BIDDING DOCUMENTS

7 CONTENTS OF BIDDING DOCUMENTS

- 7.1 The contents of Bidding Documents / Tender Documents are those stated below shall be ‘**Bid specific Additional Terms and Conditions (ATC)**’ of GeM bid, and should be read in conjunction with any 'Addendum / Corrigendum and Clarification(s)' issued in accordance with "ITB: Clause-8 & 9":

- Section-I : Invitation for Bid [IFB]*
- Section-II : Bid Evaluation Criteria & Evaluation methodology
- Section-III : Instructions to Bidders [ITB], Annexure, Forms & Format**
- Section-IV : General Conditions of Contract [GCC]***
- Section-V : Scope of Work
- Section-VI : Special Conditions of Contract [SCC]
- Section-VII : SOR (Schedule of Rates)

GeM bid document generated or available on GeM portal shall also be part of Bidding Document / Tender Document.

*Request for Quotation’, wherever applicable, shall also form part of the Bidding Document.

** The subject tender is based on standard formats and applicability of some specific clauses may be seen in Annexure-II to Section-III i.e. BDS (Bidding Data Sheet).

*** General Conditions of Contract – Procurement of Services is available under SECTION-IV.

- 7.2 The Bidder is expected to examine all instructions, forms, terms & conditions in the Bidding Documents. The "Request for Quotation [RFQ] & Invitation for Bid (IFB)" together with all its attachments thereto, shall be considered to be read, understood and accepted by the Bidders. Failure to furnish all information required by the Bidding Documents or submission of a Bid not substantially responsive to the Bidding Documents in every respect will be at Bidder's risk and may result in the rejection of his Bid.



8 CLARIFICATION OF TENDER DOCUMENT

- 8.1 A prospective Bidder requiring any clarification(s) of the Bidding Documents may notify BGCL in writing or email at BGCL's mailing address indicated in the BDS or on GeM portal no later than 02 (two) days prior to pre-bid meeting (in cases where pre-bid meeting is scheduled) or 05 (five) days prior to the due date of submission of bid in cases where pre-bid meeting is not scheduled. BGCL reserves the right to ignore the bidders request for clarification if received after the aforesaid period. BGCL may respond in writing to the request for clarification. BGCL's response including an explanation of the query, but without identifying the source of the query will be uploaded on GeM portal / communicated to prospective bidders by e-mail.
- 8.2 Any clarification or information required by the Bidder but same not received by the Employer at clause 8.1 (refer BDS for address) above is liable to be considered as "no clarification / information required".

9 AMENDMENT OF BIDDING DOCUMENTS

- 9.1 At any time prior to the 'Bid Due Date', Employer may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the Bidding Documents by corrigendum.
- 9.2 Any corrigendum thus issued shall be integral part of the Tender Document and shall be hosted on the GeM portal website. Bidders have to take into account all such corrigendum before submitting their Bid.
- 9.3 The Employer, if consider necessary, may extend the Bid Due Date in order to allow the Bidders a reasonable time to furnish their most competitive bid taking into account the addenda/ corrigendum issued thereof.

[C] – PREPARATION OF BIDS

10 LANGUAGE OF BID:

The bid prepared by the Bidder and all correspondence, drawing(s), document(s), certificate(s) etc. relating to the Bid exchanged by Bidder and BGCL shall be written in English language only. In case a document, certificate, printed literature etc. furnished by the Bidder in a language other than English, the same should be accompanied by an English translation duly authenticated by the Indian Chamber of Commerce, in which case, for the purpose of interpretation of the Bid, the English translation shall govern.

11. DOCUMENTS COMPRISING THE BID

The Bid must be submitted on GeM-portal (<https://gem.gov.in>) as follows:-:

11.1.1 TECHNO-COMMERCIAL / UN-PRICED BID shall contain the following:

- (a) 'Covering Letter' on Bidder's 'Letterhead' clearly specifying the enclosed contents with index.
- (b) 'Bidder's General Information', as per 'Form F-1'.
- (c) 'Agreed Terms and Conditions', as per 'Form F-5'
- (d) 'Acknowledgement Cum Consent Letter', as per 'Form F-6'



- (e) Duly attested documents in accordance with the Section II Bid Evaluation Criteria (BEC) of Tender Document.
- (f) Copy of Power of Attorney /copy of Board Resolution, in favour of the authorized signatory of the Bid, as per clause no.2.7 of ITB.
- (g) Copy of EMD /, Declaration for Bid Security as per provision of ITB
- (h) Undertaking as per *Form-I-A, Form-I-B & Form-II to Section-II* regarding Provisions for Procurement from a Bidder which shares a land border with India.
- (i) All forms and Formats including Annexures.
- (j) Tender Document, its Corrigendum/Amendment/Clarification(s) duly signed by the Authorized Signatory holding POA.
- (k) Additional document specified in BDS, SCC, Scope of Supply or mentioned elsewhere in the Tender Document, its Corrigendum/Amendment/Clarification(s).
- (l) Any other information/details required as per Bidding Document

Note: All the pages of the Bid must be signed by the "Authorized Signatory" of the Bidder holding POA.

Further, Bidders must submit the original "Bid Security / EMD", Power of Attorney, Integrity Pact (wherever applicable) and any other documents specified in the Tender Document to the address mentioned in IFB, in a sealed envelope, superscribing the details of Tender Document (i.e. tender number & tender for) within 7 days from the date of un-priced bid opening.

Bidders are required to submit the EMD in original by Bid Due Date and Time or upload a scanned copy of the same in the GeM portal. If the Bidder is unable to submit EMD in original by Bid Due Date and Time, the Bidder is required to upload a scanned copy of the EMD in Part-I of Bid, provided the original EMD, copy of which has been uploaded, is received within 7 days from the Bid Due Date, failing which rejected irrespective of their status/ranking in tendering process and notwithstanding the fact that a copy of EMD was earlier uploaded by the Bidder.

11.1.2 Price Bid / Financial Bid / Schedule of Rates [SOR]

- i) The Prices are to be submitted strictly as per the Price bid / Schedule of Rate (SOR) on GeM portal. BGCL shall not be responsible for any failure on the part of the bidder to follow the instructions.
- ii) Bidders are advised NOT to mention Rebate/Discount separately, either in the SOR or anywhere else in the offer. In case Bidder(s) intend to offer any Rebate/Discount, they should include the same in the item rate(s) itself under the SOR and indicate the discounted unit rate(s) only.
- iii) If any unconditional rebate has been offered in the quoted rate the same shall be considered in arriving at evaluated price. However no cognizance shall be taken for any conditional discount for the purpose of evaluation of the bids.
- iv) In case, it is observed that any of the bidder(s) has/have offered suo-moto Discount/Rebate after opening of unpriced bid but before opening of price bids such discount /rebate(s) shall not be considered for evaluation. However, in the event of the bidder emerging as the lowest evaluated bidder without considering the discount/rebate(s), then such discount/rebate(s) offered by the bidder shall be considered for Award of Work and the same will be conclusive and binding on the bidder.
- v) In the event as a result of techno-commercial discussions or pursuant to seeking clarifications / confirmations from bidders, while evaluating the un-priced part of the



bid, any of the bidders submits a sealed envelope stating that it contains revised prices; such bidder(s) will be requested to withdraw the revised prices failing which the bid will not be considered for further evaluation.

- vi) In case any bidder does not quote for any item(s) of “Schedule of Rates” and the estimated price impact is more than 10% of the quoted price, then the bid will be rejected. If such price impact of unquoted items is 10% or less of his quoted price, then the unquoted item(s) shall be loaded highest of the price quoted by the other bidders. If such bidder happens to be lowest evaluated bidder, price of unquoted items shall be considered as included in the quoted bid price.

12 BID PRICES

- 12.1 Unless stated otherwise in the Bidding Documents, the Contract shall be for the whole job /works as described in Bidding Documents, based on the rates and prices submitted by the Bidder and accepted by the Employer. The prices quoted by the Bidders will be inclusive of all taxes & duties including **GST (CGST & SGST/UTGST or IGST)**.

Successful bidder is required to provide break-up of various components such as GST (CGST & SGST/UTGST or IGST) included in the quoted prices for placing order by BGCL.

- 12.2 Bidder shall quote for all the items of Price bid/SOR after careful analysis of cost involved for the performance of the completed item considering all parts of the Bidding Document. In case any activity though specifically not covered in description of item under SOR but is required to complete the works as per Specifications, Scope of Work / Service, Standards, General Conditions of Contract (“GCC”), Special Conditions of Contract (“SCC”) or any other part of Bidding Document, the prices quoted shall deemed to be inclusive of cost incurred for such activity.
- 12.3 All duties, taxes and other levies [if any] payable by the Service Provider under the Contract, or for any other cause including final **GST (CGST & SGST/ UTGST or IGST)** shall be included in the rates / prices and the total bid-price submitted by the Bidder.
- 12.4 Prices quoted by the Bidder, shall remain firm and fixed and valid till completion of the Contract and will not be subject to variation on any account, unless any price escalation/variation is allowed elsewhere in the Tender Document.

13 GST (CGST & SGST/ UTGST or IGST)

- 13.1 Bidders are required to mention the GST Registration No. in bids wherever **GST (CGST & SGST/UTGST or IGST)** is applicable.
- 13.2 Quoted prices should be inclusive of all taxes and duties, including **GST (CGST & SGST or IGST or UTGST)**. Please note that the responsibility of payment of **GST (CGST & SGST or IGST or UTGST)** lies with the Service Provider only. Service Provider providing taxable service shall issue an e-Invoice/Invoice/ Bill, as the case may be as per rules/ regulation of GST. Further, returns and details required to be filled under GST laws & rules should be timely filed by Service Provider with requisite details.

Payments to Service Provider for claiming **GST (CGST & SGST/UTGST or IGST)** amount will be made provided the above formalities are fulfilled. Further, BGCL may seek copies of challan and certificate from Chartered Accountant for deposit of **GST (CGST &**



SGST/UTGST or IGST) collected from Owner.

- 13.3 In case CBIC (Central Board of Indirect Taxes and Customs)/ any tax authority / any equivalent government agency brings to the notice of BGCL that the Service Provider has not remitted the amount towards GST (CGST & SGST/UTGST or IGST) collected from BGCL to the government exchequer, then, that Contactor shall be put under Holiday list of BGCL for period of six months after following the due procedure. This action will be in addition to the right of recovery of financial implication arising on BGCL.

- 13.4 In case of statutory variation in **GST (CGST & SGST/UTGST or IGST)**, other than due to change in turnover, payable on the contract value during contract period, the Service Provider shall submit a copy of the 'Government Notification' to evidence the rate as applicable on the Bid due date and on the date of revision.

Beyond the contract period, in case BGCL is not entitled for input tax credit of **GST (CGST & SGST/UTGST or IGST)**, then any increase in the rate of **GST (CGST & SGST/UTGST or IGST)** beyond the contractual delivery period shall be to Service Provider 's account whereas any decrease in the rate **GST (CGST & SGST/UTGST or IGST)** shall be passed on to the Owner.

Beyond the contract period, in case BGCL is entitled for input tax credit of **GST (CGST & SGST/UTGST or IGST)**, then statutory variation in quoted **GST (CGST & SGST/UTGST or IGST)** on supply and on incidental services, shall be to BGCL's account.

Claim for payment of **GST (CGST & SGST/UTGST or IGST)**/ Statutory variation, should be raised within two [02] months from the date of issue of 'Government Notification' for payment of differential (in %) **GST (CGST & SGST/UTGST or IGST)**, otherwise claim in respect of above shall not be entertained for payment of arrears.

The base date for the purpose of applying statutory variation shall be the Bid Due Date.

- 13.5 Where BGCL is entitled to avail the input tax credit of **GST (CGST & SGST/UTGST or IGST):-**

- 13.5.1 Owner/BGCL will reimburse the **GST (CGST & SGST/UTGST or IGST)** to the Service Provider at actuals against submission of E-Invoices/Invoices as per format specified in rules/regulation of GST to enable Owner/BGCL to claim input tax credit of **GST (CGST & SGST/UTGST or IGST)** paid. In case of any variation in the executed quantities, the amount on which the **GST (CGST & SGST/UTGST or IGST)** is applicable shall be modified in same proportion. Returns and details required to be filled under GST laws & rules should be timely filed by supplier with requisite details.

- 13.5.2 The input tax credit of quoted GST (CGST & SGST/UTGST or IGST) shall be considered for evaluation of bids, as per evaluation criteria of tender document.

- 13.6 Where BGCL is not entitled to avail/take the full input tax credit of **GST (CGST & SGST/UTGST or IGST):-**

- 13.6.1 Owner/BGCL will reimburse **GST (CGST & SGST/UTGST or IGST)** to the Service Provider at actuals against submission of E-Invoices/Invoices as per format specified in rules/regulation of GST subject to the ceiling amount of **GST (CGST & SGST/UTGST or IGST)**



as quoted by the bidder, subject to any statutory variations, except variations arising due to change in turnover. In case of any variation in the executed quantities (If directed and/or certified by the Engineer-In-Charge) the ceiling amount on which **GST (CGST & SGST/UTGST or IGST)** is applicable will be modified on pro-rata basis.

- 13.6.2 The bids will be evaluated based on total price including quoted GST (CGST & SGST/UTGST or IGST).

- 13.7 BGCL will prefer to deal with registered supplier of goods/ services under GST. Therefore, bidders are requested to get themselves registered under GST, if not registered yet.

However, in case any unregistered bidder is submitting their bid, Bids will be evaluated as per quoted prices without loading of **GST (CGST & SGST/UTGST or IGST)**, if not quoted. Further, an unregistered bidder is required to mention its Income Tax PAN in bid document.

- 13.8 In case BGCL is required to pay entire/certain portion of applicable **GST (CGST & SGST/UTGST or IGST)** and remaining portion, if any, is to be deposited by Bidder directly as per **GST (CGST & SGST/UTGST or IGST)** laws, entire applicable rate/amount of **GST (CGST & SGST/UTGST or IGST)** to be considered by bidder in the Price bid/SOR.

Where BGCL has the obligation to discharge **GST (CGST & SGST/UTGST or IGST)** liability under reverse charge mechanism and BGCL has paid or is /liable to pay **GST (CGST & SGST/UTGST or IGST)** to the Government on which interest or penalties becomes payable as per GST laws for any reason which is not attributable to BGCL or ITC with respect to such payments is not available to BGCL for any reason which is not attributable to BGCL, then BGCL shall be entitled to deduct/ setoff / recover such amounts against any amounts paid or payable by BGCL to Service Provider / Supplier.

- 13.9 Service Provider shall ensure timely submission of correct invoice(s)/e-invoice(s), as per GST rules/ regulation, with all required supporting document(s) within a period specified in Contract to enable BGCL to avail input credit of GST (CGST & SGST/UTGST or IGST). Further, returns and details required to be filled under GST laws & rules should be timely filed by Service Provider with requisite details.

If input tax credit is not available to BGCL for any reason not attributable to BGCL, then BGCL shall not be obligated or liable to pay or reimburse GST (CGST & SGST/UTGST or IGST) claimed in the invoice(s) and shall be entitled to deduct / setoff / recover such GST amount (CGST & SGST/UTGST or IGST) or Input Tax Credit amount together with penalties and interest, if any, against any amounts paid or becomes payable by BGCL in future to the Service Provider under this contract or under any other contract.

- 13.10 **Anti-profiteering clause**

As per Clause 171 of GST Act it is mandatory to pass on the benefit due to reduction in rate of tax or from input tax credit to the consumer by way of commensurate reduction in prices. The Service Provider / supplier may note the above and quote their prices accordingly.

- 13.11 In case the GST rating of Service Provider on the GST portal / Govt. official website is negative / black listed, then the bids may be rejected by BGCL. Further, in case rating of bidder is negative / black listed after award of work, then BGCL shall not be obligated or liable to pay or reimburse GST to such Service Provider and shall also be entitled to deduct / recover such GST along with all penalties / interest, if any, incurred by BGCL.



- 13.12 GST, as included by the bidder in Price bid / SOR, shall be deemed as final and binding for the purpose of bid evaluation

In case a bidder includes “zero” GST or an erroneous GST, the bid evaluation for finalizing the L1 bidder will be done considering the “Zero” or quoted GST rate, as the case may be. No request for change in GST will be entertained after submission of bids.

In cases where the successful bidder quotes a wrong GST rate, for releasing the order, the following methodology will be followed:

- In case the actual GST rate applicable is lower than the quoted GST rate, the actual GST rate will be added to the quoted basic prices. The final cash outflow will be based on actual GST rate.
- In case the actual GST rate applicable is more than the quoted GST rate, the basic prices quoted will be reduced proportionately, keeping the final cash outflow the same as the overall quoted amount.

Based on the Total Cash Outflow calculated as above, BGCL shall place orders.

- 13.13 Wherever TDS under GST Laws has been deducted from the invoices raised / payments made to the Service Provider, as per the provisions of the GST law / Rules, Service Provider should accept the corresponding GST-TDS amount populated in the relevant screen on GST common portal (www.gst.gov.in). Further, Service Provider should also download the GST TDS certificate from GST common portal (reference path: Services > User Services > View/Download Certificates option).

13.14 Provision w.r.t. E- Invoicing requirement as per GST laws:

Supplier who is required to comply with the requirements of E-invoice for B2B transactions as per the requirement of GST Law will ensure the compliance of requirement of E Invoicing under GST law. If the invoice issued without following this process, such invoice can-not be processed for payment by BGCL as no ITC is allowed on such invoices.

Therefore, all the payments to such supplier who is liable to comply with e-invoice as per GST Laws shall be made against the proper e-invoice(s) only. Further, returns and details required to be filled under GST laws & rules against such e-invoices should be timely filed by Supplier of Goods with requisite details.

If input tax credit is not available to BGCL for any reason attributable to supplier (both for E-invoicing cases and non-E-invoicing cases), then BGCL shall not be obligated or liable to pay or reimburse GST (CGST & SGST/UTGST or IGST) claimed in the invoice(s) and shall be entitled to deduct / setoff / recover such GST amount (CGST & SGST/UTGST or IGST) or Input Tax Credit amount together with penalties and interest, if any, by adjusting against any amounts paid or becomes payable in future to the supplier under this contract or under any other contract.

To ensure compliance, undertaking in requisite format is to be submitted by supplier as per format **F-15** along with documents for release of payment.

- 13.15 **New Taxes & duties:** Any new taxes & duties, if imposed by the State/ Central Govt. of India after the due date of bid submission but before the Contractual Completion Date, shall be reimbursed to the Service Provider on submission of copy of notification(s) issued from State/



Central Govt. Authorities along with documentary evidence for proof of payment of such taxes & duties, but only after ascertaining it's applicability with respect to the Contract.

- 13.16 Full payment including GST will be released at the time of processing of invoice for payment, where the GST amount reflects in Form GSTR-2A of BGCL. However, in case where the GST amount doesn't reflect in Form GSTR-2A of BGCL, the amount of GST will be released after reflection of GST amount of corresponding invoice in Form GSTR-2A of BGCL.

14 **BID CURRENCIES:**

Bidders must submit bid in Indian Rupees only.

15 **BID VALIDITY**

- 15.1 Bids shall be kept valid for period specified in GeM bid from the final Due date of submission of bid'. A Bid valid for a shorter period may be rejected by BGCL as 'non-responsive'.
- 15.2 In exceptional circumstances, prior to expiry of the original 'Bid Validity Period', the Employer may request the Bidders to extend the 'Period of Bid Validity' for a specified additional period on GeM portal. The request and the responses thereto shall also be made in writing or by email (outside GeM, if required). After opening of price bids in GeM, the extension (outside GeM, if any) will be regularized through GeM with L-1 bidder. Bidder may refuse the request without forfeiture of his EMD/Bid Security.

A Bidder agreeing to the request will not be required or permitted to modify his Bid, but will be required to extend the validity of its EMD for the period of the extension and in accordance with "ITB: Clause-16" in all respects.

16 **EARNEST MONEY DEPOSIT**

- 16.1 Bid must be accompanied with earnest money deposit (i.e Earnest Money Deposit (EMD) also known as **Bid Security**) in the form of '**Demand Draft**' / '**Banker's Cheque**/ **Online banking transaction** / **Insurance Surety Bond**' / '**Fixed Deposit Receipt**' [in favour of **Bengal Gas Company Limited** payable at place mentioned in **BDS**] or '**Bank Guarantee**' as per the format given in form F-2 of the **Tender Document only**. Bidder shall ensure that EMD submitted in the form of '**Bank Guarantee**' should have a validity of at least 'two [02] months' beyond the validity of the Bid. EMD submitted in the form of '**Demand Draft**' or '**Banker's Cheque**' should be valid for three months.

Refer clause no 16.12 of ITB for detailed provisions in respect of EMD submission in the form of Fixed Deposit Receipt.

Bid not accompanied with EMD, or EMD not in requisite format shall be liable for rejection. The EMD shall be submitted in Indian Rupees only.

- 16.2 BGCL shall not be liable to pay any documentation charges, Bank charges, commission, interest etc. on the amount of EMD. In case EMD is in the form of a 'Bank Guarantee', the same shall be from any Indian scheduled Bank (excluding Co-operative banks and Regional Rural bank) or a branch of an International Bank situated in India and registered with 'Reserve Bank of India' as Scheduled Foreign Bank. However, in case of 'Bank Guarantee' from Banks other than the Nationalized Indian Banks, the Bank must be commercial Bank having net worth



in excess of Rs. 100 Crores [Rupees One Hundred Crores] and a declaration to this effect should be made by such commercial Bank either in the 'Bank Guarantee' itself or separately on its letterhead. Purchaser will verify the BG from issuing bank.

- 16.3 Any Bid not secured in accordance with "ITB: Clause-16.1 & Clause-16.2" may be rejected by BGCL as non-responsive.
- 16.4 Unsuccessful Bidder's EMD will be discharged/ returned as promptly as possible, but not later than 'thirty [30] days' after finalization of tendering process.
- 16.5 The successful Bidder's EMD will be discharged upon the Bidder's acknowledging the 'Award' and signing the 'Agreement' and furnishing the 'Contract Performance Security (CPS)/ Security Deposit' pursuant to clause no. 38 of ITB.
- 16.6 Notwithstanding anything contained herein, the EMD may also be forfeited in any of the following cases:
- (a) If a Bidder withdraws his Bid during the 'Bid Validity Period'
 - (b) If a Bidder has indulged in corrupt/fraudulent /collusive/coercive practice
 - (c) If the Bidder modifies Bid during the period of bid validity (after Due Date and Time for Bid Submission).
 - (d) Violates any other condition, mentioned elsewhere in the Tender Document, which may lead to forfeiture of EMD.
 - (e) In the case of a successful Bidder, if the Bidder fails to:
 - (i) acknowledge receipt of the "Notification of Award" / Fax of Acceptance [FOA]",
 - (ii) furnish "Contract Performance Security / Security Deposit", in accordance with "ITB: Clause-38"
 - (iii) accept 'arithmetical corrections' as per provision of the clause 30 of ITB.
- 16.7 In case EMD is in the form of 'Bank Guarantee', the same must indicate the Tender Document No. and the name of Tender Document for which the Bidder is quoting. This is essential to have proper correlation at a later date.
- 16.8 MSEs (Micro & Small Enterprises) are exempted from submission of EMD in accordance with the provisions of PPP-2012 and Clause 40 of ITB. However, Traders/Dealers/ Distributors /Stockiest /Wholesaler are not entitled for exemption of EMD. The Government Departments/PSUs are also exempted from the payment of EMD. Further, Startups are also exempted from the payment of EMD.

In addition to above, following categories of Sellers/Service Providers are also exempted from furnishing Earnest Money / Bid Bond:

- (i) Start-ups as recognized by Department for Promotion of Industry and Internal Trade (DPIIT), holding valid Startup Recognition Certificate which is to be uploaded while bidding and claiming EMD exemption and to be validated by the Buyer. Bidder to ensure that turnover for any of the financial years has not exceeded beyond limits prescribed in the certificate / Start Up scheme of DPIIT.
- (ii) KVIC, ACASH, WDO, Coir Board, TRIFED and Kendriya Bhandar.
- (iii) Sellers who have got their credentials verified through the process of Vendor



Assessment by Vendor Assessment Agencies for the Primary Product / Primary Service for which Bid / RA has been invited and holding valid Vendor Assessment or Vendor Assessment Exemption Report / confirmation (Seller to upload VA report / VAE confirmation to be validated by the Buyer).

- (iv) Sellers/ Service Provider having annual turnover of INR 500 Crore or more, at least in one of the past three completed financial year(s).
- (v) Sellers / Service Providers holding valid BIS License for the Primary Product Category whose credentials are validated through BIS database and through uploaded supporting documents to be validated by the buyer Central/State PSUs.
- (vi) Seller / Service Provider registered with designated Agency / Authority as specified in the bid document by the Buyer – such bidder shall have to upload scanned copy of relevant registration document in place of Bid Security document while bidding.

Bidders are required to submit relevant document for exemption from furnishing Earnest Money / Bid Bond

- 16.9 In addition to existing specified form (i.e. Demand Draft (DD)/ Banker's Cheque/ Bank Guarantee (including e- bank guarantee)) mentioned in tender documents for submission of EMD/Bid Bond, the bidder can also submit the EMD through online banking transaction i.e. IMPS/NEFT/RTGS etc. While remitting, the bidder must indicate EMD and tender/E-tender no. under remarks. Bidders shall be required to submit/ upload the successful transaction details along-with their bid/e-bid in addition to forwarding the details to dealing officer through email/letter with tender reference number immediately after remittance of EMD.

In absence of submitting/ uploading the remittance details, the bids are likely to be considered as bid not accompanied with EMD. Further, in case of the above online transaction, submission of EMD in original is not applicable.

- 16.10 In case of forfeiture of EMD/ Bid Security, the forfeited amount will be considered inclusive of tax and tax invoice will be issued by BGCL. The forfeiture amount will be subject to final decision of BGCL based on other terms and conditions of order/ contract.
- 16.11 EMD/Bid Bond will not be accepted in case the same has reference of 'remitter'/'financer' other than bidder on the aforementioned financial instrument of EMD/ Bid Bond submitted by the bidder and bid of such bidder will be summarily rejected.
- 16.12 In case of submission of EMD in the form of FDR, the points mentioned below shall be applicable:

- (i) The Fixed Deposit Receipt (FDR) submitted by Bidder from a Bank based in India shall be duly pledged / lien in favour of "Bengal Gas Company Limited".

The FDR shall be in the name of the Bengal Gas Company Limited (BGCL), A/c.....(Name of Bidder)and the Bidder cannot encash / pre-mature this FDR without the discharge letter / NOC/approval of BGCL. However, BGCL can encash this FDR without the approval of the Bidder in case of non-compliance of the terms of the tender.



The original FDR shall be accompanied by a confirmation letter in original on letter head from the issuing bank to BGCL as per the format of "Third Party Deposit Confirmation Letter" placed as Form F-2B.

Note: FDR (free from any encumbrance payable at place mentioned in BDS) along with original confirmation letter in the manner mentioned above shall be uploaded/submitted as per tender conditions.

Bank means - Any Indian scheduled Bank (excluding Co-operative banks and Regional Rural bank) or a branch of an International Bank situated in India and registered with 'Reserve Bank of India' as Scheduled Foreign Bank. However, in case of "Fixed Deposit" from Banks other than the Nationalized Indian Banks, the Bank must be commercial Bank having net worth in excess of Rs. 100 Crores [Rupees One Hundred Crores] and a declaration to this effect should be made by such commercial Bank either in the "Fixed Deposit" itself or separately on its letterhead. BGCL will verify the Fixed Deposit Receipt from issuing bank.

(ii) The FDR should have a validity of at least 'two [02] months' beyond the date on which the bid expires.

(iii) Any dispute arising out of or in relation to the said FDR shall be subject to the exclusive jurisdiction of courts at Kolkata.

(iv) FDR in Original and Third Party Deposit Confirmation Letter in Original has to be kept in Custody of BGCL.

16A **DECLARATION FOR BID SECURITY**

Bidder (including MSEs, Startups) to whom exemption is allowed as per Clause no. 16.8 above are required to submit Declaration for Bid Security as per proforma at Form F-2A.

17 **PRE-BID MEETING (IF APPLICABLE)**

17.1 The Bidder(s) or his designated representative are invited to attend a "Pre-Bid Meeting" which will be held at address specified in IFB. It is expected that a bidder shall not depute more than 02 representatives for the meeting.

17.2 Purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage. The Bidder must submit their queries / clarifications to BGCL in the format "F-11", as mentioned at clause no. 8.0 of ITB.

17.3 Text of the questions raised and the responses given, together with any responses prepared after the meeting, will be uploaded on GeM portal website against the GeM bid as specified in "ITB: Clause-8. Any modification of the Contents of Bidding Documents listed in "ITB: Clause-7.1", that may become necessary as a result of the Pre-Bid Meeting shall be made by the Employer exclusively through the issue of an Corrigendum pursuant to "ITB: Clause-9", and not through the minutes of the Pre-Bid Meeting.

17.4 Non-attendance of the Pre-Bid Meeting will not be a cause for disqualification of Bidder.



18 FORMAT AND SIGNING OF BID

- 18.1 The Bid shall be typed or written in indelible ink [in the case of copies, photocopies are also acceptable] and shall be signed by a person or persons duly authorized to sign on behalf of the Bidder (as per POA). The name and position held by each person signing, must be typed or printed below the signature. All pages of the Bid except for unamendable printed literature where entry(s) or amendment(s) have been made shall be initialed by the person or persons signing the Bid.
- 18.2 The Bid shall contain no alterations, omissions, or additions, unless such corrections are initialed by the person or persons signing the Bid.

19 ZERO DEVIATION AND REJECTION CRITERIA

- 19.1 ZERO DEVIATION: Deviation to terms and conditions of "Bidding Documents" may lead to rejection of bid. BGCL will accept bids based on terms & conditions of "Bidding Documents" only. Bidder may note BGCL will determine the substantial responsiveness of each bid to the Bidding Documents pursuant to provision contained in clause 29 of ITB. For purpose of this, a substantially responsive bid is one which conforms to all terms and conditions of the Bidding Documents without deviations or reservations. BGCL's determination of a bid's responsiveness is based on the content of the bid itself without recourse to extrinsic evidence.

Bidder is requested not to take any deviation(s)/exception(s) to the terms & conditions of Tender Document, and submit all requisite documents as mentioned in this Tender Document, failing which their Bid will be liable for rejection. If a Bidder does not reply to the queries in the permitted time frame then its Bid shall be evaluated based on the documents available in the Bid.

As a principle, clarifications from bidders after opening of tenders will not be sought. However, where clarifications / documents from the bidders on important aspects are absolutely necessary for finalization of tender, clarifications from bidder can be asked. The request for clarification shall be given in email/portal, asking the bidder to respond by a specified date, and also mentioning therein that, if the bidder does not comply or respond by the date, his tender will be liable to be rejected. Depending on the outcome, such tenders are to be ignored or considered further. No change in prices or substance of the bid including specifications, shall be offered or permitted. No post-bid clarification at the initiative of the bidder shall be entertained. The shortfall information/ documents should be sought only in case of historical documents which pre-existed bids and which have not undergone change since then.

- 19.2 **REJECTION CRITERIA:** Notwithstanding the above, deviation to the following clauses of Tender document shall lead to summarily rejection of Bid:
- (a) Firm Price
 - (b) Earnest Money Deposit / Bid Security / Bid Security declaration, as applicable
 - (c) Documents as specified in Bid Evaluation Criteria (BEC).
 - (d) Specification & Scope of Work
 - (e) Schedule of Rates / Price Schedule / Price Basis
 - (f) Duration / Period of Contract/ Completion schedule
 - (g) Period of Validity of Bid
 - (h) Price Reduction Schedule



- (i) Contract Performance Security
- (j) Guarantee / Defect Liability Period
- (k) Arbitration / Resolution of Dispute/Jurisdiction of Court
- (l) Force Majeure & Applicable Laws
- (m) Integrity Pact (if Applicable)
- (n) Any other condition specifically mentioned in the tender document elsewhere that non-compliance of the clause lead to rejection of bid.

Note: Further, it is once again reminded not to mention any condition in the Bid which is contradictory to the terms and conditions of Tender document.

20 E-PAYMENT

Bengal Gas Company Limited has initiated payments to Service Providers electronically, and to facilitate the payments electronically through 'e-banking'.

[D] – SUBMISSION OF BIDS

21 SUBMISSION, SEALING AND MARKING OF BIDS

- 21.1 Bids shall be submitted on GeM portal. No Manual/ Hard Copy (Original) / E-mail offer shall be acceptable. Physical documents shall be addressed to the owner at address specified in IFB.
- 21.2 Bids submitted under the name of AGENT/ REPRESENTATIVE /RETAINER/ ASSOCIATE etc. on behalf of a bidder/affiliate shall not be accepted.

22 DEADLINE FOR SUBMISSION OF BIDS

- 22.1 The bids must be submitted in GeM portal not later than the date and time specified in the tender documents.
- 22.2 BGCL may, in exceptional circumstances and at its discretion, extend the deadline for submission of Bids (8.0 and/or 9 of ITB refers). In that case all rights and obligations of BGCL and the Bidders, previously subject to the original deadline will thereafter be subject to the deadline as extended. Notice for extension of due date of submission of bid will be uploaded on GeM portal/ / communicated to the bidders.

23 LATE BIDS

- 23.1 Any Bid received after the Bid Due Date & Time of tenders will be treated as late bids. However, GeM portal shall close immediately after the due date for submission of bid and no bids can be submitted thereafter.

Where the EMD/physical documents has been received but the bid is not submitted by the bidder in the GeM portal, such EMD/ physical documents shall be returned immediately.

- 23.2 EMD /physical documents received to address other than one specifically stipulated in the Tender Document will not be considered for evaluation/opening/award if not received to the specified destination within stipulated date & time.



24 MODIFICATION AND WITHDRAWAL OF BIDS

24.1 Modification and withdrawal of bids shall be as follows: -

The bidder may withdraw or modify its bid after bid submission but before the due date and time for submission as per tender document.

24.2 No bid shall be modified/ withdrawn after the Due Date & Time for Bid submission.

24.3 Any withdrawal/ modification/substitution of Bid in the interval between the Due Date & Time for Bid submission and the expiration of the period of bid validity specified by the Bidder in their Bid shall result in the Bidder's forfeiture of EMD pursuant to clause 16 of ITB / invocation of action as per Bid Security declaration and rejection of Bid.

24.4 The latest Bid submitted by the Bidder before Bid Due Date & Time shall be considered for evaluation and all other Bid(s) shall be considered to be unconditionally withdrawn.

[E] – BID OPENING AND EVALUATION

25 EMPLOYER'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS

25.1 BGCL reserves the right to accept or reject any Bid, and to annul the Bidding process and reject all Bids, at any time prior to award of Contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligations to inform the affected Bidder or Bidders of the ground for BGCL's action.

25.2 In GeM, there is provision for representation against disqualification of bidder within the specified period after disqualifying the bidder against GeM Bid. Disqualified bidders should not upload new/additional documents against representation on GeM as the same shall not be evaluated.

Further, following decisions of BGCL shall not be subject to review:

- a) Determination of the need for procurement;
- b) Selection of the mode of procurement or bidding system;
- c) Choice of selection procedure;
- d) Provisions limiting participation of bidders in the procurement process;
- e) The decision to enter into negotiations with the L1 bidder;
- f) Cancellation of the procurement process except where it is intended to subsequently re-tender the same requirements;
- g) Issues related to ambiguity in contract terms may not be taken up after a contract has been signed, all such issues should be highlighted before consummation of the contract by the vendor/ contractor; and
- h) Complaints against specifications except under the premise that they are either vague or too specific so as to limit competition may be permissible.

26 BID OPENING

26.1 *Unpriced Bid Opening:*

BGCL will open unpriced bids at the schedule date & time.



26.2 *Priced Bid Opening:*

26.2.1 BGCL will open the price bids of those bidders who meet the qualification requirement and whose bids is determined to be technically and commercially responsive. Techno-commercial bid evaluation status will be informed to all bidders (including techno-commercially not qualified Bidders).

26.2.2 The price bids of those Bidders who were not found to be techno-commercially responsive shall not be opened.

26.3 As tender is processed on GeM portal, public opening of bids is not applicable.

27 CONFIDENTIALITY

Information relating to the examination, clarification, evaluation and comparison of Bids, and recommendations for the award of a Contract, shall not be disclosed to Bidder(s) or any other persons not officially concerned with such a process until the award to the successful bidder.

28 CONTACTING THE EMPLOYER

28.1 From the time of bid opening to the time of contract award, no bidder shall contact BGCL on any matter related to the bid, except on request and prior written permission.

28.2 Any effort by the Bidder to influence BGCL in the 'Bid Evaluation', 'Bid Comparison', or 'Contract Award' decisions may result in the rejection of the Bidder's Bid and action shall be initiated as per procedure for action in case Corrupt / Fraudulent / Collusive / Coercive practices in this regard apart from forfeiture of EMD/ Bid Security, if any.

29 EXAMINATION OF BIDS AND DETERMINATION OF RESPONSIVENESS

29.1 The Employer's determination of a bid's responsiveness is based on the content of the bid only. Prior to the detailed evaluation of Bids, the Employer will determine whether each Bid:-

- (a) Meets the "Bid Evaluation Criteria" of the Bidding Documents;
- (b) Has been properly signed;
- (c) Is accompanied by the required 'Earnest Money / Bid Security / Bid Security Declaration
- (d) Is substantially responsive to the requirements of the Bidding Documents; and
- (e) Provides any clarification and/or substantiation that the Employer may require to determine responsiveness pursuant to "ITB: Clause-29.2"

29.2 A substantially responsive Bid is one which conforms to all the terms, conditions and specifications of the Bidding Documents without material deviations or reservations or omissions for this purpose employer defines the foregoing terms below:-

- a) "Deviation" is departure from the requirement specified in the tender documents.
- b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirement in the tender documents.
- c) "Omission" is the failure to submit part or all of the information or documentation required in the tender document for evaluation of bid.

29.3 A material deviation, reservation or omission is one that,

- a) If accepted would,
 - i) Affect in any substantial way the scope, quality, or performance of the job as



- specified in tender documents.
- ii) Limit, in any substantial way, inconsistent with the Tender Document, the Employer's rights or the tenderer's obligations under the proposed Contract.
- b) If rectified, would unfairly affect the competitive position of other bidders presenting substantially responsive bids.
- 29.4 The employer shall examine all aspects of the bid to confirm that all requirements have been met without any material deviation, reservation or omission.
- 29.5 Tenders that do not meet the basic requirements specified in the bid documents are to be treated as unresponsive {both during Techno-commercial evaluation and Financial Evaluation in case of Two Bid System) and will be ignored. All tenders received will first be scrutinized to see whether the tenders meet the basic requirements as incorporated in the Bid document and to identify unresponsive tenders, if any. Unresponsive offers may not subsequently be made responsive by correction or withdrawal of the non- conforming stipulation. Some important points on the basis of which a tender may be declared as unresponsive and be ignored during the initial scrutiny are:
- The tender is not in the prescribed format or is unsigned or not signed as per the stipulations in the bid document;
 - The required EMD has not been provided or exemption from EMD is claimed without acceptable proof of exemption;
 - The bidder is not eligible to participate in the bid as per laid down eligibility criteria
 - The bid departs from the essential requirements specified in the bidding document (for example, the tenderer has not agreed to give the required contract performance security); or
 - Against a schedule in the list of requirements in the tender enquiry, the tenderer has not quoted for the entire requirement as specified in that schedule (example: in a schedule, it has been stipulated that the tenderer will supply the equipment, install and commission it and also train the BGCL's personnel for operating the equipment. The tenderer has, however, quoted only for supply of the equipment).

30 CORRECTION OF ERRORS

Not Applicable

31 CONVERSION TO SINGLE CURRENCY FOR COMPARISON OF BIDS

Not Applicable. All bids submitted must be in the currency specified at clause 14 of ITB.

32 EVALUATION AND COMPARISON OF BIDS

Bid shall be evaluated as per Evaluation Methodology mentioned in Section-II of bidding documents on lowest bid.

Refer BDS for tie-breaker criteria.

33 COMPENSATION FOR EXTENDED STAY – NOT APPLICABLE



34 PURCHASE PREFERENCE

Purchase preference to Micro & Small Enterprises (MSEs), ~~Domestically Manufactured Electronic Products / Telecom Products or~~ Policy to Provide Purchase Preference as per Public Procurement (Preference to Make in India), Order 2017 etc. shall be allowed as per Government instructions in vogue, as applicable from time to time.

As per GEM policy/guidelines, MSE bidders have to update their status in their Profile and declare whether they are participating as MSE on GeM Portal (including updating their status in Profile) while submitting the bid on GeM tender. Further, MSE are required to upload relevant documents in bid as per provision of tender. However, evaluation and applicability of EMD exemption and purchase preference policy will be based on the confirmations & documents submitted by the bidder in their bid irrespective of selection/option made on GeM portal.

Bidders are required to select the applicable purchase preference (i.e. preference category) option while submitting the bid on GeM portal. However, evaluation and applicability of purchase preference policy will be based on the confirmations & documents submitted by the bidder in their bid irrespective of selection/option made on GeM portal

The policy to Provide Purchase Preference as per Public Procurement (Preference to Make in India), Order 2017 is enclosed as Annexure II to ITB herewith.

Bidders are advised to update their status on GeM portal to avoid any complications during evaluation.

IF – AWARD OF CONTRACT

35 AWARD

Subject to "ITB: Clause-29", BGCL will award the Contract to the successful Bidder whose Bid has been determined to be substantially responsive and has been determined as the lowest provided that bidder, is determined to be qualified to satisfactorily perform the Contract.

“BGCL intent to place the contract directly on the address from where Services are to be rendered. In case, bidder wants contract at some other address or Services are to be rendered from multiple locations, bidder is required to provide in their bid, the address on which contract is to be placed”.

BGCL will place the Contract directly on the successful bidder from whom the bid has been received & evaluated and will not place order on other entities such as subsidiary, business associate or partner, dealer/distributor etc. of the Bidder.

36 NOTIFICATION OF AWARD / FAX OF ACCEPTANCE

- 36.1 Prior to the expiry of ‘Period of Bid Validity’, Notification of Award for acceptance of the Bid will be intimated to the successful Bidder by BGCL either by E - mail /Letter or like means defined as the “Fax of Acceptance (FOA)”. The Contract shall enter into force on the date of FOA and the same shall be binding on BGCL and successful Bidder (i.e. Service Provider). The Notification of Award/FOA will constitute the formation of a Contract. The detailed GeM Contract / Letter of Acceptance shall be issued thereafter incorporating terms & conditions of



Tender Document, Corrigendum, Clarification(s), Bid and agreed variation(s)/acceptable deviation(s), if any. BGCL may choose to issue Notification of Award in form of detailed GeM Contract / Letter of Acceptance without issuing FOA and in such case the Contract shall enter into force on the date of detailed GeM Contract / Letter of Acceptance only.

- 36.2 Contract period shall commence from the date of "Notification of Award" or as mentioned in the Notification of Award. The "Notification of Award" will constitute the formation of a Contract, until the Contract has been effected pursuant to signing of Contract Agreement as per "ITB: Clause-37".
- 36.3 Upon the successful Bidder's / Contractor's furnishing of 'Contract Performance Security / Security Deposit', pursuant to "ITB: Clause-38", BGCL will promptly discharge his 'Earnest Money Deposit / Bid Security', pursuant to "ITB: Clause-16".
- 36.4 The Order/ contract value mentioned above is subject to Price Reduction Schedule clause.
- 36.5 BGCL will award the Contract to the successful Bidder, who, within 'fifteen [15] days' shall acknowledge.
- 36.6 **In addition to GeM Contract(s), BGCL may place Order(s) / Contract(s) outside GeM portal for execution of Order(s) / Contract(s) and payment to suppliers outside GeM portal. Order(s)/Contract(s) will be generated by mentioning unit price excluding GST, quantity and percentage of GST. Thus, break-up of quoted prices (such as Ex-works price, freight charges & GST) shall be provided by bidders post price bid opening, based on request from BGCL.**

37 SIGNING OF AGREEMENT

- 37.1 The successful Bidder/Service Provider shall be required to execute an 'Agreement' in the proforma given in this Bidding Document on a 'non-judicial stamp paper' of appropriate value [cost of the 'stamp-paper' shall be borne by the successful Bidder/Service Provider] and of 'State of India' specified in Bidding Data Sheet (BDS) only, within 'fifteen [15] days' of receipt of the "Fax of Acceptance [FOA]" of the Tender by the successful Bidder/Service Provider

failure on the part of the successful Bidder/Contractor to sign the 'Agreement' within the above stipulated period, shall constitute sufficient grounds for forfeiture of EMD//Action as per Bid Security declaration.

However, signing of Agreement shall not be applicable in cases wherein the individual contract value as specified in Notification of Award is less than INR 10 Lakh (exclusive of GST).

- 37.2 Bidders can request Bilingual (Hindi & English) Contract Agreement. The format for signing Contract Agreement in English is attached with this Bidding Document.

38 CONTRACT PERFORMANCE SECURITY / SECURITY DEPOSIT [CPS/SD]

- 38.1 Within 30 days of the receipt of the notification of award/ Fax of Acceptance from BGCL, the successful bidder shall furnish the Contract Performance Security (CPS) in accordance with of General Conditions of the Contract. The CPS shall be in the form of either Banker's Cheque or Demand Draft (DD) or Insurance Surety Bond or Fixed Deposit Receipt [in favour of



Bengal Gas Company Limited payable at place mentioned in **BDS]** or Bank Guarantee or online banking transaction or Letter of Credit (to be denominated in the currency of contract) and shall be in the currency of the Contract for the amount as applicable. Refer clause no 38.13 of ITB for detailed provisions in respect of CPS submission in the form of Fixed Deposit Receipt. However, there shall be no Contract Performance security / PBG requirement for contracts bid value up to Rs 5 Lakh.

- 38.2 The contract performance security shall be for an amount equal to specified in Bidding Data Sheet (BDS) towards faithful performance of the contractual obligations and performance of equipment. For the purpose of CPS, Contract/order value shall be exclusive of **GST (CGST & SGST/UTGST or IGST)**.

Bank Guarantee towards CPS shall be from any Indian scheduled bank or a branch of an International bank situated in India and registered with Reserve bank of India as scheduled foreign bank. However, in case of bank guarantees from banks other than the Nationalized Indian banks, the bank must be a commercial bank having net worth in excess of Rs 100 crores and a declaration to this effect should be made by such commercial bank either in the Bank Guarantee itself or separately on its letterhead.

- 38.3 The Service Provider shall submit CPS as per Form F-4 of Tender Document only but not as per format of GeM. Further, they also submit covering letter along with CPS as per format at F-4.
- 38.4 Failure of the successful bidder to comply with the requirements of this article shall constitute sufficient grounds for consideration of the annulment of the award and forfeiture of the EMD / action as per declaration for Bid Security.
- 38.5 The CPS has to cover the entire contract value including extra works/services also. As long as the CPS submitted at the time of award take cares the extra works/ services executed and total executed value are within the awarded contract price, there is no need for additional CPS. As soon as the total executed value is likely to burst the ceiling of awarded contract price, the Service Provider should furnish additional CPS.
- 38.6 Further, Ministry of Finance (MOF) Department of financial service has issued direction for submission of Bank Guarantee through online vide letter ref number F.No.7/112/2011-BOA dated 17th July 2012. The successful bidder can submit CPS online through issuing bank to BGCL directly as per the above direction including its revisions, if any. In such cases confirmation will not be sought from issuing banker by BGCL.
- 38.7 In addition to existing specified form (i.e. Demand Draft (DD)/ Banker's Cheque/ Bank Guarantee/Letter of Credit) mentioned in tender documents for submission of Security Deposit/ Contract Performance Security, the successful bidder can also submit the Security Deposit/ Contract Performance Security through online banking transaction i.e. IMPS/NEFT/RTGS/SWIFT etc. For this purpose, the details of BGCL's Bank Account is mentioned in BDS. Further, in case a successful Bidder is willing to furnish CPS through SWIFT, the details may be obtained from Purchase Officer immediately after receipt of FOA.

While remitting such online transaction, the bidder must indicate “**Security Deposit/ Contract Performance Guarantee against FOA/DLOA no. _____ (service provider to specify the FOA/DLOA No.)**” under remarks column of such transaction of respective bank portal. The contractor/vendor shall be required to submit the successful transaction details to the dealing



officer immediately through email/letter and necessarily within 30 days from the date of Fax of Acceptance.”

- 38.8 In case of forfeiture of Contract Performance Security/ Security Deposit in terms of GCC, the forfeited amount will be considered inclusive of tax and tax invoice will be issued by BGCL. The forfeiture amount will be subject to final decision of BGCL based on other terms and conditions of order/ contract.
- 38.9 CPBG/Security Deposit will not be accepted in case the same has reference of ‘remitter’/’financer’ other than bidder on the aforementioned financial instrument of CPBG/ Security Deposit submitted by the Service Provider.
- 38.10 The first payment to vendor is to be released only after submission of CPS / Security Deposit (SD).
- 38.11 Before the CPS / Security Deposit (SD) is released a "No Claim Certificate" is to be submitted by the supplier/vendor.
- 38.12 CPBG/SD/CPS shall be submitted within 30 days from the date of Award/FOA. **In case, BGCL allows additional time for submission of CPBG/SD beyond 30 days, a penal interest of Marginal Cost of Fund based Lending Rate (MCLR) for one year charged by SBI (applicable on due date of submission of CPBG/SD i.e. 30th day after issuance of FOA/Notification of award) plus 4.0% p.a. (on CPBG/SD amount) shall be charged for delay beyond 30 days i.e. from 31st days after issuance of FOA.**
- 38.13 **In case submission of CPS in the form of FDR, the points mentioned below shall be applicable:**

(i) The Fixed Deposit Receipt (FDR) submitted by Vendor/Contractor from a Bank based in India shall be duly pledged / lien in favour of “**Bengal Gas Company Limited**”. The FDR shall be in the name of the Bengal Gas Company Limited (BGCL) A/c(Name of Vendor/Contractor) and the Vendor/Contractor cannot encash / pre-mature this FDR without the discharge letter / NOC/approval of BGCL. However, BGCL can encash this FDR without the approval of the Vendor/Contractor in case of non-compliance of the terms of the order/contract.

The original FDR shall be accompanied by a confirmation letter in original on letter head from the issuing bank to BGCL as per the format of “**Third Party Deposit Confirmation Letter**” placed as Form F-4A.

Note: FDR (free from any encumbrance payable at place mentioned in BDS) along with original confirmation letter in the manner mentioned above shall be submitted by the Vendor/Contractor within 30 days of the receipt of the notification of award/ FOA from BGCL.

Here **Bank** means – Any Indian scheduled Bank (excluding Co-operative banks and Regional Rural bank) or a branch of an International Bank situated in India and registered with ‘Reserve Bank of India’ as Scheduled Foreign Bank. However, in case of “Fixed Deposit” from Banks other than the Nationalized Indian Banks, the Bank must be commercial Bank having net worth in excess of Rs. 100 Crores [Rupees One Hundred Crores] and a declaration to this effect



should be made by such commercial Bank either in the “Fixed Deposit” itself or separately on its letterhead. BGCL will verify the Fixed Deposit Receipt from issuing bank.

(ii) The FDR submitted should have a validity of at least ‘three [03] months’ beyond the Warranty Period/Defect Liability Period.

(iii) Any dispute arising out of or in relation to the said FDR shall be subject to the exclusive jurisdiction of courts at Kolkata.

(iv) FDR in Original and Third Party Deposit Confirmation Letter in Original has to be kept in Custody of BGCL.

39 PROCEDURE FOR ACTION IN CASE CORRUPT/ FRAUDULENT/COLLUSIVE/ COERCIVE PRACTICES

39.1 Procedure for action in case Corrupt/ Fraudulent/Collusive/Coercive Practices shall be as per Appendix-1 to Section-IV(GCC) of this tender document.

39.2 The Fraud Prevention Policy document is available on BGCL’s Website (www.bgcl.co.in) .

39.3 Name and contact details of Nodal Officer are mentioned in BDS.

39.4 NON-APPLICABILITY OF ARBITRATION CLAUSE IN CASE OF BANNING OF VENDORS/ SUPPLIERS / CONTRACTORS/BIDDERS/ CONSULTANTS INDULGED IN FRAUDULENT/ COERCIVE PRACTICES

Notwithstanding anything contained contrary in GCC and other "CONTRACT DOCUMENTS", in case it is found that the Service Provider/Bidders indulged in fraudulent/coercive practices at the time of bidding, during execution of the contract etc., and/or on other grounds as mentioned in BGCL’s “Procedure for action in case Corrupt/Fraudulent/Collusive/Coercive Practices”, the service provider/bidder shall be banned (in terms of aforesaid procedure) from the date of issuance of such order by Bengal Gas Company Limited., to such Service Providers/Bidders.

The Service Provider/ Bidder understands and agrees that in such cases where Service Provider/ Bidder has been banned (in terms of aforesaid procedure) from the date of issuance of such order by Bengal Gas Company Limited, such decision of Bengal Gas Company Limited shall be final and binding on such Service Provider/ Bidder and the ‘Arbitration clause’ in the GCC and other "CONTRACT DOCUMENTS" shall not be applicable for any consequential issue /dispute arising in the matter.

40 PUBLIC PROCUREMENT POLICY FOR MICRO AND SMALL ENTERPRISES

40.1 Following provision has been incorporated in tender for MSEs, in line with notification of Government of India, vide Gazette of India No. 503 dated 26.03.2012 proclaiming the Public Procurement Policy on procurement of goods and services from Micro and Small Enterprises (MSEs)

- i) Issue of tender document to MSEs free of cost.
- ii) Exemption to MSEs from payment of EMD/Bid Security.
- iii) In Tender, participating Micro and Small Enterprises quoting price within price band of L1 + 15% shall also be allowed to supply a portion of requirement by bringing down their prices to L1 price in a situation where L1 price is from someone other than a micro



and small enterprises and such micro and small enterprises shall be allowed to supply upto 25% of the total tendered value. In case of more than one such Micro and Small Enterprises, the supply shall be shared proportionately (to tendered quantity). Further, out of above 25%, 4% shall be reserved for MSEs owned by SC/ST entrepreneurs. Further, 3% shall be reserved for MSEs owned by women within above 25% reservation. The respective quota(s) shall be transferred to other MSEs in case of non-availability of MSEs owned by SC/ST entrepreneurs / MSEs owned by Women.

The quoted prices against various items shall remain valid in case of splitting of quantities of the items above.

In case tendered item is non-splitable or non-dividable (specified in Bid Data Sheet), MSE quoting price within price band L1 (other than MSE) + 15% , may be awarded for full/ complete supply of total tendered value subject to matching of L1 price.

40.2 The MSE(s) owned by SC/ST Entrepreneurs shall mean:-

- a) In case of proprietary MSE, Proprietor(s) shall be SC/ST.
- b) In case of partnership MSE, the SC/ST partners shall be holding atleast 51% share in the unit
- c) In case of private Limited Companies, at least 51% share is held by SC/ST. If the MSE is owned by SC/ST Entrepreneurs, the bidder shall furnish appropriate documentary evidence in this regard.

The MSE(s) owned by Women shall mean:-

- a) In case of proprietary MSE, Proprietor(s) shall be Women.
- b) In case of partnership MSE, the Women partners shall be holding atleast 51% share in the unit
- c) In case of private Limited Companies, at least 51% share is held by Women. If the MSE is owned by Women Entrepreneurs, the bidder shall furnish appropriate documentary evidence in this regard.

40.3 In case Bidder is a Micro or Small Enterprise, the Bidder shall submit Udyam Registration Certificate for availing benefit under Public Procurement Policy for MSEs-2012.

Vide Gazette notification dated 18.10.2022 of Ministry of MSME, the following is notified:

“In case of an upward change in terms of investment in plant and machinery or equipment or turnover or both, and consequent re-classification, an enterprise shall continue to avail of all nontax benefits of the category (micro or small or medium) it was in before the re-classification, for a period of three years from the date of such upward change”

Accordingly, in case of upward change in status, MSE bidder is required to submit the previous certificate also to get the MSE benefits.

The above documents submitted by the bidder shall be duly certified by the Chartered Accountant (not being an employee or a Director or not having any interest in the bidder's company/firm) and notary public with legible stamp.

If the bidder does not provide the above confirmation or appropriate document or any evidence, then it will be presumed that they do not qualify for any preference admissible in the Public Procurement Policy (PPP) 2012.

Further, MSEs who are availing the benefits of the Public Procurement Policy (PPP) 2012 get



themselves registered with MSME Data Bank being operated by NSIC, under SME Division, M/o MSME, in order to create proper data base of MSEs which are making supplies to CPSUs.

MSEs are advised to update their latest status on GeM portal also to avoid complications during the evaluation.

- 40.4 If against an order placed by BGCL, successful bidder(s) (other than Micro/Small Enterprise) is procuring material/services from their sub-vendor who is a Micro or Small Enterprise as per provision mentioned at clause no.40.3 above with prior consent in writing of the purchasing authority/Engineer-in-charge, the details like Name, Registration No., Address, Contact No. details of material & value of procurement made, etc. of such Enterprises shall be furnished by the successful bidder at the time of submission of invoice/Bill.
- 40.5 The benefit of policy are not extended to the traders/dealers/ Distributors /Stockiest/Wholesalers.
- 40.6 NSIC has initiated a scheme of “Consortia and Tender Marketing Scheme” under which they are assisting the Micro & Small enterprises to market their products and services through tender participation on behalf of the individual unit or through consortia.

Accordingly, if the MSEs or the consortia, on whose behalf the bid is submitted by NSIC, is meeting the Bid Evaluation Criteria and other terms and conditions of tender their bid will be considered for further evaluation. Further, in such cases a declaration is to be submitted by MSE/ consortia on their letter head (s) that all the terms and conditions of tender document shall be acceptable to them.

- 40.7 Interest payment on delayed payments to MSME is payable in line with Micro, Small and Medium Enterprises Development Act, 2006

41 AHR ITEMS

In item rate contract where the quoted rates for the items exceed 50% of the estimate rates, such items will be considered as Abnormally High Rates (AHR) items and payment of AHR items beyond the SOR stipulated quantities shall be made at the lowest amongst the following rates:

- I) Rates as per SOR, quoted by the Service Provider/Bidder.
- II) Rate of the item, which shall be derived as follows:
- a. Based on rates of Machine and labour as available from the contract (which includes service provider's supervision, profit, overheads and other expenses).
 - b. In case rates are not available in the contract, rates will be calculated based on prevailing market rates of machine, material and labour plus 15% to cover Service Provider's supervision profit, overhead & other expenses.

42 VENDOR PERFORMANCE EVALUATION

Procedure for Vendors Performance Evaluation shall be as per Appendix-2 to Section-IV (GCC) of this tender document.

These shall be in addition to penalty imposed by GeM for such irregularities.



43 INCOME TAX & CORPORATE TAX

43.1 Income tax deduction shall be made from all payments made to the contractor as per the rules and regulations in force and in accordance with the Income Tax Act prevailing from time to time.

43.2 Corporate Tax liability, if any, shall be to the contractor's account.

43.3 TDS

(i) TDS, wherever applicable, shall be deducted as per applicable act/law/rule.

(ii) Higher rate of TDS for non-filers of ITR

As per Section 206AB of Income Tax Act, 1961, in case of any vendor/customer who does not file their Income Tax Return for both of the two previous years preceding to current year and aggregate amount of TDS is more than or equal to 50,000/- in each of those previous two years (or limit defined by Govt. from time to time), then TDS will be deducted at the higher of following rates:

- (I) Twice the rate mentioned in relevant TDS section.
- (II) Twice the rate or rates in force
- (III) 5%

43.4 MENTIONING OF PAN NO. IN INVOICE/BILL

As per CBDT Notification No. 95/2015 dated 30.12.2015, mentioning of PAN no. is mandatory for procurement of goods / services/works/consultancy services exceeding Rs. 2 Lacs per transaction or as amended from time to time.

Accordingly, service provider should mention their PAN no. in their invoice/ bill for any transaction exceeding Rs. 2 lakhs or as amended from time to time. As provided in the notification, in case service provider do not have PAN no., they have to submit declaration in Form 60 along with invoice/ bill for each transaction.

Payment of service provider shall be processed only after fulfilment of above requirement.

44 DISPUTE RESOLUTION MECHANISM

44.1 QUARTERLY CLOSURE OF THE CONTRACT AND VENDOR GRIEVANCE PORTAL

During execution of orders, various issues may arise. In order to timely detect and to address the contractual issue(s) during the execution of contracts, BGCL has introduced a mechanism of Quarterly Closure of the contract, under which all the related issues /disputes will be monitored and addressed on quarterly basis for resolution. Vendor (hereinafter referred 'Vendor') should first refer any issues/disputes to Engineer-in-Charge (EIC) for LOA/contracts/ Dealing C&P Executive for Purchase Orders and co-operate them for smooth execution of the contract and to timely address the issues, if any. For applicability of 'Quarterly Closure', please refer BDS. In case issue is not resolved by above, Supplier may submit their issue(s) to Vendor Grievance Portal, which will be addressed by BGCL within 15 days. The Portal as available at www.bgcl.co.in



Accordingly, the methodology for resolution of issue(s)/ grievance (s) of Vendor/Supplier shall be as under:

- (i) Any issue should be first referred to EIC for LOA/contracts/ Dealing C&P Executive for Purchase Orders.
- (ii) In case issue is not resolved, Vendor may submit their issue/ grievance through online Vendor Grievance Portal.
- (iii) In case, Vendor is not satisfied, there is a provision of escalation of issue to higher authority in BGCL. This option is available two times to vendor.
- (iv) Further, issue(s) can only be submitted upto 1 month after closure of respective Contract.
- (v) Vendor should refer their issue/ grievance through above mode only. Issue/ grievance received through any other mode shall not be entertained.

44.2 CONCILIATION AND ARBITRATION

Refer to Section-IV to General Conditions of Contract (GCC).

45. DISPUTES BETWEEN CPSE'S/GOVERNMENT DEPARTMENT'S/ ORGANIZATIONS

Refer to Section-IV to General Conditions of Contract (GCC).

46. INAM-PRO (PLATFORM FOR INFRASTRUCTURE AND MATERIALS PROVIDERS)

Not Applicable

47. PROMOTION OF PAYMENT THROUGH CARDS AND DIGITAL MEANS

To promote cashless transactions, the onward payments by Contractors to their employees, service providers, sub-contractors and suppliers may be made through Cards and Digital means to the extent possible.

48. CONTRACTOR TO ENGAGE CONTRACT MANPOWER BELONGING TO SCHEDULED CASTES AND WEAKER SECTIONS OF THE SOCIETY

While engaging the contractual manpower, Contractors are required to make efforts to provide opportunity of employment to the people belonging to Scheduled Castes and weaker sections of the society also in order to have a fair representation of these sections.

49. PROVISIONS FOR STARTUPS (AS DEFINED IN GAZETTE NOTIFICATION NO. D.L-33004/99 DATED 18.02.2016 AND 23.05.2017 OF MINISTRY OF COMMERCE AND INDUSTRY AND AS AMENDED FROM TIME TO TIME)

[FOR APPLICABILITY REFER BDS]

As mentioned in Section-II, Prior turnover and prior experience shall not be required for all Startups [whether Micro & Small Enterprises (MSEs) or otherwise] subject to their meeting the quality and technical specifications specified in tender document and submission of



document specified in Section -II.

Further, the Startups are also exempted from submission of EMDs (if applicable).

If a Startup emerge lowest bidder, the LoA/Order on such Startup shall be placed for entire tendered quantity/group/item/part (as the case may be). However, during the Kick of Meeting monthly milestones/ check points would be drawn. Further, the performance of such contractor/ service provider will be reviewed more carefully and action to be taken as per provision of contract in case of failure/ poor performance.

50. **PROVISION REGARDING INVOICE FOR REDUCED VALUE OR CREDIT NOTE TOWARDS PRS**

PRS is the reduction in the consideration / contract value for the services covered under this contract. In case of delay in execution of contract, service provider should raise invoice for reduced value as per Price Reduction Schedule Clause (PRS clause). If service provider has raised the invoice for full value, then service provider should issue Credit Note towards the applicable PRS amount with applicable taxes.

In such cases if service provider fails to submit the invoice with reduced value or does not issue credit note as mentioned above, BGCL will release the payment to service provider after giving effect of the PRS clause with corresponding reduction of taxes charged on service provider's invoice, to avoid delay in payment.

In case any financial implication arises on BGCL due to issuance of invoice without reduction in price or non-issuance of Credit Note, the same shall be to the account of service provider. BGCL shall be entitled to deduct / setoff / recover such GST amount (CGST & SGST/UTGST or IGST) together with penalties and interest, if any, against any amounts paid or becomes payable by BGCL in future to the service provider under this contract or under any other contract.

51. **UNIQUE DOCUMENT IDENTIFICATION NUMBER BY PRACTICING CHARTERED ACCOUNTANTS**

Practicing Chartered Accountants shall generate Unique Document Identification Number (UDIN) for all certificates issued by them as per provisions of Tender Document.

However, UDIN may not be required for documents being attested by Chartered Accountants in terms of provisions of Tender Document.

52. **DOCUMENTS FOR PAYMENT:**

Payment terms shall be as mentioned in GCC-Services/SCC.

However, for release of payment, Service Provider is required to submit invoice along with other documents as mentioned in SCC. The final bill is to be submitted within one month after completion.

53. **ASSIGNMENT/SUBLET**

The following is added to the Clause no. 2.23 of General Conditions of Contract (GCC)-Services:



बंगाल गैस कंपनी लिमिटेड BENGAL GAS COMPANY LIMITED
(गैल एवम जीसीजीएससीएल का संयुक्त उद्यम) (A JV Company of GAIL and GCGSCL)

- i Procurement of material, hire of equipment or engagement of labour will not mean sub-contracting.
- ii Sub-contracting by the contractor without the approval of BGCL shall be a breach of contract, unless explicitly permitted in the contract.
- iii However, If specified in SCC Sub-contracting for Specialized Items of Work is allowed upto certain percentage of work.



ANNEXURE-II to Section-III

BIDDING DATA SHEET (BDS)

ITB TO BE READ IN CONJUNCTION WITH THE FOLLOWING:

A. GENERAL													
ITB Clause	Description												
1.1	The Employer/Owner is: Bengal Gas Company Limited.												
	The name of the Services to be performed is ARC FOR SUPPLY, INSTALLATION AND COMMISSIONING 1200SCMH ONLINE COMPRESSOR(EMD & GAS) FOR A PERIOD OF 2 YEARS ALONG WITH CAMC FOR FIVE YEARS (INCLUDING 1 YEAR WARRANTY PERIOD)												
3	BIDS FROM CONSORTIUM/ JOINT VENTURE- NOT APPLICABLE												
B. BIDDING DOCUMENT													
ITB Clause	Description												
8.1	For clarification purposes only, the communication address is: Attention: Sourabh Sarkar Head (C&P) Bengal Gas Company Limited 1st Floor, Block A, Finance Centre, CBD, Action Area – II B, Newtown, North 24 Parganas, Kolkata, West Bengal, India, Pin: 700161 Email: hodcnp@bgcl.co.in Phone No.: 033 2324 8161												
C. PREPARATION OF BIDS													
ITB Clause	Description												
11.1.1 (I)	Additional documents to be submitted by the Bidder with its Part-I (Techno-commercial/ Unpriced bid): SCC/Scope of Work refers.												
12	Additional Provision for Schedule of Rate/ Bid Price are as under: NIL												
12 & 13	Whether BGCL will be able to avail input tax credit in the instant tender <table border="1"><tr><td>YES</td><td>☐</td></tr><tr><td>NO</td><td>☒</td></tr></table> Details of Buyer: <table border="1"><tr><td>Services to be rendered at</td><td>Bengal Gas Company Limited 1st Floor, Block A, Finance Centre, CBD, Action Area – II B, Newtown, North 24 Parganas, Kolkata, West Bengal, India, Pin: 700161</td></tr><tr><td>PAN No.</td><td>AAICB1994M</td></tr><tr><td>GST no.</td><td>19AAICB1994M1Z0</td></tr><tr><td>BGCL Bank details</td><td>Punjab National Bank A/C NO.: 1721202100000204</td></tr></table>	YES	☐	NO	☒	Services to be rendered at	Bengal Gas Company Limited 1st Floor, Block A, Finance Centre, CBD, Action Area – II B, Newtown, North 24 Parganas, Kolkata, West Bengal, India, Pin: 700161	PAN No.	AAICB1994M	GST no.	19AAICB1994M1Z0	BGCL Bank details	Punjab National Bank A/C NO.: 1721202100000204
YES	☐												
NO	☒												
Services to be rendered at	Bengal Gas Company Limited 1st Floor, Block A, Finance Centre, CBD, Action Area – II B, Newtown, North 24 Parganas, Kolkata, West Bengal, India, Pin: 700161												
PAN No.	AAICB1994M												
GST no.	19AAICB1994M1Z0												
BGCL Bank details	Punjab National Bank A/C NO.: 1721202100000204												



		CORPORATE FINANCE BRANCH - KOLKATA 11, HEMANTA BASU SARANI, KOLKATA, 700001. IFSC Code: PUNB0172120					
14	The currency of the Bid shall be INR						
16.1, 16.10 and 38.6	In case 'Earnest Money / Bid Security' or "Contract Performance Security" is in the form of 'Demand Draft' or 'Banker's Cheque', the same should be favor of Bengal Gas Company Limited, payable at Kolkata. In case of submission through online banking transaction i.e. IMPS / NEFT / RTGS / SWIFT, etc, the details of BGCL's Bank account are as under: Account Holder's Name: Bengal Gas Company Limited Account Number: 1721202100000204 IFSC Code: PUNB0172120 Other details: CORPORATE FINANCE BRANCH - KOLKATA 11, HEMANTA BASU SARANI, KOLKATA, 700001 Bidder to mention reference no. "EMD/....." in narration while remitting the EMD / Bid Security amount and to mention reference no. "CPS/....." in narration while remitting the CPS amount in BGCL's Bank Account.						
D. SUBMISSION AND OPENING OF BIDS							
ITB Clause	Description						
4.0 of IFB	For the submission of physical document as per clause no. 4.0 of IFB, the Owner's address is: Attention: Head (C&P) Bengal Gas Company Limited Address: 1st Floor, Block A, Finance Centre, CBD, Action Area – II B, Newtown, North 24 Parganas, Kolkata, West Bengal, India, Pin: 700161						
E. EVALUATION, AND COMPARISON OF BIDS							
ITB Clause	Description						
32	In case of tie at L1 position for one or more bidders, the order shall be placed as per policy & Provision of GeM.						
34	The following Purchase Preference Policy will be applicable as per provisions mentioned in tender: i) Micro & Small Enterprises (MSEs) ii) Policy to Provide Purchase Preference as per Public Procurement (Preference to Make in India), Order 2017						
F. AWARD OF CONTRACT							
ITB Clause	Description						
37	State of India which stamp paper is required for Contract Agreement: Any State						
38	Contract Performance Security/ Security Deposit <table border="1" style="width: 100%;"> <tr> <td style="width: 50%;">APPLICABLE</td> <td style="width: 50%; text-align: center;">☒</td> </tr> <tr> <td>NOT APPLICABLE</td> <td style="text-align: center;">☐</td> </tr> </table> The value/ amount of Contract Performance Security/ Security Deposit CPS/SD @ 5% of the annualized Order / Contract value excluding GST to be submitted within 30 days of notification of award.			APPLICABLE	☒	NOT APPLICABLE	☐
APPLICABLE	☒						
NOT APPLICABLE	☐						



	OR Initial security deposit (ISD) @ 2.5% of total annualized basic Order / Contract value excluding GST within 30 days of FOA/notification of award and deduction @2.5% of the RA bill subsequently from RA bills till the total amount of security deposit (Including ISD and deducted amount) reaches 5% of Annualized Order / Contract Value excluding GST. Note: In case of Bank Guarantee, Claim Expiry date should be 3 month beyond BG Expiry Date. Validity of CPS/SD shall be 87 months from the date of GeM Contract. CPS shall be submitted within 30 days from the date of Award/FOA. In case, BGCL allows additional time for submission of CPS beyond 30 days, a penal interest of Marginal Cost of Fund based Lending Rate (MCLR) for one year charged by SBI (applicable on due date of submission of CPS i.e. 30th day after issuance of FOA/Notification of award) plus 4.0% p.a. (on CPS amount) shall be charged for delay beyond 30 days i.e. from 31st days after issuance of order/FOA.				
39.3	Name and contact details of nodal officer are as under: Shri Anupam Mukhopadhyay CEO, BGCL Tel: 033 2324 8038 Email: ceo@bgcl.co.in				
40	Whether tendered item is non-split able or not-divisible: <table border="1"><tr><td>YES</td><td>☒</td></tr><tr><td>NO</td><td>☐</td></tr></table>	YES	☒	NO	☐
YES	☒				
NO	☐				
41	Provision of AHR Item: <table border="1"><tr><td>APPLICABLE</td><td>☒</td></tr><tr><td>NOT APPLICABLE</td><td>☐</td></tr></table>	APPLICABLE	☒	NOT APPLICABLE	☐
APPLICABLE	☒				
NOT APPLICABLE	☐				
44.1	Quarterly Closure of Contract: <table border="1"><tr><td>APPLICABLE</td><td>☒</td></tr><tr><td>NOT APPLICABLE</td><td>☐</td></tr></table>	APPLICABLE	☒	NOT APPLICABLE	☐
APPLICABLE	☒				
NOT APPLICABLE	☐				
49	Applicability of provisions relating to Startups: <table border="1"><tr><td>APPLICABLE</td><td>☐</td></tr><tr><td>NOT APPLICABLE</td><td>☒</td></tr></table>	APPLICABLE	☐	NOT APPLICABLE	☒
APPLICABLE	☐				
NOT APPLICABLE	☒				



ANNEXURE-V to Section-III

POLICY TO PROVIDE PURCHASE PREFERENCE AS PER PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA), ORDER 2017

1.0 Ministry of Petroleum & Natural Gas vide Notification No. FP-20013/2/2017-FP-PNG-Part(4) (E-41432) dated 26.04.2022 has notified that Public Procurement (Preference to Make in India), Order 2017 (PPP-MII) issued by DPIIT and as amended from time to time shall be applicable to all the Public Sector Undertakings and their wholly owned subsidiaries under MoP&NG with certain modifications.

2.0 The Public Procurement (Preference to Make in India), Order 2017 (PPP-MII) issued by DPIIT to encourage 'Make in India' and promote manufacturing & production of goods and services in India with a view to enhancing income and employment.

3.0 DEFINITIONS:-

(i) **Local Content** means the amount of value added in India which shall, unless otherwise prescribed by the Nodal Ministry, be the total value of item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all custom duties) as a proportion of the total value, in percent.

Further Local value addition through services such as transportation, insurance, installation, commissioning, training, and after sale support like AMC/CMC etc. shall be considered in local content calculation.

(ii) **'Class-I local supplier'** means a supplier or service provider, whose goods, services or works offered for procurement, meets the minimum local content of equal to or more than 50%.

'Class-II local supplier' means a supplier or service provider, whose goods, services or works offered for procurement, meets the minimum local content of more than 20% but less than 50%.

'Non - Local supplier' means a supplier or service provider, whose goods, services or works offered for procurement, has local content less than or equal to 20%.

(iii) **L1** mean the lowest tender or lowest bid or the lowest quotation received in a tender, bidding process or other procurement solicitation as adjudged in the evaluation process as per tender or other procurement solicitation.

(iv) **Margin of Purchase Preference:** means the maximum extent to which the price quoted by a Class-I local supplier may be above the L1 for purpose of purchase Preference.

(v) **Nodal Ministry** means the Ministry of Petroleum & Natural Gas.



(vi) **Procuring Entity** means Bengal Gas Company Limited (BGCL).

(vi) **Works** means all the works as per Rule 130 of GFR-2017 also include 'turnkey works'

4.0 **MARGIN OF PURCHASE PREFERENCE:** The margin of purchase preference shall be 20%.

5.0 **ELIGIBILITY OF 'CLASS-I LOCAL SUPPLIER'/ 'CLASS-II LOCAL SUPPLIER'/ 'NON-LOCAL SUPPLIERS' FOR DIFFERENT TYPES OF PROCUREMENT**

(a) In procurement of all goods, services or works in respect of which the Nodal Ministry / Department has communicated that there is sufficient local capacity and local competition, only 'Class-I local supplier', shall be eligible to bid irrespective of purchase value.

(b) Only 'Class-I local supplier' and 'Class-II local supplier', shall be eligible to bid in procurements undertaken by procuring entities, except when Global tender enquiry/ International Competitive bidding has been issued. In global tender enquiries/ International Competitive bidding 'Non local suppliers' shall also be eligible to bid along with 'Class-I local suppliers' and 'Class-II local suppliers'.

(c) Works includes Engineering, Procurement and Construction (EPC) contracts and services include System Integrator (SI) contracts.

(d) HP-HT Operations in upstream oil and gas business activities shall be exempted from this order.

Note: Communication F. No. FP- 20013/2/2017-FP-PNG-Part(4) (E- 41432) dated 26.03.2024 from MoP&NG regarding 'Public Procurement (Preference to Make in India), Order 2017' (attached as Appendix-I) shall be part of this policy.

6.0 **PURCHASE PREFERENCE METHODOLOGY UNDER PPP-MII (SUBJECT TO QUANTITY DISTRIBUTION APPLICABLE TO MSES AS PER PUBLIC PROCUREMENT POLICY FOR MSE 2012, REFER EXAMPLES GIVEN BELOW):**

(a) Purchase preference shall be given to 'Class-I local supplier' in procurements in the manner specified here under.

(b) In the procurements of goods or works which are cover by para 5 (b) above and which are divisible in nature, the 'Class-I local supplier' shall get purchase preference over 'Class-II local supplier' as well as 'Non-local supplier', as per following procedure:



- i. Among all qualified bids, the lowest bid will be termed as L1. If L1 is 'Class-I local supplier', the contract for full quantity will be awarded to L1.
 - ii. If L1 bid is not a 'Class-I local supplier', 50% of the order quantity shall be awarded to L1. Thereafter, the lowest bidder among the 'Class-I local supplier' will be invited to match the L1 price for the remaining 50% quantity subject to the Class-I local supplier's quoted price falling within the margin of purchase preference, and contract for that quantity shall be awarded to such 'Class-I local supplier' subject to matching the L1 price. In case such lowest eligible 'Class-I local supplier' fails to match the L1 price or accepts less than the offered quantity, the next higher 'Class-I local supplier' within the margin of purchase preference shall be invited to match the L1 price for remaining quantity and so on, and contract shall be awarded accordingly. In case some quantity is still left uncovered on Class-I local suppliers, then such balance quantity may also be ordered on the L1 bidder.
- (c) In the procurements of goods or works which are covered by para 5 (b) and which are not divisible in nature, and in procurement of services where the bid is evaluated on price alone, the 'Class-I local supplier' shall get purchase preference over 'Class-II local supplier' as well as 'Non-local supplier', as per following procedure:
- i. Among all qualified bids, the lowest bid will be termed as L1. If L1 is 'Class-I local supplier', the contract will be awarded to L1.
 - ii. If L1 is not 'Class-I local supplier', the lowest bidder among the 'Class-I local supplier', will be invited to match the L1 price subject to Class-I local supplier's quoted price falling within the margin of purchase preference, and the contract shall be awarded to such 'Class-I local supplier' subject to matching the L1 price.
 - iii. In case such lowest eligible 'Class-I local supplier' fails to match the L1 price, the 'Class-I local supplier' with the next higher bid within the margin of purchase preference shall be invited to match the L1 price and so on and contract shall be awarded accordingly. In case none of the 'Class-I local supplier' within the margin of purchase preference matches the L1 price, the contract may be awarded to the L1 bidder.



iv. "Class-II local supplier" will not get purchase preference in any procurement.

d) **Applicability in tenders where contract is to be awarded to multiple bidders** - In tenders where contract is awarded to multiple bidders subject to matching of L1 rates or otherwise which are covered by para 5 (b), the 'Class-I local supplier' shall get purchase preference over 'Class II- local supplier' as well as 'Non-local supplier', as per following procedure:

- i) If 'Class-I Local suppliers' qualify for award of contract for at least 50% of the tendered quantity in any tender, the contract may be awarded to all the qualified bidders as per award criteria stipulated in the bid documents. However, in case 'Class -I Local suppliers' do not qualify for award of contract for at least 50% of the tendered quantity, purchase preference should be given to the 'Class-I local supplier' over 'Class-II local suppliers'/ 'Non local suppliers' provided that their quoted rate falls within 20% margin of purchase preference of the highest quoted bidder considered for award of contract so as to ensure that the 'Class-I Local suppliers' taken in totality are considered for award of contract for at least 50% of the tendered quantity.
- ii) First purchase preference has to be given to the lowest quoting 'Class-I local supplier', whose quoted rates fall within 20% margin of purchase preference, subject to its meeting the prescribed criteria for award of contract as also the constraint of maximum quantity that can be sourced from any single supplier. If the lowest quoting 'Class-I local supplier', does not qualify for purchase preference because of aforesaid constraints or does not accept the offered quantity, an opportunity may be given to next higher 'Class-I local supplier', falling within 20% margin of purchase preference, and so on.

7.0 CONCURRENT APPLICATION OF PUBLIC PROCUREMENT POLICY FOR MICRO AND SMALL ENTERPRISES ORDER, 2012 AND PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA) ORDER, 2017 (IF BOTH THE POLICIES ARE APPLICABLE):

The Class-I local suppliers, under PPP-MII Order, participating in any government tender, may or may not be MSEs, as defined under the MSME Act.



Similarly, MSEs participating in any government tender, may or may not be Class-I local suppliers. Suppliers may be categorized in following four broad categories for consideration or applicability of purchase preference:

Category	Terminology
Supplier is both MSE & Class-I local supplier.	"MSE Class-I local supplier"
Supplier is MSE but not Class-I local supplier.	"MSE but non-Class-I local supplier"
Supplier is not MSE but is Class-I local supplier.	"Non-MSE but Class-I local supplier"
Supplier is neither MSE nor Class-I local.	"Non-MSE non Class-I local supplier"

The applicability of PPP-MSE Order and PPP-MII Order in various scenarios, involving simultaneous purchase preference to MSEs and Class-I local suppliers under PPP-MSE Order and PPP-MII Order respectively, shall be as under:

- a) Items covered under Para 3(a) of PPP- MII Order, 2017 for which Nodal Ministry has notified sufficient local capacity and competition: For these items, only Class-I local suppliers are eligible to bid irrespective of purchase value. Hence, Class-I1 local suppliers or Non-local suppliers, including MSEs which are Class-I1 local suppliers/ Non-local suppliers, are not eligible to bid. Possible scenarios can be as under:
 - (i) L-1 is "MSE Class-I local supplier" - 100% of the tendered quantity is to be awarded to L-1.
 - (ii) L-1 is "Non-MSE but Class-I local supplier" - Purchase preference is given to MSEs as per PPP-MSE Order. Balance quantity is to be awarded to the L-1 bidder.
- b) Items reserved exclusively for procurement from MSEs as per PPP-MSE Order: These items are reserved exclusively for purchase from MSEs. Hence, non-MSEs are not eligible to bid for these items. Possible scenarios can be as under:
 - (i) L-1 is "MSE Class-I local supplier" - 100% of the tendered quantity is to be awarded to L-1.
 - (ii) L-1 is "MSE non-Class-I local supplier" - Purchase preference is to be given to Class-I local supplier as per PPP-MII Order. Balance quantity, is to be awarded to L-1 bidder.



- c) If items are neither notified for sufficient local capacity nor reserved for MSEs, then the process will be as follows:
- (a) Items covered under Para 3A(b) of PPP-MII Order are divisible items and both MSEs as well as Class-I local suppliers are eligible for purchase preference. Possible scenarios can be as under:
- (i) L-1 is "MSE Class-I local supplier" - 100% of the tendered quantity is to be awarded to L-1.
 - (ii) L-1 is "Non-MSE but Class-I local supplier" - Purchase preference is to be given to MSEs, if eligible, as per PPP-MSE Order. Balance quantity is to be awarded to L-1 bidder.
 - (iii) L-1 is "MSE but non-Class-I local supplier" - Purchase preference is to be given to Class-I local suppliers, if eligible, as per PPP-MII Order. Balance quantity is to be awarded to L-1 bidder.
 - (iv) L-1 is "Non-MSE non-Class-I local supplier" - Purchase preference is to be given to MSEs as per PPP-MSE Order. Thereafter, purchase preference is to be given to Class-I local suppliers for "50% of the tendered quantity minus quantity allotted to MSEs above" as per PPP-MII Order. For the balance quantity, contract is to be awarded to L-1 bidder. (Refer Illustrative example).
- (b) Items covered under Para 3A(c) of PPP-MII Order, 2017 are non-divisible items and both MSEs as well as Class-I local suppliers are eligible for purchase preference. Possible scenarios can be as under:
- (i) L-1 is "MSE Class-I local supplier"- Contract is awarded to L-1.
 - (ii) L-1 is not "MSE Class-I local supplier" but the "MSE Class-I local supplier" falls within 15% margin of purchase preference - Purchase preference is to be given to lowest quoting "MSE Class-I local supplier". If lowest quoting "MSE Class-I local supplier" does not accept the L-1 rates, the next higher "MSE Class-I local supplier" falling within 15% margin of purchase preference is to be given purchase preference and so on.
 - (iii) If conditions mentioned in sub paras (i) and (ii) above are not met i.e. L-1 is neither "MSE Class-I local supplier" nor "non-MSE Class-I local supplier" is eligible to take benefit of purchase preference, the contract is to be awarded/ purchase preference to be given in different possible scenarios as under:



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(गैल एवम जीसीजीएससीएल का संयुक्त उद्यम) (A JV Company of GAIL and GCGSCL)

- A. L1 is "MSE but non-Class-I local supplier" or "Non-MSE but Class-I local supplier" – Contract is to be awarded to L1.
 - B. L1 is "Non-MSE non-Class-I local supplier" - First purchase preference to be given to MSE as per PPP-MSE Order. If MSE not eligible/ does not accept - purchase preference to be given to Class- I Local supplier as per PPP-MII Order. If Class-I Local supplier also not eligible/ does not accept - contract to be awarded to L-1.
- d) Items reserved for both MSEs and Class- I local suppliers: These items are reserved exclusively for purchase from MSEs as well as Class-I local suppliers. Hence, only "MSE Class-I local supplier" are eligible to bid for these items. Non-MSEs/Class-II local suppliers/ Non-local suppliers cannot bid for these items. Hence the question of purchase preference does not arise.
- e) Non-local suppliers, including MSEs falling in the category of Non-local suppliers, shall be eligible to bid only against Global Tender Enquiry.



8.0 Example to deal Various situations in case a bidder is eligible to seek benefit under Public Procurement (Preference to Make in India), Order 2017 as well as Public Procurement Policy for MSE 2012 (PPP for MSE 2012) :

(Scenario: Divisible items, both MSEs as well as Class-I local suppliers eligible for purchase preference and L-1 is "Non-MSE non-Class-I local supplier") Item - Desktop computer Qty- 50 Nos.

Details of bids received

Sr. No.	Name of bidder	Rates quoted	Price Ranking	Status of bidder
1	A	100	L1	"Non-MSE non- Class-I local supplier"
2	B	110	L2	"Non-MSE but Class-I local supplier"
3	C	112	L3	"MSE but non- Class-I local supplier"
4	D	115	L4	"Non-MSE but Class-I local supplier"
5	E	118	L5	"MSE but non- Class-I local supplier"
6	F	120	L6	"MSE Class-I local supplier"

1. In this case, first purchase preference is to be given to MSEs as per PPP-MSE Order for 25% of tendered quantity of 50 Nos. i.e. 12.5 Nos. (Rounded off to the next whole number say 13 Nos). Accordingly, invite L3 (bidder C), whose quoted rates falls within 15% margin of purchase preference to match L1 price i.e. Rs. 100/- for quantity of 13 Nos. Bidder "E" and "F", although MSEs, will not get purchase preference since their quoted rates don't fall within 15% margin of purchase preference. Bidder C will be considered for order of 13 Nos. on confirmation of reduction of price.
2. For 50% of balance quantity of 37 number (tendered quantity of 50- 13 awarded to bidder C; assuming bidder C has confirmed to accept L1 rates), purchase preference will be given to lowest Class-I local supplier as per PPP-MII Order. Accordingly, bidder B will be invited to match L-1 price for 50% of 37 Nos i.e. 18.5 (say 19 Nos of computers). If bidder "B" does not accept the L1 price i.e. price of Rs. 100/- per unit, next higher Class-I local supplier falling within 20% margin of purchase preference, i.e. bidder "D", may be invited to match L-1 price for 19 Nos. of



computers and so on.

3. For remaining quantity i.e. 18 Nos (50-13-19), the contract will be awarded to lowest quoting bidder i.e. Bidder "A", who is L-1 in the example.

9.0 **VERIFICATION OF LOCAL CONTENT/ DOMESTIC VALUE ADDITION**

- a. The 'Class-I local supplier'/ 'Class-II local supplier' at the time of tender, bidding or solicitation shall require to indicate percentage of local content and provide **self-certification** (as per proforma at Form-2 to Annexure V to Section-III) that the item offered meets the minimum local content for 'Class-I local supplier'/ 'Class-II local supplier' as the case may be and shall give details of the location(s) at which the local value addition is made.
- b. In cases of procurement for a value in excess of Rs. 10 crores, in addition to Form-2 'Class-I local supplier'/ 'Class-II local supplier' shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content as per proforma at Form -3 to Annexure V to Section-III.
- c. In case a complaint is received by the procuring agency relating to implementation of this order including the claim of a bidder regarding local content/ domestic value addition, the same shall be referred to Competent Authority who is empowered to look into procurement related complaints.
- d. Nodal Ministry may constitute committees with internal and external experts for independent verification of self-declarations and auditor's/accountant's certificates on random basis and in the case of complaints. A complaint fee of Rs.2 Lakh or 1% of the value of the domestically manufactured products being procured (subject to a maximum of Rs. 5 Lakh), whichever is higher, shall be paid by Demand Draft to be deposited with BGCL. In case, the complaint is found to be incorrect, the complaint fee shall be forfeited. In case, the complaint is upheld and found to be substantially correct, deposited fee of the complainant would be refunded without any interest.
- e. In case of false declarations, BGCL shall initiate action for banning such manufacturer/supplier/service provider as per as per BGCL's extant



“Procedure for action in case Corrupt/Fraudulent/Collusive/Coercive Practices”

- f. A supplier who has been debarred by any procuring entity for violation of this Order shall not be eligible for preference under this Order for procurement by any other procuring entity for the duration of the debarment. The debarment for such other procuring entities shall take effect prospectively from the date on which it comes to the notice of other procurement entities, in the manner prescribed under paragraph g below.
- g. The Department of Expenditure shall issue suitable instructions for the effective and smooth operation of this process, so that:
 - i. The fact and duration of debarment for violation of this Order by any procuring entity are promptly brought to the notice of the Member-Convenor of the Standing Committee and the Department of Expenditure through the concerned Ministry /Department or in some other manner;
 - ii. on a periodical basis such cases are consolidated and a centralized list or decentralized lists of such suppliers with the period of debarment is maintained and displayed on website(s);
 - iii. in respect of procuring entities other than the one which has carried out the debarment, the debarment takes effect prospectively from the date of uploading on the website(s) in the such a manner that ongoing procurements are not disrupted.

10.0 RECIPROCITY CLAUSE

- i. When a Nodal Ministry/Department identifies that Indian suppliers of an item are not allowed to participate and/ or compete in procurement by any foreign government, due to restrictive tender conditions which have direct or indirect effect of barring Indian companies such as registration in the procuring country, execution of projects of specific value in the procuring country etc., it shall provide such details to all its procuring entities including CMDs/CEOs of PSEs/PSUs, State Governments and other procurement agencies under their administrative control and GeM for appropriate reciprocal action.
- ii. Entities of countries which have been identified by the



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nodal Ministry/Department as not allowing Indian companies to participate in their Government procurement for any item related to that nodal Ministry shall not be allowed to participate in Government procurement in India for all items related to that nodal Ministry/ Department, except for the list of items published by the Ministry/ Department permitting their participation.

- iii. The term 'entity' of a country shall have the same meaning as under the FDI Policy of DPIIT as amended from time to time.



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Appendix-I

Communication F. No. FP- 20013/2/2017-FP-PNG-Part(4) (E- 41432) dated 26.03.2024 from MoP&NG regarding 'Public Procurement (Preference to Make in India), Order 2017'

Government of India
Ministry of Petroleum and Natural Gas
(Flagship Programme Cell)

Shastri Bhawan, New Delhi
Dated: 26th March, 2021

To

1. Chairman, IOCL
2. C&MD, ONGC/ BPCL/ HPCL/ OIL/ GAIL/ EIL/ Balmer Lawrie
3. Managing Director, CPCL/ NRL/ MRPL/ BCPL/ OVL
4. DG, DGH
5. DG, PPAC
6. Secretary, OIDB
7. ED, OISD
8. ED, CHT
9. Director, RGIPT/ IPE
10. Secretary, PNGRB
11. CEO & MD, ISPRL

Subject: Public Procurement (Preference to Make in India) Order, 2017-reg.

Sir/ Madam,

I am directed to refer to this Ministry's letter of even number dated 26.04.2022 on the above mentioned subject.

2. In this regard, it is stated that the sector specific relaxation granted under para 2(b) of aforementioned letter, has been reviewed in the Ministry and it has been decided that scope of this relaxation shall be limited to the items (list enclosed) to be installed/ operated in flammable environment of oil and gas process industry.

3. This issues with the approval of Hon'ble Minister, P&NG.

Yours faithfully

Kala
(Kala) 26/3/24

Under Secretary to the Govt. of India
Tel.: 011-23381029

Encl.: as above

Copy to:

- a. PS to Hon'ble Minister, P&NG
- b. PS to Hon'ble MoS, P&NG
- c. PPS/ PS to Secretary, P&NG
- d. PPS/PS to AS&FA/ AS, MoPNG
- e. PPS/ PS to JS (E & BR)/ JS(GP)/ JS (M& OR)/ JS (IC)/ JS (G)/ JS (IFD)/ DDG, MoPNG
- f. Technical Director, NIC: with a request to upload the letter on MoPNG website

Copy for information to,

Secretary, DPIIT

Government of India
Ministry of Petroleum and Natural Gas
(Flagship Programme Cell)

Shastri Bhawan, New Delhi
Dated 26th April, 2022

To,

1. Chairman, IOCL
2. C&MD, BPCL/ HPCL/ ONGC/ OIL/ GAIL/ EIL/ Balmer Lawrie
3. Managing Director, MRPL/NRL/CPCL// BCPL/ OVL
4. DG, DGH
5. DG, PPAC
6. Secretary, OIDB
7. ED, PCRA
8. ED, OISD
9. ED, CHT
10. Director, RGIPT
11. Secretary, PNGRB
12. CEO & MD, ISPRL

Sub: Public Procurement (Preference to Make in India) (PPP-MII) Order, 2017-reg.

Sir/Madam,

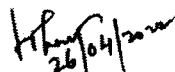
I am directed to refer to this Ministry's letter of even number dated 23.02.2022 regarding Policy to Provide Purchase Preference (linked with local content) (PP-LC) in all Public Sector Undertakings under the Ministry of Petroleum and Natural Gas (MoP&NG) and to say that Public Procurement (Preference to Make in India) Order, 2017 issued by DPIIT and as amended time to time shall be applicable to all the Public Sector Undertakings and their wholly owned subsidiaries under MoP&NG; Joint Ventures that have 51% or more equity by one or more Public Sector Undertakings under MoP&NG; attached and subordinate offices of MoPNG w.e.f. 01.04.2022.

2. Moreover, as per para 14 of the PPP-MII Order, the following modifications in the order shall be applicable on the procuring entities under this Ministry:

- a. Limit for exemption of small purchase under para 4 of the PPP-MII Order, 2017 shall be Rs. 1 crore.
- b. Local value addition through services such as transportation, insurance, installation, commissioning, training and after sales services support like AMC/ CMC etc. shall continue to be considered in local content calculation.
- c. HP-HT operations in upstream oil and gas business activities shall be exempted from applicability of the Order.

3. This issues with the approval of Hon'ble Minister, Petroleum and Natural Gas.

Yours faithfully


(Santanu Dhar)

Under Secretary to the Govt. of India
Tel.: 011-23388652

Copy to:

- a. PS to Minister, PNG
- b. PPS/ PS to Secretary/ AS&FA/ Sr. Economic Advisor, MoPNG
- c. PPS/ PS to AS (E)/ JS(R)/ JS (M& GP)/ OSD (IC)/ JS (G)/ JS (IFD)/ DDG (ED), MoPNG
- d. PPS/PS to Dir.(BR)/Dir.(E-II)/Dir.(E-I)/DS(GP)/DS(Mkt.)/DS(LPG)/DS(Admn.)/DS(RTI)/ DS (Gen) MoPNG

Copy for information to:

Secretary, DPIIT

Items specifically to be used in flammable environment of oil and gas process industry in which value addition through services such as transportation, insurance installation, commissioning, training and after sales service support like AMC/CMC shall be continued to be conserved while computing Local Content:

Sl.	Items Category of procurement
1	Instrumentation items like DCS/ ESD/ PLC, Emission Monitoring System, Machine Monitoring System, Condition Monitoring System, Fire Detection & Alarm System, Gas & Liquid Metering Systems, Mass Flow Meter, Process Analysers, Ultrasonic flowmeter, Anti surge & Governor Control system, Master control station for MOVs, Actuators, Transmitters, Radar gauges, multi-spot temperature sensors, Batch Controller unit, Additive blocks, Hydrocarbon detectors, Field instruments like Radar Gauges, Nucleonic gauges, Servo level gauging, Hydrastep, SMART Positioner in control valves, Multi point Reactor Thermocouple, Flame scanner, Viscosity cum Density meter, High Pressure/Temperature Special type valves, IS Test Equipment, Flare flow meter, Tank Farm Management System, Loading Automation System, Gas Detection System, Corrosion Monitoring System, Wireless Instrumentation, Surge Relief Valve Skid, Meter Provers, Pipeline Leak detection system (Negative Pressure wave type) etc
2	Equipment involved in drilling, completion, testing and production of oil and gas wells, Electronic carousel, Safety Relief valves, Compressors, turbines and blowers, heat ejectors, exchangers, condensers where SITC and / Expert Supervisory Services are involved, Equipment for which Life Cycle cost evaluation is done considering AMC/CAMC etc.
3	Electrical Equipment like Flameproof Plant Communication system, GIS (Gas Insulated Switchgear), Numerical Relays, Flameproof and/or explosion proof CCTV, Synchronous Machines, TETRA System etc
4	Laboratory and R&D Equipment like Gas Chromatographs, Spectrometers, Analytical equipment, Automatic liquid sampler, Dry colorimetric (tape) detectors; Mercury Free PVT Equipment; HT-HP Corrosion cell; Wheel Test Machine; Atmospheric and HT-HP- Consistometer; Ultra Sonic Cement Analyzer / HT-Ultra Sonic Cement Analyzer; Compressive strength tester; Stirred fluid loss apparatus; Total Sulfur analyzer; Colony counter; Laminar flow systems; Microscope with digital camera; Anaerobic Chamber; RockEval; TOC analyser; Simdist analyser; Cold Finger test apparatus; Microcoulometer; Atomic Absorption Spectrometer; High Performance Ion Chromatograph; Permeameter; Helium Porosimeter; Laser Scattering Particle Size Distribution Analyser; Microscope high magnification; Flame Photometer; U.V.- Visible Spectrophotometers; EP Lube tester; Differential sticking tester; Electrical stability Meter; Stemi-2000 microscope/ equivalent; Core Gama Logger; Energy Dispersive Spectrometer; Thin Section Machine; X-Ray Diffractometer; Wettability tester; Ambient Resistivity System; Fluoroscope; Spin Drop Tensiometer; Fluid Eval; Mercury Inclusion Porosity meter; Tri-Axial test machine; Smoke point detector; Vitrinite Reflectance VRo Microscope; Curing Chamber/ HT curing chamber; Source Rock Pyrolyser with Sulphur/ without sulphur; NGA Gas Analyzer Flash Point Apparatus/ automatic; Compressive Strength Analyser; HT-HP Curing Chamber; Crush resistance test equipment; Manual Dry bath pore point Apparatus; Bench Type Dissolved Oxygen meter; Bench Type GRAIN Moisture meter; Rotational Viscometer; Capillary pressure instrument; Core Plugging Machine; Core Trimming machine; HP-HT filter press; BENCH TOP DENSITY METER; HP-HT ROLLER OVEN with AGING CELLS; Crude Oil Analyser; Static Gel Strength analyser; Oilwell cement Mechanical properties analyser; Poroperm; Acoustic velocity system; Auto Saturator; Porosimeter cum permeameter; Rock Testing System; Auto Core Saturator; Auto Imbibimeter for reverse permeability; Proppant Conductivity Tester etc

5	Pipeline Intrusion and Detection System (PIDS), SCADA & APPS system; Rim seal protection system, Chemical Treatment program which involves supply of Process chemicals, Dosing & monitoring the parameters etc
6	Geophysical Services Seismic Data Acquisition System; VSP Data Acquisition System; Field Processing Unit; Geophysical equipment (non-Seismic including Gravity Magnetic, MT, EM etc.); Seismic Data Processing Software ; Seismic Data Interpretation Software ; Hydrocarbon Reservoir Software ; Seismic Data Archival Software ; Petro -Physical Software
7	Geophysical Equipment Field Processing Unit, Global Navigation Satellite System, Specialised Geological Lab Equipment, Seismic Data Acquisition System, Seismic Data Processing/ Imaging Software, Tape Drive Unit, VSP Data Acquisition System, VSP Processing Software; High-End Servers for G&G Applications, HPCC Solution; Virtualization and Container Software
8	Logging Services Logging unit, equipment and tools rated for hostile HPHT environment (Temperature > 300°F & Pressure > 10,000 psi).



बंगाल गैस कंपनी लिमिटेड BENGAL GAS COMPANY LIMITED
(गेल एवम जीसीजीएससीएल का संयुक्त उद्यम) (A JV Company of GAIL and GCGSCL)

FORM-1 TO SECTION-III

**UNDERTAKING FOR APPLICABILITY OF POLICY (APPLICABLE ONLY FOR
BIDDERS WHO ARE MSE AND CLASS-I LOCAL SUPPLIER)**

NOT APPLICABLE



बंगाल गैस कंपनी लिमिटेड BENGAL GAS COMPANY LIMITED
(गेल एवम जीसीजीएससीएल का संयुक्त उद्यम) (A JV Company of GAIL and GCGSCL)

FORM-2 TO SECTION-III

**SELF CERTIFICATION BY BIDDER WHO CLASS-I LOCAL SUPPLIER/ CLASS-II
LOCAL SUPPLIER TOWARDS MANDATORY MINIMUM LOCAL CONTENT/
DOMESTIC VALUE ADDITION**
(APPLICABLE FOR ALL BIDDERS INCLUDING MSEs)

To,
M/s BENGAL GAS COMPANY LIMITED
1st Floor, Block A, Finance Centre, CBD, Action Area – II B, Newtown,
North 24 Parganas, Kolkata, West Bengal, India, Pin: 700161

SUB.:

BID NO.:

Dear Sir

We, M/s _____ (*Name of Bidder*) confirm that as per the definition of policy we are:

Class-I Local supplier []

Class-II Local Supplier []

(Bidder is to tick appropriate option (✓) above).

It is further confirm that M/s _____ (*Name of Bidder*) meet the mandatory minimum Local content/Domestic Value Addition requirement for Class-I Local supplier/ Class-II Local supplier (as the case may be) under Public Procurement (Preference to Make in India), Order 2017 (PPP-MII) and has value addition of%.

The details of the location (s) at which the local value addition is made is as under:

.....
.....
.....

We further confirm that in case we fail to meet the minimum local content/domestic value addition, the same shall be treated false information and BGCL will take action as per provision of tender document.



बंगाल गैस कंपनी लिमिटेड BENGAL GAS COMPANY LIMITED
(गेल एवम जीसीजीएससीएल का संयुक्त उद्यम) (A JV Company of GAIL and GCGSCL)

Place:

Date:

[Signature of Authorized Signatory of Bidder]

Name:

Designation:

Seal:



बंगाल गैस कंपनी लिमिटेड BENGAL GAS COMPANY LIMITED
(गेल एवम जीसीजीएससीएल का संयुक्त उद्यम) (A JV Company of GAIL and GCGSCL)

FORM-3 TO ANNEXURE-V TO SECTION-III

**CERTIFICATE BY STATUTORY AUDITOR/COST AUDITOR/ CHARTERED
ACCOUNTANT OF BIDDER TOWARDS MANDATORY MINIMUM LOCAL
CONTENT/ DOMESTIC VALUE ADDITION**

(APPLICABLE FOR ALL BIDDERS INCLUDING MSEs)

To,
M/s BENGAL GAS COMPANY LIMITED
1st Floor, Block A, Finance Centre, CBD, Action Area – II B, Newtown,
North 24 Parganas, Kolkata, West Bengal, India, Pin: 700161

SUB.:

Dear Sir

“We _____ the statutory auditor/ cost auditor/chartered accountant (not an employee of the company) of M/s._____ (***Name of the bidder***) hereby certify that as per definition specified in policy, M/s._____ (***Name of the bidder***) is

Class-I Local supplier []

Class-II Local Supplier []

(Bidder is to tick appropriate option (✓) above).

It is further confirm that M/s_____ (***Name of Bidder***) quoted vide offer No. _____ dated _____ against tender No._____ meet the mandatory minimum Local content/Domestic Value Addition requirement specified for Class-I Local supplier/ Class-II Local supplier (as the case may be) under Policy for Public Procurement (Preference to Make in India), Order 2017 (PPP-MII) and has value addition of% .

Name of Audit Firm:

[Signature of Authorized Signatory]

Name:

Date:

Designation:

Seal:

Membership no.

UDIN:

Note:



बंगाल गैस कंपनी लिमिटेड BENGAL GAS COMPANY LIMITED
(गेल एवम जीसीजीएससीएल का संयुक्त उद्यम) (A JV Company of GAIL and GCGSCL)

- (i) This certificate it to be furnished by the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies)
- (ii) The above format is indicative, the statutory auditor/ cost auditor/ cost accountant can modify the format without changing the intent of certification.



बंगाल गैस कंपनी लिमिटेड BENGAL GAS COMPANY LIMITED
(गेल एवम जीसीजीएससीएल का संयुक्त उद्यम) (A JV Company of GAIL and GCGSCL)

FORMS & FORMAT



LIST OF FORMS & FORMAT

Form No.	Description
F-1	BIDDER'S GENERAL INFORMATION
F-1A	ANNEXURE TO BIDDER'S GENERAL INFORMATION
F-2	PROFORMA OF "BANK GUARANTEE" FOR "EARNEST MONEY/ BID SECURITY"
F-2A	PROFORMA OF DECLARATION FOR BID SECURITY
F-2B	THIRD PARTY DEPOSIT CONFIRMATION LETTER ON FDR SUBMISSION FOR EMD
F-2C	PROFORMA OF "INSURANCE SURETY BOND" FOR "EARNEST MONEY DEPOSIT/ BID SECURITY"
F-3	LETTER OF AUTHORITY
F-4	PROFORMA OF "BANK GUARANTEE" FOR "CONTRACT PERFORMANCE SECURITY / SECURITY DEPOSIT"
F-4A	THIRD PARTY DEPOSIT CONFIRMATION LETTER ON FDR SUBMISSION FOR CPS
F-4B	PROFORMA OF "INSURANCE SURETY BOND" FOR "CONTRACT PERFORMANCE SECURITY / SECURITY DEPOSIT"
F-5	AGREED TERMS & CONDITIONS
F-6	ACKNOWLEDGEMENT CUM CONSENT LETTER
F-7	BIDDER'S EXPERIENCE
F-8 (A)	CHECK LIST
F-8 (B)	CHECK LIST FOR BID EVALUATION CRITERIA (BEC) QUALIFYING DOCUMENTS
F-9	FORMAT FOR CERTIFICATE FROM BANK IF BIDDER'S WORKING CAPITAL IS INADEQUATE
F-10	FORMAT FOR CHARTERED ACCOUNTANT CERTIFICATE FOR FINANCIAL CAPABILITY OF THE BIDDER
F-11	BIDDER'S QUERIES FOR PRE BID MEETING
F-12	E-BANKING FORMAT
F-13	INTEGRITY PACT
F-14	FREQUENTLY ASKED QUESTIONS (FAQs)
F-15	UNDERTAKING REGARDING SUBMISSION OF ELECTRONIC INVOICE (E-INVOICE AS PER GST LAWS)
F-16	FORMAT FOR NO CLAIM CERTIFICATE FOR RELEASE OF CPS/SECURITY DEPOSIT



F-1
BIDDER'S GENERAL INFORMATION

To,
M/s BENGAL GAS COMPANY LIMITED

TENDER NO:

1	Bidder Name	
2	Status of Firm	Proprietorship Firm/Partnership firm/ Limited Liability Partnership (LLP) firm/Public Limited/ Pvt. Limited/ Govt. Dept. / PSU/ Others If Others Specify: _____ [Enclose relevant certificates / partnership deed/certificate of Registration, as applicable]
3a	Name of Proprietor/Partners/Directors of the firm/company including their Father's Name and residential address, Aadhar No., Pan Card Details & DIN Nos. [As per clause for 'One Bid Per Bidder' under Section-III of Tender Document] If required, a separate sheet may be enclosed for providing the above details.	
3b	Name of Power of Attorney holders of bidder	
4	Number of Years in Operation	
5	Address of Registered Office: *In case of Partnership firm, provide current address of the firm for ordering purpose	City: District: State: PIN/ZIP:
6	Bidder's address where contract is to be placed	City: District: State: PIN/ZIP:
7	Address from where Services are to be rendered along with GST no. * (In case Services are to be rendered from multiple locations, addresses and GST no. of all such locations are to be provided).	City: District: State: PIN/ZIP:



बंगाल गैस कंपनी लिमिटेड BENGAL GAS COMPANY LIMITED
(गैल एवम जीसीजीएससीएल का संयुक्त उद्यम) (A JV Company of GAIL and GCGSCL)

		GST No.:
8	Telephone Number/ Mobile no. of address where order is to be placed	(Country Code) (Area Code) (Telephone No.)
9	E-mail address	
10	Website	
11	Mobile Number:	 —
12	ISO Certification, if any	{If yes, please furnish details}
13	PAN No.	
14	GST No. (refer sl. no. 7 above)	
15	EPF Registration No.	
16	ESI code No.	
17	Whether Micro or Small Enterprise	Yes / No (If Yes, Bidder to submit requisite document as specified in ITB: Clause No. 40)
	Whether MSE is owned by SC/ST Entrepreneur(s)	Yes / No (If Yes, Bidder to submit requisite document as specified in ITB: Clause No. 40)
	Whether MSE is owned by Women	Yes / No (If Yes, Bidder to submit requisite document as specified in ITB: Clause No. 40)
18	Whether Bidder is Startups or not	Yes / No (If Yes, Bidder to submit requisite document as specified in ITB: Clause No. 49)
	In case of Start-up confirm the following: (i) Date of its incorporation/ registration [The certificate shall only be valid for the entity upto ten years from the date of its incorporation/ registration] (ii) Whether turnover for any financial years since incorporation/ registration has exceed Rs.100 Crores.	

Note: *

BGCL intent to place the contract directly on the address from where Services are rendered. In case, bidder wants contract at some other address or Services are to rendered from multiple locations, bidder is required to provide in their bid, the address on which contract is to be placed.

Place:

[Signature of Authorized Signatory of Bidder]

Date:

Name:

Designation:

Seal:



बंगाल गैस कंपनी लिमिटेड BENGAL GAS COMPANY LIMITED
(गेल एवम जीसीजीएससीएल का संयुक्त उद्यम) (A JV Company of GAIL and GCGSCL)

Format F-1A

Annexure to Bidder's General Information

To,

M/s BENGAL GAS COMPANY LIMITED

1st Floor, Block A, Finance Centre, CBD, Action Area – II B, Newtown,
North 24 Parganas, Kolkata, West Bengal, India, Pin: 700161

SUB.: _____

TENDER NO.: _____

Name of Bidder :

Sl. No.	Name of Proprietor/Partners/Directors	Father's Name	Residential Address	Aadhar No.	Pan Card No.	Details DIN Nos.

Note: The corresponding documents i.e. Aadhar, PAN & DIN etc. are also to be provided duly attested by Notary Public.

Place:

Date:

[Signature of Authorized Signatory Bidder]

Name:

Designation:

Seal:

F-2

PROFORMA OF "BANK GUARANTEE" FOR "EARNEST MONEY / BID SECURITY"

(To be stamped in accordance with the Stamp Act)

[This Format supersede the Format of GeM]

To, M/s BENGAL GAS COMPANY LIMITED	Bank Guarantee No.	
	Date of BG	
	BG Valid up to	
	Claim period up to (There should be three months gap between expiry date of BG & Claim period)	
	Stamp Sl. No./e-Stamp Certificate No.	

Dear Sir(s),

In accordance with Letter Inviting Tender under your reference No. _____ M/s. _____ having their Registered / Head Office at _____ (hereinafter called the Tenderer/Bidder), wish to participate in the said tender for

As an irrevocable Bank Guarantee against Earnest Money for the amount of _____ is required to be submitted by the Tenderer as a condition precedent for participation in the said tender which amount is liable to be forfeited on the happening of any contingencies mentioned in the Tender Document.

We, the _____ Bank at _____

having ourHead Office_____ (Local
Address) and having net worth more than Rs. 100,00,00,000.00 [Rupees One Hundred Crore] or its equivalent in foreign
currency, guarantee andundertake to pay immediately on demand without any recourse to the tenderers by
Bengal Gas Company Limited, the amount

_____ without any reservation, protest, demur and recourse. Any such demand made by BGCL, shall be conclusive and binding on us irrespective of any dispute or difference raised by the Tenderer.

This guarantee shall be irrevocable and shall remain valid up to _____ [this date should be two (02) months beyond the validity of the bid]. If any further extension of this guarantee is required, the same shall be extended to such required period on receiving instructions from M/s.

_____ whose behalf this
guarantee is issued.

Notwithstanding anything contained herein:

- a) The Bank's liability under this Guarantee shall not exceed (currency in figures) (currency in words only) .

- b) This Guarantee shall remain in force upto____(this expiry date of BG should be two months beyond the validity of bid) and any extension(s) thereof; and
- c) The Bank shall be released and discharged from all liability under this Guarantee unless a written claim or demand is issued to the Bank on or before the midnight of(indicate date of expiry of claim period which includes minimum three months from the expiry of this Bank Guarantee) and if extended, the date of expiry of the last extension of this Guarantee. If a claim has been received by us within the said date, all the rights of BGCL under this Guarantee shall be valid and shall not cease until we have satisfied that claim.



बंगाल गैस कंपनी लिमिटेड BENGAL GAS COMPANY LIMITED
(गेल एवम जीसीजीएससीएल का संयुक्त उद्यम) (A JV Company of GAIL and GCGSCL)

The Bank doth hereby declare that Shri /Ms. _____ who is the _____ (designation) of the Bank is authorized to sign this undertaking on behalf of the Bank and to bind the Bank thereby.

In witness whereof the Bank, through its authorized officer, has set its hand and stamp on this _____ day of _____ 20__ at _____.

Details of next Higher Authority of the Officials who have issued the Bank Guarantee:

Name

Designation

WITNESS:

(SIGNATURE)
(NAME)

(SIGNATURE)
(NAME)
Designation with Bank Stamp
E-Mail ID:
Telephone/Mobile No. :
Date:

(OFFICIAL ADDRESS)

Confirmation Email Id :

IFSC Code of Issuing Bank :

INSTRUCTIONS FOR FURNISHING "BID SECURITY / EARNEST MONEY" BY "BANK GUARANTEE"

1. The Bank Guarantee by Bidders will be given on non-judicial stamp paper as per "Stamp Duty" applicable. The non-judicial stamp paper should be in the name of the issuing Bank.
2. The expiry date should be arrived at in accordance with "ITB: Clause-16.1".
3. The Bank Guarantee by bidders will be given from Bank as specified in "ITB : Clause -16.3".
4. A letter from the issuing Bank of the requisite Bank Guarantee confirming that said Bank Guarantee / all future communication relating to the Bank Guarantee shall be forwarded to the Employer at its address as mentioned at "ITB".
5. Bidders must indicate the full postal address of the Bank along with the Bank's E-mail / Phone from where the Earnest Money Deposit has been issued as per proforma provided below..
6. In case BG is issued directly by a bank outside India (if allowed), it should be executed on Letter Head of the Bank and should be advised and made payable through their Indian Branch/Corresponding Bank in India (Applicable for ICB tender).



**MATTER TO BE MENTIONED IN COVERING LETTER TO BE SUBMITTED
BY VENDOR ALONG WITH BANK GUARANTEE**

1	BANK GUARANTEE NO	:				
2	VENDOR NAME	:				
3	BANK GUARANTEE AMOUNT	:				
4	TENDER NO	:				
5	NATURE OF BANK GUARANTEE	:				
	(Please Tick (✓) Whichever is Applicable		PERFORMANC E BANK GUARANTEE	SECURI TY DEPOSIT	EM D	ADVANC E
6	BG ISSUED BANK DETAILS					
(A)		EMAIL ID	:			
(B)		ADDRESS	:			
(C)		PHONE NO	:			



F-2A

DECLARATION FOR BID SECURITY

To,

M/s BENGAL GAS COMPANY LIMITED

SUB:

TENDER NO:

Dear Sir

After examining / reviewing provisions of above referred tender documents (including all corrigendum/ Addenda), we M/s _____ (*Name of Bidder*) have submitted our offer/ bid no.

We, M/s _____ (*Name of Bidder*) hereby understand that, according to your conditions, we are submitting this Declaration for Bid Security.

We understand that we will be put on watch list/holiday/ banning list (as per policies of BGCL in this regard), if we are in breach of our obligation(s) as per following:

- (a) have withdrawn/modified/amended, impairs or derogates from the tender, my/our Bid during the period of bid validity specified in the form of Bid; or
- (b) having been notified of the acceptance of our Bid by the BGCL during the period of bid validity:
 - (i) fail or refuse to execute the Contract, if required, or
 - (ii) fail or refuse to furnish the Contract Performance Security, in accordance provisions of tender document.
 - (iii) fail or refuse to accept 'arithmetical corrections' as per provision of tender document.
- (c) having indulged in corrupt/fraudulent /collusive/coercive practice as per procedure.

Place:

Date:

[Signature of Authorized Signatory of Bidder]

Name:

Designation:

Seal:



बंगाल गैस कंपनी लिमिटेड BENGAL GAS COMPANY LIMITED
(गैल एवम जीसीजीएससीएल का संयुक्त उद्यम) (A JV Company of GAIL and GCSCL)

FORMAT F-2B
Third Party Deposit Confirmation Letter

Date: _ _ / _ _ / _ _ _ _

To,

M/s Bengal Gas Company Limited

1st Floor, Block A, Finance Centre, CBD, Action Area- II B,
Newtown, North 24 Parganas, Kolkata, West Bengal, India
Pin code- 700161

Dear Sir/ Madam

Sub: Issuance of Cumulative FDR..... amounting to ₹.....valid till.....

It is hereby certified that Cumulative Fixed Deposit Receipt (FDR) bearing number.....dated..... amounting to ₹..... (Amount in figure and words) has been issued by (Name of the Bank) branch address..... The maturity value is ₹..... on dated.....

This FDR has been issued on the request of M/s(Name of the contractor) under the Tender no. This FDR can be encashed/ redeemed without any consent/ letter from the contractor M/s.....(Name of the contractor) on the demand by M/s Bengal Gas Company Limited and the payment will be made to M/s Bengal Gas Company Limited excluding the interest earned thereon. The Contractor cannot encash/ premature above FDR unless above original FDR is accompanied by the discharge letter/NOC/approval of BGCL.

If the FDR is not withdrawn, till date of maturity, it may be renewed or treated as instructed by the Contractor & BGCL for renewal.

This FDR has been issued by authorized signatory of the Bank.

For or on behalf of..... [Name of the Bank & Branch details (Including IFS Code)]

Signature.....

Name:.....

Designation:.....

Contact no.

Email Id.

Stamp of Bank.....

Note:

- (i) This letter forms an integrated part of FDR**
- (ii) In case confirmation is required, the communication can be send to the following:**
Details for confirmations (including Address, Email Id, IFS Code and contact no.)



FORMAT F-2C

PROFORMA OF "INSURANCE SURETY BOND" FOR "EARNEST MONEY DEPOSIT/ BID SECURITY"

(To be stamped in accordance with the Stamp Act)

To, M/s Bengal Gas Company Limited 	Insurance Surety Bond No.	
	Date of ISB	
	ISB Valid up to (Expiry date)	
	Claim period up to (indicate date of expiry of claim period which includes minimum three months from the expiry date)	
	Stamp Sl. No./e-Stamp Certificate No.	

Dear Sir(s),

In accordance with Tender Document under your reference No. _____ M/s. _____ having their Registered / Head Office at _____ (hereinafter called the Tenderer/Bidder), wish to participate in the said tender for _____

As an irrevocable Insurance Surety Bond against Earnest Money Deposit for the amount of _____ is required to be submitted by the bidder as a condition precedent for participation in the said Tender Document which amount is liable to be forfeited on the happening of any contingencies mentioned in the Tender Document.

We, the _____ [Name & address of the Insurer] at _____ having our Head Office _____ (Local Address) guarantee and undertake to pay immediately on demand without any recourse to the Bidder by Bengal Gas Company Limited (BGCL), the amount _____ without any reservation, protest, demur and recourse. Any such demand made by Bengal Gas Company Limited, shall be conclusive and binding on us irrespective of any dispute or difference raised by the Bidder.

This Insurance Surety Bond shall be irrevocable and shall remain valid up to _____ [this date should be two (02) months beyond the validity of the bid]. If any further extension of this Insurance Surety Bond is required, the same shall be extended to such required period on receiving instructions from Bidder M/s. _____ on whose behalf this Insurance Surety Bond is issued.

Notwithstanding anything contained herein:

a) The Insurer's liability under this Insurance Surety Bond shall not exceed (currency in figures) (currency in words only)



b) This Insurance Surety Bond shall remain in force upto _____ (this expiry date of Insurance Surety Bond should be two months beyond the validity of bid) and any extension(s) thereof; and

c) The insurer shall be released and discharged from all liability under this Insurance Surety Bond unless a written claim or demand is issued to the insurer on or before the midnight of (indicate date of expiry of claim period which includes minimum three months from the expiry of this Insurance Surety Bond) and if extended, the date of expiry of the last extension of this Insurance Surety Bond. If a claim has been received by us within the said date, all the rights of Bengal Gas Company Limited (BGCL) under this Insurance Surety Bond shall be valid and shall not cease until we have satisfied that claim.

In witness whereof the insurer, through its authorized officer, has set its hand and stamp on this _____ day of _____ 20__ at _____

Details of next Higher Authority of the Officials who have issued the Insurance Surety Bond:

Name

Designation

WITNESS:

1. _____
(SIGNATURE)

(NAME)

(OFFICIAL ADDRESS)

Date:

(SIGNATURE)

(NAME)

Designation with Insurer Stamp

E-Mail ID:

Telephone/Mobile No. :

Attorney as per

Power of Attorney No. _____



INSTRUCTIONS FOR FURNISHING "BID SECURITY DEPOSIT/ EARNEST MONEY" BY "INSURANCE SURETY BOND"

- The Insurance Surety Bond shall be from Insurance Regulatory Insurer and Development Authority of India (IRDAI) registered general insurance companies as per guidelines issued by Insurance Regulatory and Development Authority of India (IRDAI).
- The Employer shall be the Creditor, the Bidder shall be the Principal debtor and the Insurance company/Insurer shall be the Surety in respect of the Insurance Surety Bond to be issued by the Insurer.
- The Insurance Surety Bond should be on Non-Judicial stamp paper/e-stamp paper of appropriate value as per Stamp Act prevailing in the state(s) where the Insurance Surety Bond is submitted or is to be acted upon or the rate prevailing in State where the Insurance Surety Bond is executed, whichever is higher. The Stamp Paper/e-stamp paper shall be purchased in the name of Bidder/Insurer issuing the Insurance Surety Bond.
- The expiry date should be arrived at in accordance with "ITB: Clause-16.1".
- The Insurance Surety Bond by bidders will be given from Insurer as specified in "ITB: Clause-16.3".
- A letter from the issuing insurer of the requisite Insurance Surety Bond confirming that said Insurance Surety Bond / all future communication relating to the Insurance Surety Bond shall be forwarded to the Purchaser at its address as mentioned at "ITB".
- Bidder must indicate the full postal address of the Insurer along with the Insurer 's E-mail / Fax / Phone from where the Insurance Surety Bond has been issued.

MATTER TO BE MENTIONED IN COVERING LETTER TO BE SUBMITTED BY VENDOR ALONG WITH INSURANCE SURETY BOND

1	INSURANCE SURETY BOND NO	:				
2	VENDOR NAME / VENDOR CODE	:	NAME			
			VENDOR CODE			
			VENDOR EMAIL ID			
			VENDOR MOBILE NO			
3	INSURANCE SURETY BOND AMOUNT	:				
4	TENDER NO	:				
5	NATURE OF INSURANCE SURETY BOND	:				
	(Please Tick (✓) Whichever is Applicable		PERFORMANCE INSURANCE SURETY BOND	SECURITY DEPOSIT	EMD	ADVANCE
6	INSURER DETAILS					



बंगाल गैस कंपनी लिमिटेड BENGAL GAS COMPANY LIMITED
(गेल एवम जीसीजीएससीएल का संयुक्त उद्यम) (A JV Company of GAIL and GCGSCL)

		(A)	EMAIL ID :	
		(B)	ADDRESS :	
		(C)	PHONE NO :	



F-3
LETTER OF AUTHORITY

[Pro forma for Letter of Authority for Attending 'Pre-Bid Meetings']

Ref:

Date:

To,
M/s BENGAL GAS COMPANY LIMITED

SUB:
TENDER NO:

Dear Sir,

I/We, _____ hereby authorize the following representative(s) for attending any 'Meetings [Pre-Bid Meeting]' against the above Tender Documents:

[1] Name & Designation _____ Signature _____
Phone/Cell: _____
E-mail: @

[2] Name & Designation _____ Signature _____
Phone/Cell: _____
E-mail: @

We confirm that we shall be bound by all commitments made by aforementioned authorised representative(s).

Place:

[Signature of Authorized Signatory of Bidder]

Date:

Name:

Designation:

Seal:

Note:

- (i) This "Letter of Authority" should be on the "**letterhead**" of the Bidder and should be signed by a person competent and having the 'Power of Attorney' to bind the Bidder. Not more than 'two [02] persons per Bidder' are permitted to attend 'Pre-Bid Meetings'.
- (ii) Bidder's authorized representative is required to carry a copy of this authority letter while attending the 'Pre-Bid Meetings'.



F-4

**PROFORMA OF "BANK GUARANTEE" FOR "CONTRACT PERFORMANCE SECURITY
/ SECURITY DEPOSIT"**

(ON NON-JUDICIAL STAMP PAPER OF APPROPRIATE VALUE)

[This Format supersede the Format of GeM]

To, M/s Bengal Gas Company Limited _____	Bank Guarantee No.	
	Date of BG	
	BG Valid up to	
	Claim period up to (There should be three months gap between expiry date of BG & Claim period)	
	Stamp Sl. No./e-Stamp Certificate No.	

Dear Sir(s),

M/s. _____ having registered office at _____ (herein after called the “contractor/supplier/consultant” which expression shall wherever the context so require include its successors and assignees) have been placed/ awarded the job/work of _____ vide PO/LOA /FOA No. _____ dated _____ for Bengal Gas Company Limited having registered office at 1st Floor, Block A, Finance Centre, CBD, Action Area – II B, Newtown, North 24 Parganas, Kolkata, West Bengal, India, Pin: 700161 (herein after called the “BGCL” which expression shall wherever the context so require include its successors and assignees).

The Contract conditions provide that the Supplier/Contractor/Consultant shall pay a sum of Rs. _____ (Rupees _____) as full Contract Performance Guarantee in the form therein mentioned. The form of payment of Contract Performance Guarantee includes guarantee executed by Nationalized Bank/Scheduled Commercial Bank, undertaking full responsibility to indemnify Bengal Gas Company Limited, in case of default.

The said M/s. _____ has approached us and at their request and in consideration of the premises we having our office at _____ have agreed to give such guarantee as hereinafter mentioned.

1. We _____ and having net worth more than Rs. 100,00,00,000.00 [Rupees One Hundred Crore] or its equivalent in foreign currency, hereby undertake to give the irrevocable & unconditional guarantee to you that if default shall be made by M/s. _____ in performing any of the terms and conditions of the tender/order/contract or in payment of any money payable to Bengal Gas Company Limited we shall on first demand pay without demur, contest, protest and/ or without any recourse to the Service Provider to BGCL in such manner as BGCL may direct the said amount of Rupees _____ only or such portion thereof not exceeding the said sum as you may require from time to time.
2. You will have the full liberty without reference to us and without affecting this guarantee, postpone for any time or from time to time the exercise of any of the powers and rights conferred on you under the order/contract with the said _____ M/s. _____ and to enforce or to forbear from endorsing any powers or rights or by reason of time being given to the said M/s. _____ and such postponement forbearance would not have the effect of releasing the bank from its obligation under this debt.
3. Your right to recover the said sum of Rs. _____ (Rupees _____)



- _____) from us in manner aforesaid is absolute & unequivocal and will not be affected or suspended by reason of the fact that any dispute or disputes have been raised by the said M/s. _____ and/or that any dispute or disputes are pending before any officer, tribunal or court or arbitrator or any other authority/forum and any demand made by you in the bank shall be conclusive and binding. The bank shall not be released of its obligations under these presents by any exercise by you of its liberty with reference to matter aforesaid or any of their or by reason or any other act of omission or commission on your part or any other indulgence shown by you or by any other matter or changed what so ever which under law would, but for this provision, have the effect of releasing the bank.
4. The guarantee herein contained shall not be determined or affected by the liquidation or winding up dissolution or changes of constitution or insolvency of the said Service Provider but shall in all respects and for all purposes be binding and operative until payment of all money due to you in respect of such liabilities is paid.
 5. The bank undertakes not to revoke this guarantee during its currency without your previous consent and further agrees that the guarantee shall continue to be enforceable until it is discharged by BGCL in writing. However, if for any reason, the Service Provider is unable to complete the supply/work within the period stipulated in the order/contract and in case of extension of the date of delivery/completion resulting extension of defect liability period/guarantee period of the Service Provider fails to perform the supply/work fully, the bank hereby agrees to further extend this guarantee at the instance of the Service Provider till such time as may be determined by BGCL. If any further extension of this guarantee is required, the same shall be extended to such required period on receiving instruction from M/s. _____ (Supplier/Contractor/Consultant) on whose behalf this guarantee is issued.
 6. Bank also agrees that BGCL at its option shall be entitled to enforce this Guarantee against the bank (as principal debtor) in the first instant, without proceeding against the Supplier/Contractor/Consultant and notwithstanding any security or other guarantee that BGCL may have in relation to the Supplier's/Contractor's/Consultant's liabilities.
 7. The amount under the Bank Guarantee is payable forthwith without any delay by Bank upon the written demand raised by BGCL. Any dispute arising out of or in relation to the said Bank Guarantee shall be subject to the exclusive jurisdiction of courts at Kolkata.
 8. Therefore, we hereby affirm that we are guarantors and responsible to you on behalf of the Supplier/Contractor/Consultant up to a total amount of _____ (amount of guarantees in words and figures) and we undertake to pay you, upon your first written demand declaring the Supplier/Contractor/Consultant to be in default under the order/contract and without caveat or argument, any sum or sums within the limits of (amounts of guarantee) as aforesaid, without your needing to prove or show grounds or reasons for your demand or the sum specified therein.
 9. The Bank doth hereby declare that Shri/Ms. _____ who is the _____ (designation) of the Bank is authorized to sign this undertaking on behalf of the Bank and to bind the Bank thereby.
 10. Notwithstanding anything contained herein:
 - a) The Bank's liability under this Guarantee shall not exceed (currency in figures) (currency in words only)
 - b) This Guarantee shall remain in force upto _____ (this date should be expiry date of defect liability period of the Contract) and any extension(s) thereof; and
 - c) The Bank shall be released and discharged from all liability under this Guarantee unless a written claim or demand is issued to the Bank on or before the midnight of _____ (indicate date of expiry of claim period which includes minimum three months from the expiry of this Bank Guarantee) and if extended, the date of expiry of the last extension of this Guarantee. If a claim has been received by us within the said date, all the rights of BGCL under this Guarantee shall be valid and shall not cease until we have satisfied that claim.



Details of next Higher Authority of the Officials who have issued the Bank Guarantee:

Name: _____

Designation: _____

Yours faithfully,

Confirmation Email ID:

Bank by its Constituted Attorney

Signature of a person duly

IFSC Code of Issuing Bank:

Authorized to sign on behalf of the Bank

INSTRUCTIONS FOR FURNISHING
"CONTRACT PERFORMANCE SECURITY / SECURITY DEPOSIT" BY "BANK
GUARANTEE"

1. The Bank Guarantee by successful Bidder(s) will be given on non-judicial stamp paper as per 'stamp duty' applicable. The non-judicial stamp paper should be in name of the issuing bank.
2. The Bank Guarantee by Bidders will be given from bank as specified in cl.no. 38.3 of ITB [Section-III] of Tender Document.
3. A letter from the issuing bank of the requisite Bank Guarantee confirming that said Bank Guarantee and all future communication relating to the Bank Guarantee shall be forwarded to Employer.
4. Supplier/Contractor/Consultant shall submit attached cover letter (Annexure) while submitting Contract Performance Security / Security Deposit.
5. In case BG is issued directly by a bank outside India (if allowed), it should be executed on Letter Head of the Bank and should be advised and made payable through their Indian Branch/Corresponding Bank in India (Applicable for ICB tender).

MATTER TO BE MENTIONED IN COVERING LETTER TO BE SUBMITTED BY VENDOR
ALONG WITH BANK GUARANTEE

1	BANK GUARANTEE NO	:				
2	VENDOR NAME	:				
3	BANK GUARANTEE AMOUNT	:				
4	TENDER NO	:				
5	NATURE OF BANK GUARANTEE	:				
	(Please Tick (√) Whichever is Applicable		PERFORMANC E BANK GUARANTEE	SECURI TY DEPOSIT	EM D	ADVANC E
6						



बंगाल गैस कंपनी लिमिटेड BENGAL GAS COMPANY LIMITED
(गेल एवम जीसीजीएससीएल का संयुक्त उद्यम) (A JV Company of GAIL and GCGSCL)

BG ISSUED BANK DETAILS	(A)	EMAIL ID :	
	(B)	ADDRESS :	
	(C)	PHONE NO :	



F-4A

Third Party Deposit Confirmation Letter

Date: __/__/____

To,

M/s Bengal Gas Company Limited

1st Floor, Block A, Finance Centre, CBD, Action Area- II B,
Newtown, North 24 Parganas, Kolkata, West Bengal, India
Pin code- 700161

Dear Sir/ Madam

Sub: Issuance of Cumulative FDR..... amounting to ₹.....valid till.....

It is hereby certified that Cumulative Fixed Deposit Receipt (FDR) bearing number.....dated..... amounting to ₹..... (Amount in figure and words) has been issued by (Name of the Bank) branch address..... The maturity value is ₹..... on dated.....

This FDR has been issued on the request of M/s(Name of the contractor) under the PO no. / W.O. No. This FDR can be encashed/ redeemed without any consent/ letter from the contractor M/s.....(Name of the contractor) on the demand by M/s Bengal Gas Company Limited and the payment will be made to M/s Bengal Gas Company Limited excluding the interest earned thereon. The Contractor cannot encash/ premature above FDR unless above original FDR is accompanied by the discharge letter/NOC/approval of BGCL.

If the FDR is not withdrawn, till date of maturity, it may be renewed or treated as instructed by the Contractor & BGCL for renewal.

This FDR has been issued by authorized signatory of the Bank.

For or on behalf of..... [Name of the Bank & Branch details (Including IFS Code)]

Signature.....

Name:.....

Designation:.....

Contact no.

Email Id.

Stamp of Bank.....

Note:

(iii) This letter forms an integrated part of FDR

(iv) In case confirmation is required, the communication can be send to the following:

Details for confirmations (including Address, Email Id, IFS Code and contact no.)



F-4B

**PROFORMA OF "INSURANCE SURETY BOND" FOR "CONTRACT
PERFORMANCE SECURITY / SECURITY DEPOSIT"**
(ON NON-JUDICIAL STAMP PAPER OF APPROPRIATE VALUE)

To, M/s Bengal Gas Company Limited _____	Insurance Surety Bond No.	
	Date of Insurance Surety Bond	
	Insurance Surety Bond Valid up to (Expiry date)	
	Claim period up to (indicate date of expiry of claim period which includes minimum three months from the expiry date)	
	Stamp Sl. No./e-Stamp Certificate No.	

Dear Sir(s),

M/s. _____ having
registered office at _____ (herein after called the “contractor/supplier” which
expression shall wherever the context so require include its successors and assignees) have been placed/
awarded the job/work of _____ vide PO/LOA
/FOA No. _____ dated _____ for Bengal Gas Company Limited having
registered office at 1ST Floor, Block-A, Finance Centre, CBD Action Area-II B, Newtown, Kolkata-
700161 (herein after called the “BGCL” which expression shall wherever the context so require include
its successors and assignees).

The Contract conditions provide that the SUPPLIER/CONTRACTOR shall pay a sum of Rs.
_____ (Rupees _____) as full Contract
Performance Guarantee in the form therein mentioned. The form of payment of Insurance Surety Bond
executed by Insurer, undertaking full responsibility to indemnify BENGAL GAS COMPANY LIMITED,
in case of default.

The said M/s. _____ (herein after called the
“insurer” which expression shall wherever the context so require include its successors and assignees)
has approached us and at their request and in consideration of the premises we having our office at
_____ have agreed to give such guarantee as hereinafter mentioned.

1. We _____ hereby
undertake to give the irrevocable & unconditional guarantee in form of Insurance Surety Bond to
you that if default shall be made by M/s. _____ in performing
any of the terms and conditions of the tender/order/contract or in payment of any money payable
to BENGAL GAS COMPANY LIMITED we shall on first demand pay without demur, contest,
protest and/ or without any recourse to the contractor to BGCL in such manner as BGCL may
direct the said amount of Rupees _____ only or such portion
thereof not exceeding the said sum as you may require from time to time.
2. You will have the full liberty without reference to us and without affecting this Insurance Surety
Bond, postpone for any time or from time to time the exercise of any of the powers and rights
conferred on you under the order/contract with the said _____ M/s.



- _____ and to enforce or to forbear from endorsing any powers or rights or by reason of time being given to the said M/s. _____ and such postponement forbearance would not have the effect of releasing the insurer from its obligation under this debt.
3. Your right to recover the said sum of Rs. _____ (Rupees _____) from us in manner aforesaid is absolute & unequivocal and will not be affected or suspended by reason of the fact that any dispute or disputes have been raised by the said M/s. _____ and/or that any dispute or disputes are pending before any officer, tribunal or court or arbitrator or any other authority/forum and any demand made by you to the insurer shall be conclusive and binding. The insurer shall not be released of its obligations under these presents by any exercise by you of its liberty with reference to matter aforesaid or any of their or by reason or any other act of omission or commission on your part or any other indulgence shown by you or by any other matter or changed what so ever which under law would, but for this provision, have the effect of releasing the insurer.
4. The Insurance Surety Bond herein contained shall not be determined or affected by the liquidation or winding up dissolution or changes of constitution or insolvency of the said supplier/contractor but shall in all respects and for all purposes be binding and operative until payment of all money due to you in respect of such liabilities is paid.
5. The insurer undertakes not to revoke this Insurance Surety Bond during its currency without your previous consent and further agrees that the Insurance Surety Bond shall continue to be enforceable until it is discharged by BGCL in writing. However, if for any reason, the Contractor/Supplier is unable to complete the supply/work within the period stipulated in the order/contract and in case of extension of the date of delivery/completion resulting extension of defect liability period/guarantee period of the Contractor/Supplier fails to perform the supply/work fully, the insurer hereby agrees to further extend this Insurance Surety Bond at the instance of the supplier/contractor till such time as may be determined by BGCL. If any further extension of this Insurance Surety Bond is required, the same shall be extended to such required period _____ on _____ receiving _____ instruction _____ from _____ M/s. _____ (contractor) on whose behalf this Insurance Surety Bond is issued.
6. Insurer also agrees that BGCL at its option shall be entitled to enforce this Insurance Surety Bond against the insurer (as principal debtor) in the first instant, without proceeding against the Contractor/Supplier and notwithstanding any security or other guarantee that BGCL may have in relation to the Contractor/Supplier's liabilities.
7. The amount under the Insurance Surety Bond is payable forthwith without any delay by insurer upon the written demand raised by BGCL. Any dispute arising out of or in relation to the said Insurance Surety Bond shall be subject to the exclusive jurisdiction of courts at Kolkata.
8. Therefore, we hereby affirm that we are guarantors and responsible to you on behalf of the Contractor/Supplier up to a total amount of _____ (amount of guarantees in words and figures) and we undertake to pay you, upon your first written demand declaring the Contractor/Supplier to be in default under the order/contract and without caveat or argument, any sum or sums within the limits of (amounts of guarantee) as aforesaid, without your needing to prove or show grounds or reasons for your demand or the sum specified therein.



9. We have power to issue this Insurance Surety Bond in your favor under our Memorandum and Articles of Association, and the undersigned has full power to sign and execute documents under the Power of Attorney, dated _____ granted to him by the Insurer.
10. Notwithstanding anything contained herein:
- a) The Insurer's liability under this Insurance Surety Bond shall not exceed (currency in figures) (currency in words only)
- b) This Insurance Surety Bond shall remain in force upto _____ (this date should be expiry date of defect liability period of the Contract) and any extension(s) thereof; and
11. The Insurer shall be released and discharged from all liability under this Insurance Surety Bond unless a written claim or demand is issued to the Insurer on or before the midnight of(indicate date of expiry of claim period which includes minimum three months from the expiry of this Insurance Surety Bond) and if extended, the date of expiry of the last extension of this Insurance Surety Bond. If a claim has been received by us within the said date, all the rights of BGCL under this Insurance Surety Bond shall be valid and shall not cease until we have satisfied that claim.

Details of next Higher Authority of the Officials who have issued the Insurance Surety Bond:

Name

Designation

Yours faithfully,

Insurer by its Constituted Attorney

Signature of a person duly
Authorized to sign on behalf of the
Insurer

INSTRUCTIONS FOR FURNISHING
"CONTRACT PERFORMANCE SECURITY / SECURITY DEPOSIT" BY "INSURANCE SURETY BOND"

- a) The Insurance Surety Bond shall be from Insurance Regulatory and Development Authority of India (IRDAI) registered general insurance companies as per guidelines by Insurance Regulatory and Development Authority of India (IRDAI).
- b) The Employer shall be the Creditor, the Bidder shall be the Principal debtor and the Insurance company/Insurer shall be the Surety in respect of the Insurance Surety Bond to be issued by the Insurer.
- c) The Insurance Surety Bond should be on Non-Judicial stamp paper/e-stamp paper of appropriate value as per Stamp Act prevailing in the state(s) where the Insurance Surety Bond is submitted or is to be acted upon or the rate prevailing in State where the Insurance Surety Bond is executed, whichever is higher. The Stamp Paper/e-stamp paper shall be purchased in the name of Bidder/Insurer issuing the Insurance Surety Bond.



- d) The Insurance Surety Bond by successful Bidder(s) will be given on non-judicial stamp paper as per 'stamp duty' applicable. The non-judicial stamp paper should be in name of the issuing Insurer.
- e) The Insurance Surety Bond by Bidders will be given from insurer as specified in cl.no. 38.2 of ITB [Section-III] of Tender Document.
- f) A letter from the issuing insurer of the requisite Insurance Surety Bond confirming that said Insurance Surety Bond and all future communication relating to the Insurance Surety Bond shall be forwarded to Purchaser.
- g) Supplier shall submit attached cover letter (Annexure) while submitting Contract Performance Security / Security Deposit.

**MATTER TO BE MENTIONED IN COVERING LETTER TO BE SUBMITTED BY VENDOR
ALONG WITH INSURANCE SURETY BOND**

1	INSURANCE SURETY BOND NO	:				
2	VENDOR NAME / VENDOR CODE	:	NAME			
			VENDOR CODE			
			VENDOR EMAIL ID			
			VENDOR MOBILE NO			
3	INSURANCE SURETY BOND AMOUNT	:				
4	PURCHASE ORDER/ LOA NO	:				
5	NATURE OF INSURANCE SURETY BOND (Please Tick (√) Whichever is Applicable)	:				
			PERFORMANCE INSURANCE SURETY BOND	SECURITY DEPOSIT	EMD	ADVANCE
6	INSURER DETAILS					
(A)		EMAIL ID	:			
(B)		ADDRESS	:			
(C)		PHONE NO	:			



F-5
AGREED TERMS & CONDITIONS

To,

M/s BENGAL GAS COMPANY LIMITED

SUB:

TENDER NO:

This Questionnaire duly filled in, signed & stamped must form part of Bidder's Bid and should be returned along with Un-priced Bid. Clauses confirmed hereunder need not be repeated in the Bid.

Sl.	DESCRIPTION	BIDDER'S CONFIRMATION
1	Bidder's name and address	Bidder's name: Address:
2.	Bidder confirms the currency of quoted prices is in Indian Rupees.	
3.	Bidder confirms quoted prices will remain firm and fixed till complete execution of the order (except where price escalation/variation is allowed in the Tender).	
4	Bidder confirms that they have quoted/included GST (CGST & SGST/ UTGST or IGST) in Price bid.	
4.1	Whether in the instant tender services/works are covered in reverse charge rule of GST (CGST & SGST/UTGST or IGST) If yes, Bidder confirms that they have quoted/included applicable GST (CGST & SGST/ UTGST or IGST) in Price Bid	Yes/ No
4.2	Bidder confirms Harmonized System Nomenclature (HSN)/Service Accounting Code (SAC) of subject job	
4.3	Bidder hereby confirms that the quoted prices are in compliance with the Section 171 of CGST Act/ SGST Act as mentioned as clause no. 13.10 of ITB (Anti-profiteering clause).	
4.4	Whether bidder is liable to raise E-Invoice as per GST Act. If yes, bidder will raise E-Invoice and confirm compliance to provision of tender in this regard.	
5.	Bidder confirms acceptance of relevant Terms of Payment specified in the Bid Document.	
6.	Bidder confirms that Contract Performance Security will be furnished as per Bid Document within 30 days of FOA in case of successful bidder.	
7.	Bidder confirms that Contract Performance Security shall be from any Indian scheduled bank (excluding Co-operative banks and Regional Rural bank) or a branch of an International bank situated in India and registered with Reserve bank of India as scheduled foreign bank. However, in	



बंगाल गैस कंपनी लिमिटेड BENGAL GAS COMPANY LIMITED
(गेल एवम जीसीजीएससीएल का संयुक्त उद्यम) (A JV Company of GAIL and GCGSCL)

Sl.	DESCRIPTION	BIDDER'S CONFIRMATION
	case of bank guarantees from banks other than the Nationalized Indian banks, the bank must be a commercial bank having net worth in excess of Rs 100 crores and a declaration to this effect shall be made by such commercial bank either in the Bank Guarantee itself or separately on its letterhead.	
8.	Bidder confirms compliance to Completion Schedule as specified in Bid document.	
9.	Bidder confirms acceptance of Price Reduction Schedule for delay in completion schedule specified in Bid document. In case of delay, the bills / invoices shall be submitted after reducing the price reduction due to delay (refer PRS Clause).	
10.	a) Bidder confirms acceptance of all terms and conditions of Bid Document (all sections). b) Bidder confirms that printed terms and conditions of bidder are not applicable.	
11.	Bidder confirms their offer is valid for period specified in GeM bid from Final/Extended bid due date of submission of bids.	
12.	Bidder furnishes EMD/Bid Security details as under OR bid security declaration: a) EMD/ Bid Security No. & date b) Value c) Validity d) Bank Address/e-mail ID/Mobile no. [in case of BG] OR Bidder furnishes bid security declaration [applicable for bidders to whom exemption is allowed as per cl.no.16.8 of Section-III].	
13.	Bidder confirms that (i) none of Directors (in Board of Director) of bidder is a relative of any Director (in Board of Director) of BGCL or (ii) the bidder is not a firm in which any Director (in Board of Director) of BGCL or their relative is a partner.	
14.	All correspondence must be in ENGLISH language only.	
15.	The contents of this Tender Document have not been modified or altered by Bidder. In case, it is found that the tender document has been modified / altered by the bidder, the bid submitted by them shall be liable for rejection.	
16.	Bidder confirms that all Bank charges associated with Bidder's Bank regarding release of payment etc. shall be borne by Bidder.	
17.	<u>No Deviation Confirmation:</u> It may be note that any 'deviation / exception' in any form may result in rejection of Bid. Therefore, Bidder confirms that they have not taken any 'exception / deviation' anywhere in the Bid. In case any 'deviation / exception' is mentioned or noticed,	



Sl.	DESCRIPTION	BIDDER'S CONFIRMATION
	Bidder's Bid may be rejected.	
18.	If the Bidder becomes a successful Bidder pursuant to the provisions of the Tender Document, the following Confirmation shall be automatically become enforceable "We agree and acknowledge that the Employer is entering into the Contract/Agreement solely on its own behalf and not on behalf of any other person or entity. In particular, it is expressly understood & agreed that the Government of India is not a party to the Contract/Agreement and has no liabilities, obligations or rights thereunder. It is expressly understood and agreed that the Purchaser is authorized to enter into Contract/Agreement, solely on its own behalf under the applicable laws of India. We expressly agree, acknowledge and understand that the Purchaser is not an agent, representative or delegate of the Government of India. It is further understood and agreed that the Government of India is not and shall not be liable for any acts, omissions, commissions, breaches or other wrongs arising out of the Agreement. Accordingly, we hereby expressly waive, release and forego any and all actions or claims, including cross claims, VIP claims or counter claims against the Government of India arising out of the Agreement and covenants not to sue to Government of India as to any manner, claim, cause of action or things whatsoever arising of or under the Agreement."	
19.	Bidder to ensure all documents as per tender including clause 11 of Section III and all Formats are included in their bid	
20.	Bidder understands that Tender Document is not exhaustive. In case any activity though specifically not covered in description of 'Schedule of Rates' but is required to complete the work as per Scope of Work, Conditions of Contract, or any other part of Bidding document, the quoted rates will deemed to be inclusive of cost incurred for such activities unless otherwise specifically excluded. Bidder confirms to perform for fulfilment of the contract and completeness of the supplies in all respect within the scheduled time frame and quoted price.	
21.	Bidder hereby confirms that they are not on 'Holiday' by GAIL/BGCL or Public Sector Project Management Consultant (like EIL, Mecon only due to "poor performance" or "corrupt and fraudulent practices") or banned by Government department/ Public Sector on due date of submission of bid. Further, Bidder confirms that neither they nor their allied agency/(ies) (as defined in the Procedure for Action in case of Corrupt/ Fraudulent/ Collusive/ Coercive Practices) are on banning list of BGCL or the Ministry of Petroleum and Natural Gas.	



Sl.	DESCRIPTION	BIDDER'S CONFIRMATION
	Bidder also confirms that they are not under any liquidation, court receivership or similar proceedings or 'bankruptcy'. In case it comes to the notice of BGCL that the bidder has given wrong declaration in this regard, the same shall be dealt as 'fraudulent practices' and action shall be initiated as per the Procedure for action in case of Corrupt/Fraudulent/Collusive/Coercive Practices. Further, Bidder also confirms that in case there is any change in status of the declaration prior to award of contract, the same will be promptly informed to BGCL by them.	
22.	Bidder confirms that they have read and understood the General Conditions of Contract - available at SECTION-IV & no 'exception / deviation' anywhere has been taken in the same and that they shall abide by provisions of relevant GCC.	
23.	Bidder certifies that they would adhere to the Fraud Prevention Policy of BGCL [available at BGCL website] and shall not indulge themselves or allow others (working in BGCL) to indulge in fraudulent activities and that they would immediately apprise BGCL of the fraud/suspected fraud as soon as it comes to their notice. Concealment of facts regarding their involvement in fraudulent activities in connection with the business transaction(s) of BGCL is liable to be treated as crime and dealt with by the procedures of BGCL as applicable from time to time.	
24.	Bidder confirms that (i) any variation in GST at the time of supplies for any reasons, other than statutory, including variations due to turnover, shall be borne by them and (ii) any error of interpretation of applicability of rate of GST (CGST & SGST/ UTGST or IGST) on components of an item and/or various items of tender by them shall be to bidder's account.	
25.	Bidders confirm to submit signed copy of Integrity Pact (wherever included in tender). If Bidder is a partnership concern or a consortium, this agreement must be signed by all partners or consortium members.	
26.	Bidder confirms that there is no conflict of interest with other bidders, as per clause no. 4.2 of Section-III (ITB) of Tender Document.	
27.	In case of any variance in the terms and conditions between GeMContract and PO/LOA, the terms and conditions of PO/LOA shall prevail.	
28.	Bidder confirms that as specified in tender that evaluation bids will be based on the confirmations & documents submitted by bidders in their bid and methodology specified in Section II of tender document irrespective of the status/evaluation on GeM portal and BGCL's decision in this regard shall be final.	
29.	As per GEM policy/guidelines, MSE bidders have to update their status in their Profile and declare whether they are	



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Sl.	DESCRIPTION	BIDDER'S CONFIRMATION
	participating as MSE on GeM Portal (including updating their status in Profile) while submitting the bid on GeM tender. Further, MSE are required to upload relevant documents in bid as per provision of tender. However, evaluation and applicability of EMD exemption and purchase preference policy will be based on the confirmations & documents submitted by the bidder in their bid irrespective of selection/option made on GeM portal. (Applicable only for MSE Bidders).	
30.	Bidder confirms that, in case of contradiction between the confirmations provided in this format and to the terms & conditions mentioned elsewhere in the offer, the confirmations given in this format shall prevail.	

Place:

Date:

[Signature of Authorized Signatory of Bidder]

Name:

Designation:

Seal:



F-6

ACKNOWLEDGEMENT CUM CONSENT LETTER

(On receipt of tender document/information regarding the tender, Bidder shall acknowledge the receipt and confirm his intention to bid or reason for non-participation against the enquiry /tender through e-mail to concerned executive in BGCL issued the tender, by filling up the Format)

To,

M/s BENGAL GAS COMPANY LIMITED

SUB:

TENDER NO:

Dear Sir,

We hereby acknowledge receipt of a complete set of bidding document along with enclosures for subject item/job and/or the information regarding the subject tender.

- We intend to bid as requested for the subject item/job and furnish following details with respect to our quoting office:

Postal Address with Pin Code:
Telephone Number :
Contact Person :
E-mail Address :
Mobile No. :
Date :
Seal/Stamp :

- We are unable to bid for the reason given below:

Reasons for non-submission of bid:

Agency's Name :
Signature :
Name :
Designation :
Date :
Seal/Stamp :



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BIDDER'S EXPERIENCE

To,

M/s Bengal Gas Company Limited

SUB:

TENDER NO:

Sl. No	Description of the Supply/ Services	PO/ Contract No. and date	Full Address & phone nos. of Client.	Postal & nos. of	Value of Contract/ Order (Specify Currency Amount)	Date of Commencement	Scheduled Completion/ Delivery Period (Months)	Date of Actual Completion	Reasons for delay in execution, if any
(1)	(2)	(3)	(5)	(6)	(7)	(8)	(9)	(10)	

Place:

Date:

[Signature of Authorized Signatory of Bidder]

Name:

Designation:

Seal:



F-8 (A)

CHECK LIST

Bidders are requested to duly fill in the checklist. This checklist gives only certain important items to facilitate the bidder to make sure that the necessary data/information as called for in the bid document has been submitted by them along with their offer. This, however, does not relieve the bidder of his responsibilities to make sure that his offer is otherwise complete in all respects. Please ensure compliance and tick (√) against following points:

S. No.	DESCRIPTION	CHECK BOX	REFERENCE PAGE NO. OF THE BID SUBMITTED
1.0	Signing and Stamping on each sheet of offer, original bidding document including SCC, ITB, GCC, SOR drawings, corrigendum (if any)		
2.0	Confirm that the following details have been submitted in the Un-priced part of the bid		
i	Covering Letter, Letter of Submission		
ii	EMD/Bid Security / Declaration for Bid Security as per provisions of Tender		
iii	signed & stamped tender document along with drawings and addendum (if any)		
iv	Power of Attorney in the name of person signing the bid.		
v	Confirm submission of document alongwith unpriced bid as per bid requirement (including cl.no.11.1.1 of Section-III).		
3.0	Confirm that all format duly filled in are enclosed with the bid duly Signed and Stamped by authorised person(s)		
4.0	Confirm that the price part is uploaded in GeM portal.		
6.0	Confirm that undertaking as per Form-I-A, Form-I-B & Form-II to Section-II have been submitted by the bidder (Guidelines from Procurement from a Country sharing a Land Border with India)		
7.0	Confirm submission of Checklist against Bid Evaluation Criteria as per format F-8(B)		

Place:

[Signature of Authorized Signatory of Bidder]

Date:

Name:

Designation:

Seal:



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F-8(B)

CHECKLIST FOR BID EVALUATION CRITERIA (BEC) (refer Section II of Tender document)

BEC Clause no.	Description	Documents required for qualification	Documents Submitted by Bidder	Documents attested as per Section-II of Tender	Reference Page No. of the Bid submitted
A	Documents Required-Technical Criteria				
A.1 & A.2	Proof of Manufacturer / Packager [A.1.1 & A.2.1]	Copy of Factory registration certificate / Excise registration certificate / NSIC certificate indicating as Manufacturer / Packager of CNG compressor in scope or any other document evidencing the bidder as manufacturer / packager of CNG Compressor Copy of PESO approval and factory registration certificate / Excise registration certificate / NSIC certificate indicating as Manufacturer of CNG Compressor in scope or any other document evidencing the bidder as manufacturer of CNG Compressor. Documents must be duly certified / attested by a Chartered Engineer and Notary Public with legible Stamp.		Yes/No	
	Experience criteria For the bidder (Quantity) [A.1.2 & A.2.2]	Copies of c) Detailed Letter of Award/Purchase Order / Contract with SOR. d) Inspection Release Note/Completion Certificate issued by End user/Owner (or their consultant who has been duly authorized by them to issue such certificate), indicating year of supply, no. of packages; only after completion of work/supply in all respect.		Yes/No	



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BEC Clause no.	Description	Documents required for qualification	Documents Submitted by Bidder	Documents attested as per Section-II of Tender	Reference Page No. of the Bid submitted
		Documents must be duly certified / attested by a Chartered Engineer and Notary Public with legible Stamp.			
A.3	Undertaking as per BEC	Bidder in their letter head shall furnish the declaration Documents must be duly certified / attested by a Chartered Engineer and Notary Public with legible Stamp.		Yes/No	
B	Documents Required-Financial Criteria				
B.1, B.2, & B.3	Average Annual Turn-over, Net-Worth & Working Capital	Bidder(s) shall submit copy of Audited Annual Financial Statement [Balance Sheet and Profit & Loss Account Statement] along with Audit Report of three (03) preceding Financial Year(s) along with un-price bid. Submitted Documents must be duly certified / attested by a Chartered Accountant and Notary Public with legible Stamp. Further, Bidder shall submit “Details of financial capability of Bidder” in prescribed format (F-10) duly signed and stamped by a chartered accountant/ Certified Public Accountant (CPA).		Yes/No	
D	General				
D.2	Jobs executed for Subsidiary / Fellow	Tax paid invoice(s) duly certified by statutory auditor of the bidder towards payments of statutory tax in support of the job executed for Subsidiary/		Yes/No	



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BEC Clause no.	Description	Documents required for qualification	Documents Submitted by Bidder	Documents attested as per Section-II of Tender	Reference Page No. of the Bid submitted
	subsidiary/ Holding company	Fellow subsidiary/ Holding company.			
D.3	In case of rate contract	Bidder to comply the documents as mentioned under A.1 & A.2 above. Regarding execution, bidder to submit satisfactory work execution certificate issued by End User/Owner/Authorized Consultant. Documents must be duly certified / attested by a Chartered Engineer and Notary Public with legible Stamp.			

Place:
Date:

[Signature of Authorized Signatory of Bidder]
Name:
Designation:
Seal:



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F-9

FORMAT FOR CERTIFICATE FROM BANK
IF BIDDER'S WORKING CAPITAL IS INADEQUATE/NEGATIVE

(To be provided on Bank's letter head)

Date:

To,
M/s. BENGAL GAS COMPANY LIMITED

Dear Sir,

This is to certify that M/s (name of the Bidder with address)(hereinafter referred to as Customer) is an existing Customer of our Bank.

The Customer has informed that they wish to bid for BGCL's Tender No. dated for(Name of the supply/work/services/consultancy) and as per the terms of the said Tender Document they have to furnish a certificate from their Bank confirming the availability of line of credit.

Accordingly, M/s..... (name of the Bank with address) confirms availability of line of credit to M/s..... (name of the Bidder) for at least an amount of Rs.

It is also confirmed that the net worth of the Bank is more than Rs. 100 Crores (or Equivalent USD) and the undersigned is authorized to issue this certificate.

Yours truly

for (Name & address of Bank)

(Authorized signatory)Name of the signatory:

Designation :

Email Id :

Contact No. :

Stamp

Note:

This Declaration Letter for line of credit shall be from single bank only. Letters from multiple banks shall not be applicable. However, banking syndicate will be acceptable wherein a group of banks can jointly provide line of credit to the bidder.



F-10

**FORMAT FOR CHARTERED ACCOUNTANT CERTIFICATE/ CERTIFIED
PUBLIC ACCOUNTANT (CPA) FOR FINANCIAL CAPABILITY OF THE BIDDER**

We have verified the Audited Financial Statements and other relevant records of M/s
..... (Name of the bidder) and certify the following:

A. AVERAGE ANNUAL FINANCIAL TURNOVER* DURING THE LAST THREE FINANCIAL YEARS:

Year	Amount (Currency)
Year 1:	
Year 2:	
Year 3:	
Total (A)	
Average Annual Financial Turnover during the last three financial years (A/3)	

B. NET WORTH* AS PER AUDITED FINANCIAL STATEMENT OF PRECEDING FINANCIAL YEAR:

Description	Year _____
	Amount (Currency)
1. Net Worth	

C. WORKING CAPITAL* AS PER AUDITED FINANCIAL STATEMENT OF PRECEDING FINANCIAL YEAR:

Description	Year _____
	Amount (Currency)
1. Current Assets	
2. Current Liabilities	
3. Working Capital (Current Assets-Current liabilities)	

****Refer Instructions***

Notes:

- 1.0** It is further certified that the above mentioned applicable figures are matching with the returns filed with Registrar of Companies (ROC) [Applicable only in case of Indian Companies]
- 2.0** We confirm that above figures are after referring notes at page 2 of 2 of F-10.
- 3.0** Practicing Chartered Accountants shall generate Unique Document Identification Number (UDIN) for all certificates issued by them

Name of Audit Firm:
Chartered Accountant/CPA
Date:
Seal: Membership No.:
UDIN:

[Signature of Authorized Signatory]
Name:
Designation:



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Instructions:

1. The financial year would be the same as one normally followed by the bidder for its Annual Report.
2. The bidder shall provide the audited annual financial statements as required for this Tender document. Failure to do so would result in the Proposal being considered as non-responsive.
3. For the purpose of this Tender document:
 - (i) **Annual Turnover** shall be “Revenue from Operations” as per Profit & Loss account of audited annual financial statements”
In case the date of constitution/incorporation of the bidder is less than 3 years old, the average turnover in respect of the completed financial years after the date of constitution/ incorporation shall be taken into account for minimum Average Annual Financial Turnover criteria.
 - (ii) **Working Capital** shall be “Current Assets less Current liabilities” and
 - (iii) **Net Worth** shall be Paid up share capital plus Free Reserves & Surplus less accumulated losses, deferred expenditure and miscellaneous expenditure not written off, if any.
4. **Above figures shall be calculated after considering the qualification, if any, made by the statutory auditor on the audited financial statements of the bidder including quantified financial implication.**
5. This certificate is to be submitted on the letter head of Chartered Accountant/CP



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F-11

BIDDER'S QUERIES FOR PRE BID MEETING

To,

M/s BENGAL GAS COMPANY LIMITED

Sub :

Tender No :

SL. NO.	REFERENCE OF BIDDING DOCUMENT				BIDDER'S QUERY	BGCL'S REPLY
	SEC. NO.	Page No.	Clause No.	Subject		

NOTE: The Pre-Bid Queries may be sent by e-mail before due date for receipt of Bidder's queries.

SIGNATURE OF BIDDER: _____

NAME OF BIDDER : _____



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E-Banking Mandate Form

**(APPLICABLE ONLY IN CASE BIDDER'S BANK ACCOUNT IS NOT MAPPED
IN BGCL)**

(To be issued on vendors letter head)

1. Vendor/customer Name:
2. Vendor/customer Code (If available):
3. Vendor /customer Address:
4. Vendor/customer e-mail id:
5. Particulars of bank account
 - a) Name of Bank
 - b) Name of branch
 - c) Branch code:
 - d) Address:
 - e) Telephone number:
 - f) Type of account (current/saving etc.)
 - g) Account Number:
 - h) RTGS IFSC code of the bank branch
 - i) NEFT IFSC code of the bank branch
 - j) 9 digit MICR code

I/We hereby authorize Bengal Gas Company Limited to release any amount due to me/us in the bank account as mentioned above. I/We hereby declare that the particulars given above are correct and complete. If the transaction is delayed or lost because of incomplete or incorrect information, we would not hold the Bengal Gas Company Limited responsible.

(Signature of vendor/customer)

BANK CERTIFICATE

We certify that ----- has an Account no. ----- with us and we confirm that the details given above are correct as per our records.

Bank stamp

Date

(Signature of authorized officer of bank)



F-13 **INTEGRITY PACT**

INTRODUCTION:

Bengal Gas Company Limited (BGCL) as one of its endeavour to maintain and foster most ethical and corruption free business environment, have decided to adopt the Integrity Pact, a tool developed by the Transparency International, to ensure that all activities and transactions between the Company (BGCL) and its Counterparties (Bidders, Contractors, Vendors, Suppliers, Service Providers/Consultants etc.) are handled in a fair and transparent manner, completely free of corruption.

Considering the above, the details mentioned at the attached Annexure-1 are applicable as stated in Instruction to Bidders of Bid Document in addition to the existing stipulation regarding Corrupt and Fraudulent Practices.

The attached copy of the Integrity Pact at Annexure- 2 shall be included in the Bid submitted by the bidder (to be executed by the bidder for all tenders of value Rs. 1 (One) crore and above). In case a bidder does not sign the Integrity Pact, his bid shall be liable for rejection.



ANNEXURE-1

Bidder is required to sign the Integrity Pact with BGCL as per format & terms and conditions enclosed with tender. In case a bidder does not sign the Integrity Pact, his bid shall be liable for rejection.

I COMMITMENTS AND OBLIGATIONS OF THE “COUNTERPARTY”

- a) The Counterparty, directly or indirectly (through agent, consultant, advisor, etc.), shall not pay any bribe/ influence or give undue/ unlawful benefit to anyone to gain undue advantage in dealing with BGCL.
- b) The Counterparty will not engage in collusion of any kind including price fixation etc. with other Counterparts.
- c) The counterparty will not pass BGCL's confidential information to any third party unless specifically authorized by BGCL in writing.
- d) The Counterparties shall promote and observe best ethical practices within their respective organizations.
- e) The Counterparty shall inform the Independent External Monitor.
 - i) If it received any demand, directly or indirectly, for a bribe/ favour or any illegal gratification/ payment / benefit;
 - ii) If it comes to know of any unethical or illegal payment / benefit;
 - iii) If it makes any payment to any BGCL associate.
- f) The Counterparty shall not make any false or misleading allegations against BGCL or its associates.

II VIOLATIONS & CONSEQUENCES:

- a) If a Counterparty commits a violation of its Commitments and Obligations under the Integrity Pact Programme during bidding process, their entire Earnest Money Deposit/ Bid Security, would be forfeited and in addition, action shall be taken as per **“Procedure for action in case Corrupt /Fraudulent/ Collusive/Coercive Practices”**
- b) In case of violation of the Integrity pact by Counterparty after award of the Contract, BGCL shall be entitled to terminate the Contract. Further, BGCL would forfeit the security deposits/ Contract Performance Bank Guarantee and in addition, action shall be taken as per **“Procedure for action in case Corrupt /Fraudulent/ Collusive/Coercive Practices”**



INDEPENDENT EXTERNAL MONITORS (IEMS)

Presently the panel consisting of the following Independent External Monitors (IEMS) has been appointed by BGCL, in terms of Integrity Pact (IP) which forms part of BGCL Tenders / Contracts.

- i) Shri Apurva Varma, (email id: apurvavarmal@gmail.com)
- ii) Shri Akhil Kumar Shukla, (email id: akhilshukla60@gmail.com)

This panel is authorised to examine / consider all references made to it under this tender/ contract. The bidder(s) , in case of any dispute(s) / complaint(s) pertaining to this tender may raise the issue either with the designated tender/contract issuing officer or Nodal Officer (presently Sh. B Sonowal, Head (C&P)- Email: hodenp@bgcl.co.in) in BGCL or directly with the IEMs on the panel or IEM c/o Chief Vigilance Officer, GAIL (India) Limited, GAIL Bhawan, 16, Bhikaiji Cama Place, R.K. Puram, New Delhi – 110066.



ANNEXURE-2

INTEGRITY PACT

(To be executed on plain paper)

Between Bengal Gas Company Limited, a Government of India Public Sector, (here-in-after referred to as "Principal").

AND

_____ (here-in-after referred to as "The Bidder/ Contractor").

(Principal and the Bidder / Contractor are here-in-after are referred to individually as "Party" or collectively as "Parties").

PREAMBLE

The Principal intends to award under laid down organizational procedures, contract/s for _____. The Principal values full compliance with all relevant laws of land rules, regulations, and economic use of resources and of fairness /transparency in its relations with its Bidder (s) and/or Contractor (s).

The Integrity Pact essentially envisages an agreement between the prospective vendors/bidders and the buyer, committing the persons/officials of both sides, not to resort to any corrupt practices in any aspect/stage of the contract. Only those vendors/bidders, who commit themselves to such a Pact with the buyer, would be considered competent to participate in the bidding process. In other words, entering into this Pact would be a preliminary qualification. Integrity Pact, in respect of a particular contract, shall be operative from the date IP is signed by both the parties.

The essential ingredients of the Pact include:

Section 1 – Commitments of the Principal

1. The Principal commits itself to take all measures necessary to prevent corruption and to observe the following Principles:-
 - i) No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or for a third person, any material or immaterial benefit which the person is not legally entitled to.
 - ii) The Principal will, during the tender process treat all Bidder(s) with equity and reasons. The Principal will in particular, before and during the tender process , provide to all Bidder (s) the same information and will not provide to any Bidder (s) confidential / additional information through which the Bidder (s) could obtain an advantage in relation to the tender process or the contract execution. The


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principal will enter into agreements with identical conditions as this one with all bidders and contractors.

- iii) The Principal will exclude from the process all known prejudiced persons.
2. If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal Code (IPC)/ Prevention of Corruption Act (PC Act), or if there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officers and in addition can initiate disciplinary actions.

Section 2 – Commitments of the Bidder (s)/Contractor (s)

1. The Bidder (s) / Contractor (s) commits themselves to take all measures necessary to prevent corruption. The Bidder (s)/ Contractor (s) commits themselves to observe the following principles during participation in the tender process and during the contract execution:
- i) The Bidder (s) / Contractor (s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he / she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.
 - ii) The Bidder (s) / Contractor (s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other action to restrict competitiveness or to introduce cartelisation in the bidding process.
 - iii) The Bidder (s) / Contractor (s) will not commit any offence under the relevant IPC/PC Act; further, the Bidder (s) / Contractor (s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
 - iv) The Bidder (s)/ Contractor (s) of foreign origin shall disclose the name and address of the Agents/ representatives in India, if any. Similarly, the Bidder (s)/ Contractor (s) of Indian Nationality shall furnish the name and address of the foreign principals, if any. Further, all the payments made to the Indian agent/ representative have to be in India Rupees only.
 - v) The Bidder (s) / Contractor (s) will, when presenting their bid, disclose any and all payments made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.


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- vi) Bidder(s) / Contractor(s) who have signed the Integrity Pact shall not approach the Courts while representing the matter to IEMs and shall wait for their decision in the matter.
 - vii) In case of a Joint Venture, all the partners of the joint venture should sign the Integrity Pact. In case of sub-contracting, the principal contractor be solely responsible for the adherence to the provisions of IP by the Subcontractor(s).
2. The Bidder(s)/ Contractor(s) shall not instigate third person to commit offences outlined above or be an accessory to such offences.

Section 3 – Disqualification from tender process and exclusion from future contracts

If the Bidder (s) / Contractor (s), before award or during execution has committed a transgression through a violation of Section 2, above or in any other form such as to put their reliability or credibility in question, the Principal is entitled to disqualify the Bidder (s) / Contractor (s) from the tender process or take action as per provisions of “**Procedure for action in case Corrupt /Fraudulent/ Collusive/Coercive Practices**”.

Section 4 – Compensation for Damages

1. If the Principal has disqualified the Bidder (s) from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit / Bid Security.
2. If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to Section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages equal to the Contract Value or the amount equivalent to Performance Bank Guarantee.

Section 5 – Previous transgression

1. The Bidder declares that no previous transgression occurred in the last three years, with any other Company in any country conforming to the anti-corruption approach or with any Public Sector Enterprise in India that could justify his exclusion from the tender process.
2. If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or actions can be taken as per provisions of “**Procedure for action in case Corrupt /Fraudulent/ Collusive/Coercive Practices**”

Section 6 – Equal treatment to all Bidders / Contractors / Subcontractors

1. In case of sub-contracting, the Principal contractor shall take the responsibility of the


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adoption of IP by the sub-contractor. It is to be ensured by him that all sub-contractors also sign the IP.

2. The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors.
3. The Principal will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

Section 7 – Criminal charges against violating Bidder (s) / Contractor (s) / Sub-contractor (s)

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the same to the Chief Vigilance Officer.

Section 8 –Independent External Monitor / Monitors

1. The Principal appoints competent and credible Independent External Monitor for this Pact after approval by Central Vigilance Commission. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
2. The Monitor is not subject to instructions by the representatives of the parties and performs his/her functions neutrally and independently. The Monitor would have access to all documents/records pertaining to the contract for which a complaint or issue is raised before them, as and when warranted. However, the documents/records/information having National Security implications and those documents which have been classified as Secret/Top Secret are not to be disclosed. It will be obligatory for him/ her to treat the information and documents of the Bidders/ Contractors as confidential. The IEMs have also signed declaration on "non-disclosure of confidential Information" and of "Absence of conflict of interest". In case of any conflict of interest arising at a later date, the IEM shall inform CEO, BGCL and recuse himself/herself from that case."
3. The Bidder (s)/ Contractor (s) accepts that the Monitor has the right to access without restriction to all Project documentation of the Principal including that provided by the Contractor. The Contractor will also grant the Monitor, upon his/her request and demonstration of a valid interest, unrestricted and unconditional access to their project documentation. The same is applicable to Sub-contractors.
5. The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the

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Monitor the option to participate in such meetings.

6. As soon as the Monitor notices, or believes to notice, a violation of this agreement, he/she will so inform the Management of the Principal and request the Management to discontinue or to take corrective action, or to take other relevant action. The monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
7. The Monitor will submit a written report to the CEO, BGCL within 30 days from the date of reference or intimation to him by the 'Principal' and, should the occasion arise, submit proposals for correcting problematic situations.
8. If the Monitor has reported to the CEO, BGCL, a substantiated suspicion of an offence under relevant IPC/PC Act, and the CEO, BGCL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer, then only in case of very serious issue having a specific, verifiable Vigilance angle, the matter should be reported directly to the Central Vigilance Commission.
9. The word 'Monitor' would include both singular and plural.
10. In case of any complaints referred under IP Program, the role of IEMs is advisory and would not be legally binding and it is restricted to resolving the issues raised by an intending bidder regarding any aspect of the tender which allegedly restricts competition or bias towards some bidder.
11. After award of contract, the IEMs shall look into any issue relating to execution of contract, if specifically raised before them. As an illustrative example, if a contractor who has been awarded the contract, during the execution of contract, raises issue of delayed payment etc. before the IEMs, the same shall be examined by the panel of IEMs.

Section 9 – Pact Duration

This Pact begins when both parties have legally signed it. It expires for the Contractor 12 months after the last payment under the respective contract, and for all other Bidders 6 months after the contract has been awarded. Any violation to the same would entail disqualification of the bidders and exclusion from future business dealing.

If any claim is made / lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/determined by the CEO, BGCL.

Section 10 – Miscellaneous provisions

1. This agreement is subject to Indian Law. Place of performance and exclusive jurisdiction is the Registered Office of the Principal, i.e. Kolkata.


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2. Changes and supplements as well as termination notices, if any, need to be made in writing. Side agreements have not been made.
3. If the Contractor / Bidder is a Joint Venture or a partnership concern or a consortium, this agreement must be signed by all partners or consortium members.
4. Should one or several of the provisions of this agreement turn out to be invalid, the remainder of this agreement shall remain valid. In this case, the parties will strive to come to an agreement to their original intentions in such a case.
5. In the event of any contradiction between the Integrity Pact and its Annexure, the Clause in Integrity Pact will prevail.

(For & on Behalf of Principal)

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Action Area-II B, New Town, Kolkata-700161
(Office Seal)

(For & on Behalf of
Bidder/Contractor)

(Office Seal)

Place -----

Date -----

Witness 1:

(Name & Address)

.....
.....
.....

Witness 2:

(Name & Address)

.....
.....
.....



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FREQUENTLY ASKED QUESTIONS (FAQs)

SL.NO.	QUESTION	ANSWER
1.0	Can any vendor quote for subject Tender?	Yes. A Vendor has to meet Bid Evaluation Criteria (BEC) given under Section II of Tender document in addition to other requirements.
2.0	Should the Bid Evaluation Criteria documents be attested?	Yes. Please refer Section II of Tender document.
3.0	Is attending Pre Bid Meeting mandatory.	No. Refer Clause No. 17 of Instruction to Bidders of Tender Document. However, attending Pre Bid Meeting is recommended to sort out any issue before submission of bid by a Bidder.
4.0	Can a vendor submit more than 1 offer?	No. Please refer Clause No. 4 of Instruction to Bidders of Tender Document.
5.0	Is there any Help document available for GeM portal.	Refer training module presentations and FAQs as available on GeM portal.
6.0	Are there are any MSE (Micro & Small Enterprises) benefits available?	Yes. Refer Clause No. 40 of Instructions to Bidders of Tender Document.
7.0	Are there are any benefits available to Startups?	Refer Clause No. 49 of Instructions to Bidders of Tender Document.

All the terms and conditions of Tender remain unaltered.



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**UNDERTAKING REGARDING SUBMISSION OF ELECTRONIC INVOICE (E-
INVOICE AS PER GST LAWS)**

(To be submitted on letter head along with documents for release of payment)

To,
M/s BENGAL GAS COMPANY LIMITED

.....

SUB:

PO NO:

Dear Sir,

We _____ (Name of the Supplier) hereby confirm that E-Invoice provision as per the GST Law is

(i) Applicable to us []

(ii) Not Applicable to us []

(Supplier is to tick appropriate option (✓ or X) above).

In case, same is applicable to us, we confirm that we will submit E-Invoice after complying with all the requirements of GST Laws. If the invoice issued without following this process, such invoice can-not be processed for payment by BGCL as no ITC is allowed on such invoices. We also confirm that If input tax credit is not available to BGCL for any reason attributable to Supplier (both for E-invoicing cases and non-E-invoicing cases), then BGCL shall not be obligated or liable to pay or reimburse GST (CGST & SGST/UTGST or IGST) claimed in the invoice(s) and shall be entitled to deduct / setoff / recover such GST amount (CGST & SGST/UTGST or IGST) or Input Tax Credit amount together with penalties and interest, if any, by adjusting against any amounts paid or becomes payable in future to the Supplier under this contract or under any other contract.

Place: [Signature of Authorized Signatory of Bidder]

Date: Name:

Designation:

Seal:



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**NO CLAIM CERTIFICATE
(TO BE SUBMITTED BEFORE RELEASE OF CPS/SECURITY DEPOSIT)
[On the Letter-head of Contractor]**

We, _____, a company incorporated under the laws of India/ a Consortium between
* ___ and * ___ (name of Consortium partners to be inserted)/ a Partnership Firm consisting of
* ___ and * ___ (name of Partners to be inserted)/ a Sole Proprietorship (as the case may be), having
its registered office at _____ and carrying on business under the name and style
M/s. _____ were awarded the contract by BGCL in reference to Tender No.
_____ dated _____ (“Order/Contract”).

After completion of the above-said items/job under the Order/Contract, we have scrutinized all our
claims, contentions, disputes, issues and we hereby confirm that after adjusting all payments
received by us against our R.A. Bills and final bill, we have no claims, dues, issues and contentions
from BGCL.

We further absolve BGCL from all liabilities present or future arising directly or indirectly out of
the Contract.

There is no economic duress or any other compulsion on us for submission of this no claim
certificate.

Place:	[Signature of Authorized Signatory of Service Provider]
Date:	Name:
	Designation:
	Seal:



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SECTION - IV

GENERAL CONDITION OF CONTRACT (GCC) - PROCUREMENT OF GOODS



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4. Country of Origin
5. Scope of Contract
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1.0 DEFINITIONS, INTERPRETATIONS & PRIORITY OF CONTRACT DOCUMENTS

1.1 Definitions

In this document, General Conditions of Contract (GCC-Goods), the following terms shall have the following respective meanings:

- 1.1.1 “Approved” means prior approval in writing.
- 1.1.2 The “Bid” or “Tender” “Offer” means the proposal along with supporting documents submitted before Notification of Award by the Bidder for consideration / acceptance by the Purchaser.
- 1.1.3 “Bidder” Designates the person(s) or legal entity / Firm / Company /Corporation/ Organization, and it’s legal representatives, successors and permitted assigns which has made a proposal or submitted Bid/Tender/Offer with the aim of concluding a Contract with the Purchaser.
- 1.1.4 “Consultant” or “PMC” [if engaged] shall mean M/s.....having its registered office at..... Who are the consultant to the Purchaser for this Contract. The term Consultant includes successors, assigns of M/s.
- 1.1.5 “Contract” shall mean all obligations, commitments, promises agreed upon between Purchaser and Supplier for supply of Goods including execution of the Services (if any) as per Purchase Order (PO) and its subsequent amendment(s), if any in writing thereto.
- 1.1.6 “Contract Price” or “Purchase Order Value” shall mean the total sum accepted or the total sum calculated in accordance with the prices accepted in the Contract as payable to the Supplier under the Contract for the full and proper performance of its contractual obligations. The Contract Price /Purchase Order Value is subject to Price Reduction Schedule clause.
- 1.1.7 “Completion Date” shall mean the date on which the supplied Goods are successfully commissioned by the Supplier and handed over to the Purchaser.

“Delivery Date” shall mean the date on which Goods are supplied by Supplier as per delivery terms of the Contract.
- 1.1.8 “Commercial Operation” shall mean the condition of the operation in which the complete Goods / equipment covered under the Contract is officially declared by the Purchaser to be available for continuous operation at different loads up to and including rated capacity.
- 1.1.9 “Day” shall mean a day of 24 hours from midnight to midnight irrespective of the number of hours worked in that day.
- 1.1.10 “Delivery” shall mean the transfer of the Goods from the Supplier to the Purchaser in accordance with the terms and conditions set forth in the Contract.

Delivery terms shall be interpreted as per current edition of INCOTERMS, published by the International Chamber of Commerce before the due date of submission of Bid
- 1.1.11 “Drawings” shall mean and include Engineering drawings, sketches showing plans, sections and elevations in relation to the Contract together with modifications and/or revisions thereto.



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- 1.1.12 “Engineer” or “Engineer-in-Charge” shall mean the person designated from time to time by Purchaser/Consultant and shall include those who are expressly authorized to act for and on behalf of Purchaser/Consultant for operation of this Contract.
- 1.1.13 “Fax of Acceptance” shall mean intimation regarding notification of award by the Purchaser/Consultant to the successful Bidder/Supplier through a fax/ letter/ email conveying that the Tender/Bid/Offer has been accepted in accordance with the provisions contained therein.
- 1.1.14 “Final Acceptance” shall mean the Purchaser’s written acceptance of the Goods supplied and works/Services performed under the Contract after successful completion of performance and guarantee test, at/after the Completion Date.
- 1.1.15 “Goods” shall mean articles, materials, equipment, machinery, instruments, stores, design and drawings, data and other property to be supplied by Supplier including Services (if any), to complete the Contract and Amendment(s) thereto.
- 1.1.16 “Inspector” shall mean any person or third party Agency nominated by Purchaser/Consultant to inspect Goods, stage wise as well as final, before dispatch, at Supplier’s works and/or on receipt at Site as per terms of the Contract.
- 1.1.17 “Initial Operation” shall mean the first integral operation of the complete Goods covered under the Contract with sub-systems and supporting equipment(s) in service or available for service.
- 1.1.18 “Purchase Order” means the Contract Document/Order collectively the Tender Documents, Designs, Drawings, Specification, Bill of Quantities, Schedule of Rates along with its break-up (if any), Fax of Acceptance (if any), agreed variations and amendments (if any) and such other documents constituting the Tender and acceptance thereof.
- 1.1.19 “Purchaser” shall mean Bengal Gas Company Limited (BGCL) having its registered office at 1st Floor, Block A, Finance Centre, CBD, Action Area – II B, Newtown, North 24 Parganas, Kolkata, West Bengal, India, Pin: 700161. The term Purchaser includes successors, assigns of BGCL.
- 1.1.20 “Performance and Guarantee Tests” shall mean all operational checks and tests required to determine and demonstrate capacity, efficiency and operating characteristics as specified in the Purchase Order.
- 1.1.21 “Project” designates the aggregate of the Goods and/or Services to be provided by one or more Suppliers/Contractors.
- 1.1.22 “Quantities / Bills of Quantities” designate the quantity calculations to be taken into account when these calculations are made from detailed or construction drawings or from work actually performed, and presented according to a jointly agreed breakdown of the Goods and/or Services.
- 1.1.23 “Supplier” shall mean the successful Bidder whose Bid has been accepted by the Purchaser for supply of Goods and incidental Services (if any). The term Supplier is a synonyms of Seller and Vendor/Contractor and also includes its successor(s) and permitted assign(s).



- 1.1.24 “Service” shall mean those services ancillary to the supply of Goods, such as transportation and insurance and any other incidental services such as erection, installation, testing, commissioning, provision of technical assistance, training and other such obligations of the Supplier covered under the Contract.
- 1.1.25 “Site” means the land(s) and other place(s) on, under, in or across/through which the Goods and/or Services have to be supplied, erected, assembled, adjusted, tested, arranged and/or commissioned.
- 1.1.26 6 “Specifications” shall mean and include schedules, details, description, statement of technical data, performance characteristics, standards (Indian and/or International) and standard specifications including all addenda/corrigenda published before entering into the Contract, as applicable and specified in the Contract.
- 1.1.27 “Sub-Contract” shall mean order placed by the Supplier, for any portion of the Contract, after necessary consent and prior written approval of Purchaser unless otherwise explicitly mentioned in the Contract.
- 1.1.28 “Sub-Contractor” shall mean the person(s) / firm / Organization / company (other than the Supplier) and its legal representatives, successors and permitted assigns named in the Contract for supply of any part of the Goods or Service(s) or to whom any part of the Contract has been sub-let by the Supplier with the prior consent in writing of the Consultant/Purchaser unless otherwise explicitly mentioned in the Contract.
- 1.1.29 “Start-Up” shall mean the time period required to bring the Goods covered under the Contract from an inactive condition, when construction is essentially complete to the state of readiness for trial operation. The start-up period shall include preliminary inspection and check out of Goods and supporting subsystems, initial operation of the complete Goods covered under the Contract to obtain necessary pre-trial operation data, perform calibration and corrective action, shutdown inspection and adjustment prior to the trial operation period.
- 1.1.30 “Tests” shall mean such process or processes to be carried out by the Supplier as are prescribed in the Contract or considered necessary by Purchaser or his representative in order to ascertain quality, workmanship, performance and efficiency of Goods or part thereof.
- 1.1.31 “Tests on Completion” shall mean such tests as prescribed in the Contract to be performed by the Supplier before the complete Goods and Services are taken over by the Purchaser.
- 1.1.32 "Week" shall mean a period of any consecutive seven Days.

1.2 Interpretations & Priority of Contract Documents

- 1.2.1 The documents forming the Contract are to be read together and interpreted as mutually explanatory of one another. If there is a direct inconsistency in specific obligation(s), then for the purposes of interpretation, and unless otherwise provided in the Contract, the priority of the Contract Documents shall be in accordance with following sequence:
- (i) Purchase Order
 - (ii) Fax of Acceptance
 - (i) Specific Technical Specification/Job Specifications (pertaining to Scope of Supply)



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- (ii) Drawings
- (iii) Special Purchase Conditions (SPC) / Special Conditions of Contract (SCC)
- (iv) General Technical Specifications (if applicable)
- (vii) Instructions to Bidders (ITB)
- (viii) General Conditions of Contract (GCC)
- (ix) Any other document forming part of the Contract

An Amendment issued to Purchase Order after signing of formal Contract shall take precedence over respective clauses of the formal Contract and its annexures.

The higher priority interpretation shall be adopted only to the extent required to deal with an inconsistency. Specific term(s) agreed take priority over general statement(s) and terms in Contract Document created at a later date govern over terms in earlier Contract Document. Subject to foregoing, the terms of the groups of documents set out above have equal importance within their group.

- 1.2.2 Headings and Marginal Notes: All headings and marginal notes to the clauses of these General Conditions of Contract or to the Specifications or to any other Tender Document are solely for the purpose of giving a concise indication and not a summary of the contents thereof, and they shall never be deemed to be part thereof or be used in the interpretation thereof the Contract.
- 1.2.3 Singular and Plural: In Contract Documents unless otherwise stated specifically, the singular shall include the plural and vice versa wherever the context so requires.
- 1.2.4 Interpretation: Words implying 'Person(s)/Party(ies)' shall include relevant Corporate Companies / Registered Associations/ Body of Individuals/ Firm of Partnership' and any firm/organization having legal capacity, as the case may be.
- 1.2.5 Gender: Where the context so requires, words imparting the masculine gender shall also include the feminine gender and the neuter gender and vice versa.
- 1.2.6 Severability: Should any provision of this Contract be found to be invalid, illegal or otherwise not enforceable by any court of law, such finding shall not affect the remaining provisions hereto and they shall remain binding on the parties hereto.
- 1.2.7 Incoterms:
 - (i) The meaning of any trade term and the rights and obligations of Parties thereunder shall be as prescribed by Incoterms® 2020 or its latest version.
 - (ii) EXW, FOB, FCA, CIF, CIP & CPT and other similar terms, shall be governed by the rules prescribed in the Incoterms® 2020 or its latest version, published by the International Chamber of Commerce, applicable as on due date of submission of Bid.

2.0 SUPPLIER TO INFORM

- 2.1 The Supplier shall be deemed to have carefully examined all Contract documents to his entire satisfaction. Any lack of information shall not in any way relieve the Supplier of his responsibility to fulfill his obligation under the Contract.

3.0 APPLICATION



- 3.1 These General Conditions of Contract (GCC-Goods) shall apply to the extent that they are not superseded by provisions of other parts of the Contract.

4.0 COUNTRY OF ORIGIN

- 4.1 All goods and services supplied under the contract shall have their Origin as quoted by the Bidder and accepted by Purchaser.
- 4.2 For purposes of this Clause “Origin” means the place where the Goods were mined, grown or produced, or from which the Services are supplied. Goods are produced when, through manufacturing, processing or substantial and major assembling of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components.
- 4.3 In case of Contract with foreign Suppliers, a certificate issued by relevant Chamber of Commerce specifying Country of Origin shall form part of shipping/dispatch documents.
- 4.4 The Origin of goods and services is distinct from the nationality of the Supplier.
- 4.5 In case of any export/re-export control restrictions imposed by parent country of Bidder / country of origin on the Goods offered/supplied regarding Goods’ end use or end user, then Bidder shall intimate the same upfront in their offer. In such case, right to accept or reject the Bid of such Bidder shall be decided by Purchaser on its sole discretion.

5.0 SCOPE OF CONTRACT

- 5.1 Scope of the Contract shall be as defined in the Purchase Order/Contract Document(s) and Annexure thereto.
- 5.2 Completeness of the Goods and Services shall be the responsibility of the Supplier. Any equipment, fittings and accessories which may not be specifically mentioned in the Scope, Specifications or drawings, but which are usual or necessary for the satisfactory functioning of the Goods (i.e. successful operation and functioning of the Equipment being Supplier’s responsibility) shall be provided by Supplier without any extra cost.
- 5.3 The Supplier shall follow the good engineering practices in the manufacture of Goods/Equipment(s) notwithstanding any omission in the Specifications. The true intent and meaning of these documents is that Supplier shall in all respects, design, engineer, manufacture and supply the Goods, equipment in a thorough workmanlike manner and supply the same in prescribed time to the entire satisfaction of Purchaser.
- 5.4 The Supplier shall furnish three (3) copies in English language of Technical documents, final drawings, preservation instructions, operation and maintenance manuals, test certificates, spare parts catalogues for all equipments to the Purchaser. The Supplier shall also furnish the above in computer readable soft copies in PDF format or equivalent by electronic mode.
- 5.5 The documents once submitted by the Supplier shall be firm and final and not subject to subsequent changes unless otherwise explicitly agreed by the Purchaser in writing. The Supplier shall be responsible for any loss to the Purchaser/Consultant consequent to furnishing of incorrect data/drawings.



- 5.6 All dimensions and weight should be in metric system.
- 5.7 All equipment to be supplied and work to be carried out under the Contract shall conform to and comply with the provisions of relevant regulations/Acts(State Government or Central Government) as may be applicable to the type of equipment/work carried out and necessary certificates shall be furnished.
- 5.8 The Supplier shall provide cross sectional drawings, wherever applicable, to identify the spare part numbers and their location.
- 5.9 Specifications, design and drawings issued to the Supplier along with Tender Document/RFQ and Contract are not sold or given but loaned. These remain property of Purchaser/Consultant or its assigns and are subject to recall by Purchaser/Consultant. The Supplier and his employees shall not make use of the drawings, specifications and technical information for any purpose at any time except for manufacture against the Contract and shall not disclose the same to any person, firm or corporate body, without prior written permission of Purchaser/Consultant. All such details shall be kept confidential.
- 5.10 Supplier shall pack, protect, mark and arrange for dispatch of Equipment as per instructions given in the Contract.
- 5.11 The Supplier on his own behalf and on behalf of Sub-Contractor(s) hereby represents that both have full legal right, power and authority to transfer the ownership of the equipment/material to Purchaser.

6.0 STANDARDS

- 6.1 The Goods supplied under the Contract shall conform to the standards mentioned in the Technical Specifications, or such other standards which ensure equal or higher quality, and when no applicable standard is mentioned, to the authoritative standard appropriate to the Goods' country of origin and such standards shall be the latest issued by the concerned institution(s).

7.0 INSTRUCTIONS, DIRECTION & CORRESPONDENCE

- 7.1 The Goods described in the Contract are to be supplied according to the standards, data sheets, tables, specifications and drawings attached thereto and/or enclosed with the Contract, itself and according to all conditions, both general and specific enclosed with the contract, unless any or all of them have been modified or cancelled in writing as a whole or in part.
- 7.2 All instructions and orders to Supplier shall, excepting what is herein provided, be given by Purchaser/Consultant.
- 7.3 All provision of Goods and supply of Services shall be carried out under the direction of and to the satisfaction of Purchaser/Consultant.
- 7.4 All communications including technical/commercial clarifications and/or comments shall be addressed to Purchaser/ Consultant and shall always bear reference to the Purchase Order number.
- 7.5 Invoices for payment against Contract shall be addressed to Purchaser.



- 7.6 The Purchase Order number shall be shown on all invoices, communications, packing lists, containers and bills of lading, etc.

8.0 CONTRACT OBLIGATIONS

- 8.1 Purchaser will be the sole judge in the matter of award of Contract and the decision of Purchaser shall be final and binding on the Supplier. The Acceptance of Tender/Bid will be intimated to the successful Bidder by the Purchaser through notification of award of Contract either by fax / e - mail /letter or like means defined as Fax of Acceptance (FOA). The Contract shall enter into force on the date of Notification of Award and the same shall be binding on Purchaser and Supplier.

- 8.2 If after award of the Contract, the Supplier does not acknowledge the receipt of FOA/PO or fails to furnish the Contract Performance Security within the prescribed time limit, the Purchaser reserves the right to cancel the Contract and apply all remedies available to him under the terms and conditions of this Contract.

- 8.3 Once a Contract enters into force, the terms and conditions contained therein shall take precedence over the Supplier's bid and all previous correspondence.

8.4 Supplier's Responsibilities

- 8.4.1 The Supplier shall supply all the Goods and incidental Services as per terms and conditions of Purchase Order within the Delivery and Completion schedule mentioned therein.

8.5 Purchaser's Responsibilities

- 8.5.1 Whenever the supply of Goods and incidental Services requires that the Supplier obtain permits, approvals, and import and other licenses from local public authorities, the Purchaser shall, if so required by the Supplier, make its best effort to assist the Supplier in complying with such requirements in a timely and expeditious manner.

8.6 Joint and Several Responsibility:

- 8.6.1 Where Supplier's Goods/Equipment(s) or any part thereof are to be used jointly with other equipment(s) supplied by another manufacturer(s), the name of the such manufacturer(s) will be communicated separately to Supplier, the Purchaser/Consultant will hold Supplier and the manufacturer(s) jointly and severally responsible for the perfect operation of the entire group or section of equipment as regard the technical and mechanical characteristics stipulated in the specification. Such responsibility shall also include the mechanical coupling as well as dynamic and starting moment.

- 8.6.2 Consequently, Supplier shall establish and maintain all necessary contact with the manufacturer to be indicated by Purchaser/Consultant with a view to ensuring the exchange of all relevant data and information.

9.0 MODIFICATION IN CONTRACT

- 9.1 All modifications leading to changes in the Contract with respect to technical and/or commercial aspects including terms of delivery, shall be considered valid only when accepted in writing by Purchaser/Consultant by issuing amendment to the Contract. Issuance of acceptance or otherwise in such cases shall not be any ground for extension of agreed delivery date and also shall not affect the performance of contract in any



manner except to the extent mutually agreed through a modification of Contract.

9.2 Based on the requirement, the Purchaser/Consultant in writing shall have the right to change the quantities, specifications, drawings etc. without changing the indented purpose of the Contract. If such changes cause an increase or decrease in the price or time required for the supply, the Supplier shall submit the proposal indicating the implications along with documentary evidence/ back-up documents/ calculations within 7 days, for review and processing of change order/amendment to the Contract by Purchaser/Consultant. On receipt of the amendment to the Contract, Supplier shall execute the change order.

9.3 Purchaser/Consultant shall not be bound by any printed conditions or provisions in the Supplier's Bid Forms or acknowledgment of Contract, invoices, packing list and other documents which purport to impose any conditions at variance with or supplemental to Contract.

10.0 USE OF CONTRACT DOCUMENTS & INFORMATION

10.1 The Supplier shall not, without the Purchaser's/Consultant's prior written consent, disclose the Contract or any provision thereof, or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the Purchaser in connection therewith, to any person other than a person employed by the Supplier in the performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purpose of such performance.

10.2 The Supplier shall not, without the Purchaser's prior written consent, make use of any document or information enumerated in clause no. 10.1. except for purpose of performing the Contract.

11.0 PATENT RIGHTS, LIABILITY & COMPLIANCE OF REGULATIONS

11.1 Supplier hereby warrants that the use or sale of the materials delivered hereunder will not infringe claims of any patent covering such material and Supplier agrees to be responsible for and to defend at his sole expense all suits and proceedings against Purchaser based on any such alleged patent infringement and to pay all costs, expenses and damages which Purchaser and/or Consultant may have to pay or incur by reason of any such suit or proceedings.

11.2 The Supplier shall, indemnify and hold harmless the Purchaser/Consultant and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Purchaser/Consultant may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, industrial design rights or other intellectual property right registered or otherwise by reason of (a) the installation or the use of the Goods or any part thereof in the country where the Site is located; and (b) the sale of the products (which is produced by use of the Goods) in any country.

11.3 Supplier shall also protect and fully indemnify the Purchaser from any claims from



Supplier's workmen/employees or their heirs, dependents, representatives, etc. or from any other person(s) or company(ies) etc. for any acts of commissions or omission while executing the Contract.

- 11.4 Supplier shall be responsible for compliance with all requirements under the laws and shall protect and indemnify completely the Purchaser from any claims/penalties arising out of any infringements.

12.0 CONTRACT PERFORMANCE SECURITY (CPS):

- 12.1 Within 30 days after the Supplier's receipt of FOA, the Supplier shall furnish Contract Performance Security (CPS) in the form of Demand Draft/online direct transfer/Bank Guarantee in the format attached as Appendix-III, for an amount equivalent to defined percentage (mentioned in tender/ FOA) of the total Purchase Order Value excluding GST on finished goods or for the amount mentioned in the Tender Document/FOA.

- 12.2 The proceeds of CPS shall be appropriated by the Purchaser as compensation for any loss resulting from the Supplier's failure to complete his obligations under the Contract without prejudice to any of the rights or remedies the Purchaser may be entitled to as per terms and conditions of Contract. The proceeds of this CPS shall also govern the successful performance of Goods and Services during the entire period of Contractual Warrantee/Guarantee. In case of forfeiture of Contract Performance Security/ Security Deposit, the forfeited amount will be considered inclusive of tax and tax invoice will be issued by BGCL. The forfeiture amount will be subject to final decision of BGCL based on other terms and conditions of order/ contract.

- 12.3 The CPS shall be denominated in the currency of the Contract.

- 12.4 The CPS shall be valid for the duration upto expiry of Warrantee/Guarantee period with claim period as per the format attached as Appendix-III. The Bank Guarantee will be discharged by Purchaser within 3 months from the date of expiration of the Supplier's entire obligations, including any warrantee/guarantee obligations, under the Contract.

- 12.5 All compensation, claim or other sums of money payable by the Supplier to the Purchaser/Consultant under terms of this Contract may be deducted from or paid by the encashment or sale of a sufficient part of his Contract Performance Security or from any sums which may be due or may become due to the Supplier by the Purchaser/Consultant of any account whatsoever and in the event of his CPS being reduced by reasons of any such deductions or sale of aforesaid, the Supplier shall within ten days thereafter make good in bank drafts/Bank Guarantee as aforesaid any sum or sums which may have been deducted from or realized by sale of his CPS, or any part thereof. The Supplier shall pay to the Purchaser/Consultant on demand any balance remaining due. No interest shall be payable by the Purchaser/Consultant for sum deposited as CPS and no claim whatsoever in this regard shall be entertained by Purchaser.

13.0 INSPECTION, TESTING & EXPEDITING

- 13.1 The Purchaser or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications. The special conditions of Contract and/or the Technical Specifications shall specify what



inspections and tests the Purchaser requires and where they are to be conducted. The Purchaser shall notify the Supplier in writing the identity of any representative(s) retained for these purposes.

- 13.2 The inspections and tests may be conducted on the premises of the Supplier or his sub-contractor(s), at point of Delivery and/or at the Goods' final destination. When conducted on the premises of the Supplier or his sub-contractor (s), all reasonable facilities and assistance including access to the drawings and production data shall be furnished to the inspectors at no charge to the Purchaser.
- 13.3 Should any inspected or tested Goods fail to conform to the Specifications, the Purchaser may reject them and the Supplier shall either replace the rejected Goods or make all alterations necessary to meet Specifications' requirements, free of cost to the Purchaser.
- 13.4 The Purchaser's right to inspect, test and where necessary reject the Goods after the Goods' arrival in the Purchaser's country shall in no way be limited or waived by reason of the Goods having previously been inspected, tested and passed by the Purchaser, or their representative prior to the Goods shipment from the country of Origin.
- 13.5 The Inspector may follow the progress of the manufacture of the Goods under the Contract to ensure that the requirements outlined in the Contract are not being deviated with respect to schedule and quality. Supplier shall allow the Inspector to visit, during working hours, the workshops relevant for execution of the Contract during the entire period of Contract validity.
- 13.6 Any materials/goods covered under scope of Contract, which during the process of inspection by Inspector, at any stage of manufacture/fabrication and subsequent stages, prior to dispatch is found not conforming to the requirements/specifications of the Purchase Order, shall be liable for immediate rejection. Supplier shall be responsible and liable for immediate replacement of such material with acceptable material at no extra cost or impact on the delivery schedule to Purchaser.
- 13.7 In order to enable Purchaser's representatives to obtain entry visas in time, Supplier shall notify Purchaser two months before assembly, testing and packing of main Equipment. If requested, Supplier shall assist Purchaser's representatives in getting visas in the shortest possible time (applicable only in case of foreign order).
- 13.8 Supplier shall place at the disposal of the Inspector, free of charge, all tools, instruments, and other apparatus necessary for the inspection and/or testing of the Goods. The Inspector is entitled to prohibit the use and dispatch of Goods and/or materials which have failed to comply with the characteristics required for the Goods during tests and inspections.
- 13.9 Supplier shall advise in writing of any delay in the inspection program at the earliest, describing in detail the reasons for delay and the proposed corrective action.
- 13.10 All Tests and trials in general, including those to be carried out for materials not manufactured by Supplier shall be witnessed by the Inspector. Therefore, Supplier shall confirm to Purchaser by fax or e-mail about the exact date of inspection with at least 30 days notice. Supplier shall specify the Goods and quantities ready for testing and indicate whether a preliminary or final test is to be carried out.
- 13.11 If on receipt of this notice, Purchaser should waive the right to witness the test, timely information will be given accordingly.



- 13.12 Any and all expenses incurred in connection with tests, preparation of reports and analysis made by qualified laboratories, necessary technical documents, testing documents and drawings shall be at Supplier's cost. The technical documents shall include the reference and numbers of the standards used in the construction and, wherever deemed practical by the Inspector, copy of such standards.
- 13.13 Nothing in Clause-13 shall in any way release the Supplier from any warrantee/guarantee or other obligations under this Contract.
- 13.14 Arrangements for all inspections required by Indian Statutory Authorities and as specified in technical specifications shall be made by Supplier.

13.15 INSPECTION & REJECTION OF MATERIALS BY CONSIGNEES

When materials are rejected by the consignee, the Supplier shall be intimated with the details of such rejected materials, as well as the reasons for their rejection, also giving location where such materials are lying at the risk & cost of the Supplier. The Supplier will be called upon either to remove the materials or to give instructions as to their disposal within 14 days and in the case of dangerous, infected and perishable materials within 48 hours from the date of such written Notice, failing which the consignee/Purchaser will either return the materials to the Supplier on freight to pay or otherwise dispose them off at the Supplier's risk and cost. The Purchaser shall also be entitled to recover handling & storage charges, as per Clause No. 27.4

14. TIME SCHEDULE & PROGRESS REPORTING

- 14.1 Time Schedule Network/Bar Chart.
- 14.1.1 Together with the Contract confirmation, Supplier shall submit to Purchaser, his time schedule regarding the documentation, manufacture, testing, supply, erection and commissioning of the Goods.
- 14.1.2 The time schedule will be in the form of a network or a bar chart clearly indicating all main or key events regarding documentation, supply of raw materials, manufacturing, testing, delivery, erection and commissioning.
- 14.1.3 The original issue and subsequent revisions of Supplier's time schedule shall be sent to Purchaser.
- 14.1.4 The time schedule network/bar chart shall be updated at least every second month or as agreed with Purchaser.
- 14.2 **Progress Trend Chart/Monthly Report**
- 14.2.1 Supplier shall report monthly to Purchaser, on the progress of the execution of Contract and achievement of targets set out in time bar chart.
- 14.2.2 The progress will be expressed in percentages as shown in the progress trend chart attached to the Time Schedule specification.
- 14.2.3 The first issue of the Progress Trend Chart will be forwarded together with the time



bar chart alongwith Contract confirmation.

- 14.2.4 Purchaser's/Consultant's representatives shall have the right to inspect Supplier's premises with a view to evaluating the actual progress of Contract execution on the basis of Supplier's time schedule documentation.
- 14.2.5 Irrespective of such inspection, Supplier shall advise Consultant, with copy to Purchaser, at the earliest possible date of any anticipated delay in the progress.
- 14.3 Notwithstanding the above, in case progress on the execution of contract at various stages is not as per time schedule and is not satisfactory in the opinion of the Purchaser/Consultant which shall be conclusive or Supplier shall neglect to execute the Contract with due diligence and expeditiousness or contravenes the provisions of the Contract, Purchaser/Consultant may give notice of the same in writing to the Supplier calling upon him to make good the failure, neglect or contravention complained of. Should Supplier fail to comply with such notice within the period considered reasonable by Purchaser/Consultant, the Purchaser/Consultant shall have the option and be at liberty to cancel the Contract wholly or in part out and make alternative arrangements to obtain the requirements and completion of Contract at the Supplier's risk and cost and recover from the Supplier, all extra cost incurred by the Purchaser on this account. In such event Purchaser/Consultant shall not be responsible for any loss that the Supplier may incur and Supplier shall not be entitled to any gain. Purchaser/Consultant shall, in addition, have the right to encash Contract Performance Security in full or part.

15. **DELIVERY & DOCUMENTS AND DISPATCH SCHEDULE**

- 15.1 Delivery of the Goods shall be made by the Supplier in accordance with terms specified in the Contract, and the goods shall remain at the risk of the Supplier until delivery has been completed.
- 15.2 Delivery shall be deemed to have been made:
- (i) In the case of FOB/FCA, CFR/CPT& CIF/CIP Contracts, when the Goods have been put on board the ship/flight, at the specified port of loading and a clean Bill of Lading/Airway Bill is obtained. The date of Bill of Lading/Airway Bill shall be considered as the delivery date.
 - (ii) In case of FOT dispatch point Contract (For Indian bidder), on evidence that the goods have been loaded on the carrier and a negotiable copy of the Goods receipt obtained. The date of LR/GR shall be considered as the date of delivery.
 - (iii) In case of FOT site (for Indian bidders) Contract, date of receipt of Goods by Purchaser/Consultant at the designated site(s) shall be considered as the date of delivery.
 - (iv) For Contracts involving Services, the delivery/completion period for such Services mentioned in Contract shall commence from zero date as intimated



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by the Purchaser/Consultant in writing or as mentioned in SCC or elsewhere.

- 15.3 The delivery terms are binding and essential and consequently, no delay is allowed without the written approval of Purchaser/Consultant. Any request concerning delay will be void unless accepted by Purchaser/Consultant through a modification to the Contract.
- 15.4 Delivery time shall include time for submission of drawings for approval, incorporation of comments, if any, and final approval of drawings by Purchaser/Consultant.
- 15.5 In the event of delay in delivery, Price Reduction Schedule as stipulated in Clause– 26 shall apply. The Contract shall be continued to be in force till the delivery of Goods or written Notice from Purchaser to Supplier for termination of Contract.
- 15.6 It should be noted that if a Contract is placed on a higher bidder as a result of this tender, in preference to the lowest acceptable offer, in consideration of an earlier delivery, the Supplier will be liable to pay to BGCL the difference between the contract rate and the rate quoted by the lowest acceptable bidder in case of failure to complete the supply in terms of such Contract within the date of delivery specified in the Tender Document and incorporated in the Contract. This is without prejudice to other rights and remedies available to BGCL, under terms of Contract.
- 15.7 The documentation, in English Language, shall be delivered in due time, in proper form and in the required number of copies as specified in the contract.
- 15.8 The additional copies of final drawings and instructions will be included in the package of goods, properly enveloped and protected. 15.9 The Supplier should comply with the Packing, Marking and Shipping Documentation Specifications.
- 15.10 **Dispatch Schedule**
- 15.10.1 **Indian Bidder:**

If Purchase Order issued based on FOT (Free on Truck) / FOR (Free on Rail) project site basis, materials shall be delivered at the destination on freight prepaid & door delivery basis and for the cases where order(s) are finalized on Ex-works basis the transportation will be arranged by supplier(s) / BGCL on 'freight to pay' basis and the freight will be paid at the destination.

Supplier shall submit the following details of goods/cargo within 15 days from Notification of Award to the designated authority as per Purchase Order:

- (i) Shipments Schedule
- (ii) Dimension details of packages
- (iii) Detailed technical write-up along with Catalogue (if applicable)
- (iv) Any other document/details, if mentioned in Purchase Order

The consignment should be handed over to transporter with E-way bill, wherever



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required as per law/act. In case such e-way bill is required to be issued by BGCL, the concerned designated order issuing authority may be contacted in this regard. It will be the responsibility of the supplier to ensure the compliance of the provisions relating to E-Way bill before dispatch of the consignment and any financial implication arising due to non-compliance in this regard will be to the account of the supplier.

It shall be responsibility of the Supplier to send intimation immediately on dispatch of the material so that necessary arrangements can be made at site. Delays on account of the same shall solely be attributable to the Supplier.

15.10.2 Foreign Bidder:

Where the Supplier is required under the Contract to deliver the Goods on CFR or CIF, transportation of the Goods to the port of discharge or such other point in the country of destination as shall be specified in the Contract shall be arranged and paid for by the Supplier and the for the cases where order(s) are finalized on FOB or FCA basis the transportation will be arranged by BGCL.

Supplier shall submit the following details of goods/cargo within 15 days from Notification of Award to the designated authority as per Purchase Order:

- (i) Shipments Schedule
- (ii) Dimension details of packages
- (iii) Detailed technical write-up along with Catalogue (if applicable)
- (iv) Any other document/details, if mentioned in Purchase Order

It shall be responsibility of the Supplier to send intimation and Original Shipping Documents immediately on dispatch of the material so that necessary arrangements can be made at Destination Port. Delays on account of the same shall solely be attributable to the Supplier.

All equipments / materials are to be insured by BGCL for transit/marine risks unless specified otherwise in the purchase order, to cover the damages during the transportation etc.

Any such damage during the transportation shall be immediately notified to underwriters as well as the transporter, for further necessary action for recovery of transit damages.

For the purpose of arranging transit/marine insurance of the goods dispatched / shipped, vendors are required to furnish the dispatch / shipping particulars to the Insurance Company giving complete details of dispatches along with Policy No. etc.

16 TRANSIT RISK INSURANCE

- 16.1 All Goods supplied under the contract shall be fully insured in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery.
- 16.2 The Purchaser shall arrange transit risks Insurance for the Goods supplied by indigenous



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Supplier unless specified otherwise in the Purchase Order, to cover the risk & damages during the inland transportation. Further, where delivery is on FOB/FCA or CFR/CPT basis, marine insurance shall be the responsibility of the Purchaser. Any such damage during the transportation shall be immediately notified to underwriters as well as the transporter under intimation to consignee, for further necessary action for recovery of transit damages.

16.3 Insurance Requirements:

Indigenous Supplier: Transit risk insurance from F.O.T. dispatch point onwards shall be arranged and borne by BGCL unless specified otherwise in the Purchase Order. Immediately after shipment, the Supplier shall inform the Purchaser's insurance agent and Purchaser/Consultant giving the details of shipment regarding LR number and date, invoice no. & date with value, number of packages/cases, gross/net weight, value of goods and Purchase Order number along with Insurance policy no., for arranging insurance of the consignment against transit risk from the dispatch point to the Site/warehouse of the consignee.

Foreign Supplier : Marine insurance as well as transit insurance in Purchaser's country shall be arranged and borne by BGCL, in case of EXW, FOB/FCA, CFR/C&F orders as per INCOTERMS. Immediately after shipment, the Supplier shall inform the Purchaser's insurance agent and Purchaser/Consultant giving the details of shipment regarding name of vessel, B/L or AWB number and date, invoice no. & date with value, packing details including number of packages/cases & gross/net weight, value of goods and Purchase Order number & date, ETD & ETA of vessel at ports along with Insurance policy no., for arranging necessary insurance.

The Supplier shall ensure that in effecting dispatch of Goods, the primary responsibility of the carriers for safe movement is always retained so that the Purchaser's interests are fully safeguarded and are in no way jeopardized. The Supplier shall furnish the cost of materials against each equipment.

Purchaser's Insurance Agent & Insurance policy no.:

[The name and address of Insurance Agent and Insurance policy no. shall be mentioned in Tender Document/Purchase Order]

17. PACKING & SHIPPING INSTRUCTIONS AND TRANSPORTATION

17.1 Packing & Marking: The Supplier shall dispatch the materials in worthy/Sea worthy/Air worthy packing conforming to the international norms of packing/ prescribed standards in force to withstand air/ocean/land journey and ensuring the

safety of cargo en-route and also arrival of materials at ultimate destination in good condition. Hazardous/dangerous cargo ordered alongwith other material, against a particular supply order, the hazardous/dangerous cargo should be packed in a separate identifiable box to avoid payment of excess freight and delay in clearance. The consignment shall be comprehensively insured against all risks by the Supplier in case of contracts with transit insurance in Supplier's scope from Supplier's ware-house to



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ultimate consignee's ware-house basis and each case/packing shall have on its outer side the following marking in English in indelible ink:

- (i) Purchase Order No. and date
- (ii) Country of origin(Applicable for Foreign Suppliers)
- (iii) Name of Supplier
- (iv) Case number (running number upon total number of boxes).
- (v) Gross and net weight in Kilogram on each box.
- (vi) Dimension of packages (vii) Port of destination (Applicable for Foreign Suppliers)
- (viii) Consignee
- (ix) TOP/DON'T TURNOVER/HANDLE WITH CARE (as applicable)
- (x) The equipment which cannot be packed shall bear metal tags with above marking indicated thereon. Each box shall contain one copy of packing list and Material Safety Data Sheet (if applicable) in English.

In case of hazardous chemicals / materials the bidder will provide Material Safety Data Sheets along with quotation and also while dispatching the materials. The bidder will also provide special hazard identification symbols / markings on each packing of hazardous chemicals.

The Supplier shall be held liable for all damages or breakages to the goods due to the defective or insufficient packing as well as for corrosion due to insufficient protection. Packaged equipment or material showing damage, defects or shortages resulting from improper packaging material or packing procedures or having concealed damage or shortages, at the time of unpacking shall be to the Supplier's account.

- 17.2 Shipping Instructions: The Supplier shall notify the Purchaser/Consultant & all concerned and also the port as well as ultimate consignee by e-mail the Bill of Lading/Airway Bill number and date, the name of ship/flight, ship manifest, the date of departure of the ship/flight, the port of loading and destination, brief description of materials, gross/net weight and total number of packages, quantity, value and Purchase Order number and date within 2 days from the departure of the ship or within 24 hours from the departure of the flight from the port of loading.
- 17.3 Copies of dispatch documents should reach Purchaser/Consultant well in advance failing which any demurrage/wharfage etc. incurred on account of late/ non-receipt of dispatch document/wrong dispatches of consignment will be recovered from Supplier. In case of documents through Bank, it may be noted that the documents will be retired only if the dispatches are made as per the terms of the Purchase Order.
- 17.4 Where the Supplier is required under the Contract to deliver the Goods on FOB/FCA basis, transport of the Goods until delivery, that is, upto and including the point of putting the Goods on board the export conveyance at the specified port of loading, shall be arranged and paid for by the Supplier and the cost thereof shall be included in the Purchase Order Value.
- 17.5 Where the Supplier is required under the Contract to deliver the Goods on CFR/CPT or CIF/CIP basis, transport of the Goods to the port of discharge or such other point in the country of destination as specified in the Contract shall be arranged and paid for by the



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Supplier and the cost thereof shall be included in the Purchase Order Value.

17.6 Where the Supplier is required under the Contract to deliver the Goods on FOT destination point basis, transport of the Goods upto the destination point shall be specified in the Contract shall be arranged and paid by the Supplier and the cost thereof shall be included in the Purchase Order Value.

17.7 As per the Section 3 of the “Carriage by Road Act 2007”, no person can engage in the business of a common carrier unless granted a certificate of registration to do so and any transportation of goods through unregistered common carrier is illegal. Accordingly, Goods should be transported through registered common carriers only.

18. INCIDENTAL SERVICES

18.1 The Supplier may be required to provide any or all of the following Services:

18.1.1 Performance or supervision of onsite assembly and/or start-up of the supplied Goods:

18.1.2 Furnishing tools required for assembly and/or maintenance of the supplied Goods:

18.1.3 Performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this Service shall not relieve the Supplier of any warranty/guarantee obligations under the Contract.

18.1.4 Training of the Purchaser’s personnel at the Supplier’s premise and/or at Site, in assembly, start-up operation, maintenance and/or repair of the supplied Goods at no extra cost. However, Purchaser will bear boarding, lodging & personal expenses of Trainees.

18.2 Prices charged by the Supplier for the preceding incidental Services, shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.

18.3 When required, Supplier shall depute necessary personnel for supervision and/or erection of the Goods/Equipments at site for duration to be specified by Purchaser on mutually agreed terms. Supplier’s personnel shall be available at Site within seven Days for emergency action and twenty-one Days for medium and long-term assistance, from the date of notice given by Purchaser.

18.4 If the cost of incidental Services is not shown separately in the Price Schedules /t Schedule of Rates, then the same shall be considered included in the quoted prices.

19. SPARE PARTS, MAINTENANCE TOOLS ETC.

19.1 Supplier may be required to provide any or all of the following materials and notification pertaining to Spare parts (including standby Equipments, accessories, sub-assemblies/assemblies etc.) manufactured or sourced by the Supplier. Such Spares shall be supplied directly by Supplier and the responsibility shall not be passed on to his dealers/distributors/stockists or Indian associates.



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19.1.1 Such Spare parts as the Purchaser may opt to purchase from the Supplier, provided that his option shall not relieve the Supplier of any warrantee obligations under the Contract, and

19.1.2 In the event of termination of production of the spare parts:

- i) Advance notification to the Purchaser of the pending termination, in sufficient time to permit the Purchaser to procure such Spares, and
- ii) Following such termination, furnishing at no cost to the Purchaser, the blue prints, drawings and specifications of the spare parts, if any when requested.

19.2 Supplier shall supply item wise list with value of each item of Spare parts and maintenance tools requirements, along with full details of all manufacturers/ sub supplier(s) for spares/maintenance tools sourced by Supplier.

19.3 Spare parts shall be new and of first class quality as per engineering standards/ codes, free of any defects (even concealed), deficiency in design, materials & workmanship and also shall be completely interchangeable with the corresponding parts.

19.4 Type and sizes of FILTER ELEMENTS shall be clearly indicated.

19.5 Spare parts shall be packed for long storage under tropical climatic conditions in suitable cases, clearly marked as to intended purpose.

19.6 A list of special tools and gauges required for normal maintenance and special handling and lifting appliances, if any, for the Goods, shall be submitted to Purchaser.

19.7 Bidders should note that if they do not comply with above conditions, their Bid may be rejected.

20. GUARANTEE

20.1 All Goods or Materials shall be supplied strictly in accordance with the specifications, drawings, data sheets, other attachments and conditions stated in the Contract.

No deviation from such specifications or alterations or of these conditions shall be made without Purchaser's /Consultant's agreement in writing which must be obtained before any work against the order is commenced. All materials supplied by the Supplier pursuant to the Contract (irrespective of whether engineering, design data or other information has been furnished, reviewed or approved by Purchaser/Consultant) are guaranteed to be of the best quality of their respective kinds (unless otherwise specifically authorized in writing by Purchaser/Consultant) and shall be free from faulty design, workmanship and materials, and to be of sufficient size and capacity and of proper materials so as to fulfil in all respects all operating conditions, if any, specified in the Contract.

If any trouble or defect, originating with the design, material, workmanship or operating characteristics of any materials, arises at any time prior twelve(12) months from the date of the first commercial operation of the Goods/Equipments or twenty four (24) months from the date of last shipment 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 24 months from the date of commissioning of original equipment or 36 months from last supply, whichever is earlier. This period excludes repair/replacement/rectification period of defective goods.

Purchaser/Consultant may, at his option, remove such defective materials, at Supplier's expense in which event Supplier shall, without cost to Purchaser/Consultant and as promptly as possible, furnish and install proper materials. In case defects are of such nature that Goods shall have to be taken to Supplier's works for rectification etc., Supplier shall take the Goods at his costs after giving necessary undertaking or security as may be required by Purchaser/Consultant. Purchaser/Consultant may, if so required by the Supplier, dispatch the Goods by quickest mode on "Freight-to-pay" basis to the Supplier's works. After repairs Supplier shall deliver the Goods at Site on freight pre-paid basis. All risks in transit to and fro and all expenses on account of to and fro freight, insurance, customs clearance, transportation and handling, port charges and customs duty etc. shall be borne by the Supplier.

In the event that the materials supplied do not meet the specifications and/or not in accordance with the drawings data sheets or the terms of the Contract (including guarantee period) and rectification is required at site, Purchaser/Consultant shall notify the Supplier giving full details of differences. The Supplier shall attend the site within seven (7) days of receipt of such notice to meet and agree with representatives of Purchaser/Consultant, the action required to correct the deficiency. Should the Supplier fail to attend meeting at Site within the time specified above, Purchaser/Consultant shall immediately rectify the work/materials and Supplier shall reimburse Purchaser all costs and expenses incurred in connection with such trouble or defect.

20.2 Performance Guarantee of Equipment

- 20.2.1 Supplier shall guarantee that the performance of the Equipment supplied under the Contract shall be strictly in conformity with the specifications and shall perform the duties specified under the Contract.
- 20.2.2 If the Supplier fails to prove the guaranteed performance of the Equipment set forth in the specification, the Supplier shall investigate the causes and carry out necessary rectifications/modifications to achieve the guaranteed performance. In case the Supplier fails to do so within a reasonable period, the Supplier shall replace the Equipment and prove guaranteed performance of the new equipment without any extra cost to Purchaser.
- 20.2.3 If the Supplier fails to prove the guarantee within a reasonable period, Purchaser/Consultant shall have the option to take over the Equipment and rectify, if possible, the Equipment to fulfil the guarantees and/or to make necessary additions to make up the deficiency at Supplier's risk and cost. All expenditure incurred by the Purchaser/Consultant in this regard shall be to Supplier's account.



21. TERMS OF PAYMENT

- 21.1 In case of supply, payment shall be released within 15 days after receipt and acceptance of goods and submission of relevant documents complete in all respects through e-banking unless otherwise specifically mentioned in the Special Conditions of Contract.
- 21.2 The type(s) of payment to be made to the Supplier under this Contract shall be as mentioned above unless otherwise specifically specified in the Special Conditions of Contract.
- 21.3 The Supplier's request(s) for payment shall be made to the Purchaser in writing accompanied by an invoice describing, as appropriate, the Goods delivered and services performed, and by shipping documents submitted, and upon fulfillment of other obligations stipulated in the Contract.
- 21.4 Payment will be made in the currency or currencies in which the Contract Price has been stated in the Supplier's bid, as well as in other currencies in which the Supplier had indicated in his bid that he intends to incur expenditure in the performance of the Contract and wishes to be paid. If the requirements are stated as a percentage of the bid price alongwith exchange rates used in such calculations these exchange rates shall be maintained.
- 21.5 Mentioning of PAN no. in Invoice/Bill

As per CBDT Notification No. 95/2015 dated 30.12.2015, mentioning of PAN no. is mandatory for transactions related to procurement of goods / services exceeding Rs. 2 Lakhs per transaction or as amended from time to time. Accordingly, Supplier should mention their PAN no. in their invoice/ bill for any transaction exceeding Rs. 2 lakhs. As provided in the notification, in case Supplier do not have PAN no., they have to submit declaration in Form 60 along with invoice/ bill for each transaction.

Payment of Supplier shall be processed only after fulfilment of above requirement.

- 21.6 Foreign Suppliers should ensure submission of Tax Residency Certificate(TRC), Form 10F or Permanent Establishment(PE) information within specified time.

General Notes:

- (i) All foreign currency payments to foreign bidder shall be released through Cash against Documents (CAD) through bank, If Supplier insists payment through an irrevocable Letter of Credit, which shall be opened through Government of India Nationalized Bank and hence shall not be confirmed. In case any bidder insists on confirmation, charges towards confirmation shall be borne by him. L/C shall be established within 30 days after receipt of acknowledgement of Letter/Fax of Acceptance/Purchase Order together with Contract Performance Security.
- (ii) For dispatches on FOT dispatch point (in India) basis involving payment through bank, the payment shall be through Purchaser's bank. Payment through Bank, wherever applicable, shall be released as per normal banking procedures.



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- (iii) All bank charges incurred in connection with payments shall be to Supplier's account in case of Indian bidders and to respective accounts in case of Foreign bidder.
- (iv) Unless otherwise specifically stated in Bid Document, all payments shall be made in the currency quoted.
- (v) No interest charges for delay in payments, if any, shall be payable by Purchaser.
- (vi) In case of Indian bidder, variation, if any, on account of customs duty on their built-in- import content, as per terms of bid document, shall be claimed separately by bidder after receipt of goods at site(s). However, any price benefits to the Purchaser, on account of such variation as per terms specified in the Bid Document, shall be passed on to the Purchaser alongwith invoicing itself.
- (vii) Agency commission, if any, to Indian agent for Foreign bidders, indicated in prices, shall be paid to the agent in equivalent Indian Rupees on receipt and acceptance of material at site and after completion of its role & responsibility by such agent.
- (viii) Wherever buy-back is involved, 5% payment towards supply of new item shall be made only after uplifting the buy-back items.

22. PRICES

- 22.1 Prices charged by the Supplier for Goods delivered and Services performed under the Contract shall not, with the exception of any price adjustments authorized by the Contract, vary from the prices quoted by the Supplier in his bid.

23. SUBLETTING & ASSIGNMENT

- 23.1 The Supplier shall not without previous consent in writing of the Purchaser authority, sublet, transfer or assign the Contract or any part thereof or interest therein or benefit or advantage thereof in any manner whatsoever. Provided, nevertheless, that any such consent shall not relieve the Supplier from any obligation, duty or responsibility under the Contract.
- 23.2 There is no obligation on part of Purchaser/Consultant to release any payment to Sub-Contractor.

24. TIME AS ESSENCE OF CONTRACT

- 24.1 The original or extended time of delivery/completion of the Goods/Services as stipulated in the Contract shall be deemed to be the essence of the Contract.

25. DELAYS IN THE SUPPLIER'S PERFORMANCE

- 25.1 If the specified delivery schedule is not adhered to or the progress of manufacture or



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supply of the items is not satisfactory or is not in accordance with the progress schedule, the Purchaser has the right to:

- (i) hire for period of delay from elsewhere goods which in Purchaser's opinion will meet the same purpose as the Goods which are delayed and Supplier shall be liable without limitation for such hire charges plus overhead charges @ 15% thereupon; or
- (ii) terminate /cancel the Contract in whole or in part without liability for termination/cancellation charges. In that event, Purchaser may procure from elsewhere goods which Purchaser's opinion would meet the same purpose as the Goods for which Contract is cancelled and Supplier shall be liable without limitations for the difference between the cost of such substitution and the price set forth in the Contract for the Goods involved; or
- (iii) hire the substitute goods vide (i) above and if the ordered goods continue to remain undelivered thereafter, cancel the order in part or in full vide (ii) above.

25.2 Any inexcusable delay by the Supplier or his sub-contractor shall render the Supplier liable, without prejudice to any other terms of the Contract, to any or all of the following sanctions:

- forfeiture of Contract Performance Security,
- imposition of price reduction for delay in delivery and
- termination of the contract for default.

As per Performance Evaluation procedure (Appendix-II), the Supplier's non-performance or poor performance shall affect the future business relationship with BGCL and its PMCs.

26. PRICE REDUCTION SCHEDULE (PRS) FOR DELAYED DELIVERY

26.1 Subject to Clause-29, if the Supplier fails to deliver any or all of the Goods or performance of the services within the time period (s) specified in the Contract, the Purchaser shall, without prejudice to his other remedies under the Contract, deduct from the Contract Price, a sum calculated on the basis of the Contract Price, including subsequent modifications.

26.1.1 Deductions shall apply as per following formula:

A. For order including only supply of Goods/Equipment/Package

In case of delay in delivery of equipment/materials or delay in completion, PRS shall be applicable ½ % (half percent) of the order value per complete week of delay or part thereof subject to a maximum of 5% (five percent) of the Total Contract Price/ Order Value.

The portion of supply completed in all respect which can be used for commercial operation shall not be considered for applying PRS, if delivered within contractual



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delivery period. The remaining supplies which are completed beyond the contractual delivery shall attract price reduction schedule @1/2 % of the delayed delivery value maximum up to 5% of total Purchase Order Value.

Decision of the Purchaser in the matter of usage for commercial operation shall be final and binding.

Note: When installation and/or commissioning is in Supplier's scope, the above clause 'A' will not be applicable, in such cases clause 'B' below will be applicable.

- B. For order including both supply of Goods and Services (i.e. supervision, installation, erection, commissioning etc.)

For delay in supply:

The PRS shall be applicable @ ½ % (half percent) of price of respective goods/equipment / package (including spares etc. even if prices are indicated separately in the order but excluding value of Services) per week of delay or part thereof subject to maximum 5% (five percent) of Total Contract/ Order Value excluding value of Services.

For delay in Services (i.e. supervision, installation, erection, commissioning etc.):

The PRS shall be applicable @ ½ % (half percent) of Total Contract/ Order Value of respective equipment / package (including value of spares, Services etc. even if prices are indicated separately in the Contract) per week of delay or part thereof subject to maximum 5% (five percent) of Total Contract/ Order Value including value of Services.

In no case, total PRS shall exceed 5% (five percent) of Total Contract/ Order Value (Supply + Services).

However, if the completion of supply and services together are achieved within the overall completion period, no PRS shall be applicable. For specific provision relating to supervision by Supplier (wherever applicable), refer SCC.

- 26.2 Both Supplier and Purchaser agree that the above percentages of price reduction are genuine pre estimates of the loss/damage which the Purchaser would have suffered on account of delay/breach on the part of the Supplier and the said amount will be payable on demand without there being any proof of the actual loss/or damage caused by such breach/delay. A decision of the Purchaser/EIC in the matter of applicability of price reduction shall be final and binding.
- 26.3 In case of delay in delivery on the part of Supplier, the invoice/document value shall be reduced proportionately for the delay and payment shall be released accordingly.
- 26.4 In the event the invoice value is not reduced proportionately for the delay, the Purchaser may deduct the amount so payable by Supplier, from any amount falling due to the Supplier or by recovery against the Contract Performance Security.



- 26.5 In case of Annual Rate Contract (ARC), the PRS shall be applicable on the value of Release Order /Individual Order(s) and not on the entire value of ARC.
- 26.6 In case of FOT Site /dispatch point order, the value referred in PRS clause is the EXW value (i.e. excluding GST and Freight/Inland Transportation) for delay in supply. In case of Import, PRS shall be applicable on FOB amount (except EXW orders) for delay in supply.
- 26.7 PRS is the reduction in the consideration / contract value for the goods / services covered under this contract. In case of delay in supply/ execution of contract, Supplier should raise invoice for reduced value as per Price Reduction Schedule Clause (PRS clause). If Supplier has raised the invoice for full value, then Supplier shall issue Credit Note towards the applicable PRS amount with applicable taxes. In such cases if Supplier fails to submit the invoice with reduced value or does not issue credit note as mentioned above, BGCL will release the payment to Supplier after giving effect of the PRS clause with corresponding reduction of taxes charged on vendor's invoice, to avoid delay in delivery/collection of material." In case any financial implication arises on BGCL due to issuance of invoice without reduction in price or non-issuance of Credit Note, the same shall be to the account of Supplier. BGCL shall be entitled to deduct / setoff / recover such GST amount (CGST & SGST/UTGST or IGST) together with penalties and interest, if any, against any amounts paid or becomes payable by BGCL in future to the Supplier under this contract or under any other contract.

27. REJECTIONS, REMOVAL OF REJECTED EQUIPMENT & REPLACEMENT

- 27.1 Preliminary inspection at Supplier's works by Inspector shall not prejudice Purchaser's/Consultant's claim for rejection of the Goods / Equipment on final inspection at Site or claims under warranty provisions.
- 27.2 If the Equipments are not of specification or fail to perform specified duties or are otherwise not satisfactory the Purchaser/Consultant shall be entitled to reject the Equipment/Material or part thereof and ask free replacement within reasonable time failing which obtain his requirements from elsewhere at Supplier's cost and risk.
- 27.3 Nothing in this clause shall be deemed to deprive the Purchaser and/or Affect any rights under the Contract which it may otherwise have in respect of such defects or deficiencies or in any way relieve the Supplier of his obligations under the Contract.
- 27.4 Goods/Equipment rejected by the Purchaser/Consultant shall be removed by the Supplier at his cost within 14 days of notice after repaying the amounts received against the Supply. Failure or any delays of Supplier for removal of Goods/Equipment, the Purchaser shall also be entitled to recover handling and storage charges @5% of the estimated value of such Goods for each month or part of a month without relieving the Supplier from any other related liability. In the event of the Supplier's failure to remove the same within a period of 6 months or as decided by the Purchaser, the Purchaser may take action for removal through auction or sale on behalf of the Supplier and at his risk in all respects. The Supplier shall be liable to pay the Purchaser the handling & storage charges as mentioned above plus overhead charges @ 15% of sale value of such materials. The decision of Purchaser w.r.t. such removal and the amount of the proceeds



shall be final and binding on the Supplier. The Purchaser shall in no way be responsible for any deterioration or damage to the Equipment under any circumstances whatsoever.

- 27.5 In case of rejection of Equipment, Purchaser shall have the right to recover the amounts, if any, from any of Supplier's invoices pending with Purchaser or by alternative method(s).

28. TERMINATION OF CONTRACT

28.1 Termination for Default

- 28.1.1 The Purchaser may, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, terminate the Contract in whole or in part:

- (i) If the Supplier fails to deliver any or all of the Goods within the time period(s) specified in the Contract; or
- (ii) If the Supplier fails to perform any other obligation(s) under the Contract, and
- (iii) If the Supplier, in either of the above circumstances, does not cure his failure within a period of 30 days (or any such period as the Purchaser may authorize in writing) after receipt of the default notice from the Purchaser.

- 28.1.2 In the event the Purchaser terminates the Contract in whole or in part, pursuant to clause no. 28.1.1, the Purchaser may procure, upon such terms and in such manner as it deems appropriate, goods similar to those undelivered and the Supplier shall be liable to the Purchaser for any excess costs for such similar Goods. However, the Supplier shall continue performance of the Contract to the extent not terminated.

- 28.1.3 In case of termination of Contract herein set forth (under clause 28) [except under conditions of Force Majeure (under clause 29)], the Purchaser is entitled to put Supplier on under Suspension and/or Holiday as per provisions of "Procedure for Action in Case of Corrupt/Fraudulent/Collusive/Coercive Practices (Appendix-I)" and "Procedure for Evaluation of Performance of Vendor/ Supplier/ Contractor/ Consultant" of Tender Document (Appendix-II)".

28.2 Termination for Insolvency

- 28.2.1 The Purchaser, may at any time, terminate the Contract by giving written notice to the Supplier, without compensation to the Supplier, if the Supplier becomes bankrupt or otherwise insolvent, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Purchaser.

28.3 Termination for Convenience including short-closure

- 28.3.1 The Purchaser may, by written notice/communication to the Supplier, may short-close/ terminate the Contract, in whole or part, at any time for his convenience. The notice/



communication to the Supplier shall specify that short-closure/termination is for the Purchaser's convenience, the extent to which performance of work under the Contract is short-closed/terminated and the date upon which such short-closure/termination becomes effective.

28.3.2 The Goods that are complete and ready for shipment within 30 days after the Supplier's receipt of notice/communication of termination/short-closure shall be purchased by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may opt:

(i) to have any portion completed and delivered at the Contract terms and prices, and /or

(ii) to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and for materials and parts previously procured by the Supplier.

28.4 Termination of Contract for Corrupt/Fraudulent/ Collusive/Coercive Practices and Non-Performance If the Bidder/Supplier is found to have indulged in Corrupt/Fraudulent /Collusive/Coercive practices, the Contract shall be terminated and the Bidder/ Supplier shall be banned for future business with BGCL. The detailed procedure for banning including suspension in this regard is attached as Appendix-I to this GCC. Due to non- performance of the Supplier leading to termination of the Contract, the Supplier shall be put on suspension list and also on holiday list of Purchaser for a period mentioned in the detailed procedure. The detailed procedure for evaluation of performance in this regard is attached as Appendix-II to this GCC.

29. FORCE MAJEURE

29.1 Force Majeure shall mean and be limited to the following:

(i) Act of terrorism;

(ii) Riot, war, invasion, act of foreign enemies, hostilities (whether war be declared or not), civil war, rebellion, revolution, insurrection of military or usurped power;

(iii) Ionizing, radiation or contamination, radio activity from any nuclear fuel or from any nuclear waste from the combustion of nuclear fuel, radioactive toxic explosive or other hazardous properties of any explosive assembly or nuclear component;

(iv) Pandemic, Epidemics, earthquakes, flood, natural fire/wildfire, hurricanes, typhoons or other physical natural disaster, but excluding weather conditions regardless of severity; and

(v) Freight embargo, strikes at national or state-wide level or industrial disputes (more than 7 consecutive days) at a national or state-wide level where supplier's Works is located.



For the avoidance of doubt, inclement weather, third party breach, delay in supply of materials (other than conditions mentioned above at sl. no. (i) to (v)) or commercial hardship shall not constitute a Force Majeure event.

The Supplier shall advise Purchaser/Consultant by a registered letter/courier duly certified by the local Chamber of Commerce or statutory authorities, the beginning and end of the above causes of delay within ten (10) days of the occurrence and cessation of such Force Majeure Conditions.

The extension of time for a period upto the period of delay attributable to the causes of Force Majeure shall be the sole remedy of the Supplier for any delay under this clause and the Supplier shall not be entitled in addition to or in lieu of such extension to claim any damages or compensation on any account whatsoever whether under the law governing contracts or any other law in force, and the Supplier hereby waives and disclaims any and all contrary rights.

In case force majeure conditions persists for period exceeding 02 (Two) Months, the Purchaser reserves the right to cancel the Purchase order or part of it.

Supplier shall categorically specify the extent of Force Majeure Conditions prevalent in their works at the time of submitting their bid and whether the same have been taken into consideration or not in their quotations. In the event of any force majeure cause, the Supplier or the Purchaser shall not be liable for delays in performing their obligations under this order and the delivery dates will be extended to the Supplier without being subject to price reduction for delayed deliveries, as stated elsewhere.

Payment in case of termination due to Force Majeure

In case of termination of Order/contract due to Force Majeure, the Supplier will get payment of goods supplied and/ or services performed as at the date of the commencement of the relevant event of Force Majeure. The Supplier has no entitlement and Purchaser has no liability for:

- (i) Any costs, losses, expenses, damages or the payment of any part of the Order/ Contract Price during an event of Force Majeure; and
- (ii) Any delay costs in any way incurred by the Supplier due to an event of Force Majeure.

30. DISPUTE RESOLUTION MECHANISM

30.1 Conciliation

Bengal Gas Company Limited will frame the Conciliation Rules 2023 in conformity with Part– III of the Arbitration and Conciliation Act 1996 as amended from time to time for speedier, cost effective and amicable settlement of disputes through conciliation. All issue(s)/dispute(s) arising under the Contract, which cannot be mutually resolved within a reasonable time, may be referred for conciliation in



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accordance with BGCL Conciliation Rules 2023 as amended from time to time. A copy of the said rules shall be made available on BGCL's web site i.e www.bgcl.co.in

Where invitation for Conciliation has been accepted by the other party, the Parties shall attempt to settle such dispute(s) amicably under Part-III of the Arbitration and Conciliation Act, 1996 and Bengal Gas Company Limited Conciliation Rules, 2023. It would be only after exhausting the option of Conciliation as an Alternate Dispute Resolution Mechanism that the Parties hereto shall invoke Arbitration Clause. For the purpose of this clause, the option of 'Conciliation' shall be deemed to have been exhausted, even in case of rejection of 'Conciliation' by any of the Parties.

30.2 Arbitration

All issue(s)/dispute(s) excluding the matters that have been specified as excepted matters and listed at clause no. 30.1.6 and which cannot be resolved through Conciliation, such issue(s)/dispute(s) shall be referred to arbitration for adjudication by Sole Arbitrator.

The party invoking the Arbitration shall have the option to either opt for Ad-hoc Arbitration as provided at Clause 30.1.1 below or Institutionalized Arbitration as provided at Clause 30.1.2 below, the remaining clauses from 30.1.3 to 30.1.7 shall apply to both Ad-hoc and Institutional Arbitration: -

- 30.2.1 On invocation of the Arbitration clause by either party, BGCL shall suggest a panel of three independent and distinguished persons (Retd Supreme Court & High Court Judges only) to the other party from the Panel of Arbitrators maintained by 'Delhi International Arbitration Centre (DIAC)' to select any one among them to act as the Sole Arbitrator. In the event of failure of the other party to select the Sole Arbitrator within 30 days from the receipt of the communication from BGCL suggesting the panel of arbitrators, the right of selection of the sole arbitrator by the other party shall stand forfeited and BGCL shall appoint the Sole Arbitrator from the suggested panel of three Arbitrators for adjudication of dispute(s). The decision of BGCL on the appointment of the sole arbitrator shall be final and binding on the other party. The fees payable to Sole Arbitrator shall be governed by the fee Schedule of 'Delhi International Arbitration Centre'.

OR

If a dispute arises out of or in connection with this contract, the party invoking the Arbitration shall submit that dispute to any one of the Arbitral Institutions i.e. ICADR/ICA/DIAC/SFCA and that dispute shall be adjudicated in accordance with their respective Arbitration Rules. The matter shall be adjudicated by a Sole Arbitrator who shall necessarily be a Retd. Supreme Court/High Court Judge to be appointed/nominated by the respective institution. The cost/expenses pertaining to the said Arbitration shall also be governed in accordance with the Rules of the respective Arbitral Institution. The decision of the party invoking the Arbitration for reference of dispute to a specific Arbitral institution for adjudication of that dispute shall be final and binding on both the parties and shall not be subject to any change thereafter. The institution once selected at the time of invocation of dispute shall remain unchanged.

- 30.2.3 The cost of arbitration proceedings shall be shared equally by the parties.



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30.2.4 The Arbitration proceedings shall be in English language and the seat, venue and place of Arbitration shall be Kolkata only.

3.2.5 Subject to the above, the provisions of Arbitration & Conciliation Act 1996 and any amendment thereof shall be applicable. All matter relating to this Contract and arising out of invocation of Arbitration clause are subject to the exclusive jurisdiction of the Court(s) situated at Kolkata.

30.1.6 List of Excepted matters:

- (i) Dispute(s)/issue(s) involving claims below Rs 25 lakhs and above Rs 25 crores.
- (ii) Dispute(s)/issue(s) relating to indulgence of Supplier/Vendor/Bidder in corrupt/fraudulent/collusive/coercive practices and/or the same is under investigation by CBI or Vigilance or any other investigating agency or Government.
- (iii) Dispute(s)/issue(s) wherein the decision of Engineer-In- Charge/owner/BGCL has been made final and binding in terms of the Contract.

30.2.7 Disputes involving claims below Rs 25 Lakhs and above Rs. 25 crores:-Parties mutually agree that dispute(s)/issue(s) involving claims below Rs 25 Lakhs and above Rs 25 crores shall not be subject matter of Arbitration and are subject to the exclusive jurisdiction of the Court(s) situated at Kolkata.

30.3 Governing Law and Jurisdiction:

The Contract shall be governed by and construed in accordance with the laws in force in India. The Parties hereby submit to the exclusive jurisdiction of the Courts situated at Kolkata for adjudication of disputes, injunctive reliefs, actions and proceedings, if any, arising out of this Contract.

30.4 Disputes between CPSE's/Government Department's/ Organizations

Subject to conciliation as provided above, in the event of any dispute (other than those related to taxation matters) or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs/ Port Trusts) inter se and also between CPSEs and Government Departments /Organizations), such dispute or difference shall be taken up by either party for resolution only through AMRCD as mentioned in OPE OM No. 4(1)/2013-DPE(GM)/FTS-1835 dated 22-05-2018.

Any party aggrieved with the decision of the Committee at the First level (tier) may prefer an appeal before the Cabinet Secretary at the Second level (tier) within 15 days from the date of receipt of decision of the Committee at First level, through its administrative Ministry/Department, whose decision will be final and binding on all concerned.



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The above provisions mentioned at clause no. 30.1 to 30.4 shall supersede provisions relating to Conciliation, Arbitration, Governing Law & Jurisdiction and Disputes between CPSE's/ Government Department's/ Organizations mentioned elsewhere in tender document.

30.5 Continuance of the Contract:

Notwithstanding the fact that settlement of dispute(s) (if any) may be pending, the parties hereto shall continue to be governed by and perform the work in accordance with the provisions under this Contract and no payment due or payable to the Supplier shall be withheld on account of such proceedings.

30.6 Non-Applicability of Arbitration Clause in Case of Banning of Vendors/ Suppliers / Bidders indulged in Fraudulent/ Coercive Practices

Notwithstanding anything contained contrary in GCC or elsewhere in the Purchase Order, in case it is found that the Bidder/ Supplier indulged in fraudulent/ coercive practices at the time of bidding, during execution of the Contract and/or on other grounds as mentioned in BGCL's "Procedure for action in case Corrupt/ Fraudulent/ Collusive/Coercive Practices" (Appendix-I), the Bidder/Supplier shall be banned (in terms of aforesaid procedure) from the date of issuance of such order by Bengal Gas Company Limited., to such Bidder/Supplier. The Bidder /Supplier understands and agrees that in such cases where Bidder /Supplier has been banned (in terms of aforesaid procedure) from the date of issuance of such order by BGCL, such decision of BGCL shall be final and binding on the Bidder /Supplier and the 'Arbitration Clause' mentioned in the GCC or elsewhere in the Purchase Order shall not be applicable for any consequential issue /dispute arising in the matter.

31. GOVERNING LANGUAGE

- 31.1 The Contract shall be written in English language as specified by the Purchaser/Consultant in the Instruction to Bidders. All literature, correspondence and other documents pertaining to the Contract which are exchanged by the parties shall be written in English language. Printed literature in other language shall only be considered, if it is accompanied by an English translation. For the purposes of interpretation, English translation shall govern and be binding on all parties. The Supplier shall bear all costs of translation to the governing language and all risks of the accuracy of such translation.
- 31.2 The Supplier shall ensure that the language/terminology/description of Goods used in Purchase Order/Bill of Lading/Airway Bill/Invoice is verbatim in English and not at variance.

32. NOTICES

- 32.1 TO THE SUPPLIER: Any notice to be given to the Supplier may be served by the Purchaser/Consultant by facsimile / e-mail or through registered post/Courier at the address/contact information furnished by the Supplier. Proof of issue of any such notice could be conclusive of the Supplier having been duly informed of all contents therein.



32.2 TO THE PURCHASER/CONSULTANT: Any notice to be given to the Purchaser/Consultant under the terms of the Contract may be served by the Supplier, by facsimile / e-mail or delivering the same through registered post /Courier at the concerned site office.

32.3 A notice shall be effective when delivered or on the notice's effective date, whichever is later.

33. TAXES & DUTIES

33.1 A foreign Supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the Purchaser's country.

33.2 A domestic Supplier shall be entirely responsible for all taxes, duties, license fees etc. incurred until the delivery of the contracted goods to the Purchaser. However, GST on finished products shall be reimbursed by Purchaser.

33.3 Customs duty payable in India for imported Goods ordered by Purchaser on foreign Supplier shall be borne and paid by Purchaser.

33.4 Any income tax payable in respect of supervisory services rendered by foreign Supplier under the Contract shall be as per the Indian Income Tax Act and shall be borne by Supplier. It is upto the Bidder/Supplier to ascertain the amount of these taxes and to include them in his Bid price.

33.5 TDS

33.5.1 TDS as applicable will be deducted by BGCL under section 194Q of the Income Tax Act, 1961 on Purchases exceeds Rs. 50 Lakhs or limit defined therein from time to time during the financial year.

33.5.2 Since BGCL is liable to deduct Income Tax TDS under section 194Q, the provision of TCS as per section 206C(1H) of the Income Tax Act, 1961 shall not be applicable.

33.5.3 Higher rate of TDS for non-filers of ITR As per Section 206AB of Income Tax Act, 1961, in case of any vendor/customer who does not filed their Income Tax Return for both of the two previous years preceding to current year and aggregate amount of TDS is more than or equal to Rs. 50,000/- in each of those previous two years (or limit defined by Govt. from time to time), then TDS will be deducted at the higher of following rates:

- (i) Twice the rate mentioned in relevant TDS section.
- (ii) Twice the rate or rates in force
- (iii) 5%

34. BOOKS & RECORDS

34.1 Supplier shall maintain adequate books and records in connection with Contract and shall make them available for inspection and audit by Purchaser/Consultant or their



authorized agents or representatives during the terms of Contract until expiry of the Contract Performance Security. Fixed price (lumpsum or unit price) Contract will not be subject to audit as to cost except for cost reimbursable items, such as escalation and termination claims, transportation and comparable requirements.

35. PERMITS & CERTIFICATES

- 35.1 Supplier shall procure, at his expense, all necessary permits, certificates and licences required by virtue of all applicable laws, regulations, ordinances and other rules in effect at the place where any of the work is to be performed, and Supplier further agrees to hold Purchaser and/or Consultant harmless from liability or penalty which might be imposed by reason of any asserted or established violation of such laws, regulations, ordinances or other rules. Purchaser will provide necessary permits for Supplier's personnel to undertake any work at Site in connection with Contract.

36. GENERAL

- 36.1 In the event that terms and conditions stipulated in the General Conditions of Contract should deviate from terms and conditions stipulated in the Contract, the latter shall prevail.

36.2 Losses due to non-compliance of Instructions

Losses or damages occurring to the Purchaser owing to the Supplier's failure to adhere to any of the instructions given by the Purchaser/Consultant in connection with the Contract execution shall be recoverable from the Supplier.

36.3 Recovery of sums due

All costs, damages or expenses which the Purchaser/Consultant may have paid, for which under the Contract Supplier is liable, may be recovered by the Purchaser (he is hereby irrevocably authorized to do so) from any money due to or becoming due to the Supplier under this Contract or other Contracts and/or may be recovered by action at law or otherwise. If the sums due to the Supplier be not sufficient to recover the recoverable amount, the Supplier shall pay to the Purchaser, on demand, the balance amount.

36.4 Payments, etc. not to affect rights of the Purchaser

No sum paid on account by the Purchaser nor any extension of the date for completion granted by the Purchaser/Consultant shall affect or prejudice the rights of the Purchaser against the Supplier or relieve the Supplier of his obligation for the due fulfillment of the Contract.

36.5 Cut-off Dates

No claims or correspondence on claims on this Contract shall be entertained by the Purchaser/Consultant after 90 days after expiry of the Contract Performance Security (from the date of final extension, if any)



36.6: Indemnity

The Supplier hereby irrevocably and unconditionally undertakes to indemnify and keep indemnified the Purchaser/BGCL and all its employees, agents and assigns from and against all losses, penalties interests, costs etc., which may arise out of breach of any terms and conditions of this Contract by the Supplier and the employees' /personnel/sub-contractors/agents or any third party appointed by the Supplier for the purpose of implementation of their obligations under this Contract. The Supplier undertakes to compensate the Purchaser/BGCL forthwith on demand without protest any loss suffered by the Purchaser/BGCL together with direct/indirect expenses . This Indemnity shall remain valid and irrevocable for all claims of the Purchaser/BGCL arising from any such case or court case filed for which Purchaser/BGCL or its employees has been made party until now or here -in- after.

36.7 Paragraph heading

The paragraph heading in these conditions shall not affect the construction thereof.

36.8 Retired Purchaser's Director

No Director of BGCL is allowed to participate in tender for a period of 1 (one) year after his retirement from the employment of BGCL, without the prior permission of BGCL. The Contract if awarded is liable to be cancelled if the tenderer is found at any time to be such a person and has not obtained the permission of BGCL before submission of the tender. Any tender by a person aforesaid shall carry a disclosure thereof on the tender, and shall be accompanied by a copy of the document by which the requisite consent is given. Such disqualifications shall apply to every partner of a partnership firm.

The tenderer is required to state whether he is a relative of any Director of BGCL, or whether the tenderer is a partnership firm, whether a Director of BGCL or its relative is a partner in the firm, or whether the tenderer is a Company, whether a Director of BGCL or relative of such Director is a substantial member holding more than 10% (ten percent) of the paid up capital in the Company, or a Director of the Company. The definition of relative shall be as per The Companies Act, 2013 and its amendment(s).

37. IMPORT LICENSE

37.1 No import license is required for the imports covered under this Contract.

38. FALL CLAUSE

The following Fall Clause shall be applicable in the Contract, only if there is a specific mention of its applicability in ITB or SCC of Tender Document.

38.1 The price charged for the Goods supplied under the Contract by the Supplier shall in no event exceed the lowest price at which the Supplier or his agent/principal/dealer, as the case may be, sells the Goods of identical description to any Persons/Organizations including the Purchaser or any Department of the Central Govt. or any Department of a



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State Govt. or any Statutory Undertaking of the Central or State Govt. as the case may be, during the currency of the Contract.

- 38.2 If at any time during the said period, the Supplier or his agent/principal/dealer, as the case may be, reduces the sale price, sells or offers to sell such materials to any persons/organizations including the Purchaser or any Deptt. of Central Govt. or State Govt. as the case may be, at a price lower than the price chargeable under the Contract, he shall forthwith notify such reduction or sale or offer of sale to the Purchase Authority who has issued the Purchase Order and the price payable under the Purchase Order for the materials supplied after the date of coming into force of such reduction or sale or offer of sale shall stand correspondingly reduced.

The above stipulation will, however, not apply to:

- (i) Export/Deemed Export by the supplier;
- (ii) Sale of goods as original equipment prices lower than the price charged for normal replacement;
- (iii) Sale of goods such as drugs, which have expiry date;
- (iv) Sale of goods at lower price on or after the date of completion of sale/placement of order of goods or services by the authority concerned, under the existing or previous Rate Contracts as also under any previous contracts entered into with the Central or State Government Departments including new undertakings (excluding joint sector companies and or private parties) and bodies.

- 38.3 The Supplier shall furnish the following certificate to the concerned Paying Authority along with each bill for payment for supplies made against this order:-

“I/We certify that there has been no reduction in sale price of the items/Goods/materials of description identical to those supplied to the BGCL under the order herein and such items/Goods/materials have not been offered/sold by me/us to any person/organizations including the Purchaser or any Deptt. of Central Govt. or any Deptt. of State Govt. or any Statutory Undertaking of the Central or State Govt. as the case may be upto the date of bill/during the currency of the Contract whichever is later, at a price lower than the price charged to the BGCL under this Purchase Order”.

Such a certificate shall be obtained, except for quantity of items/Goods/materials categories under sub-clause (i), (ii) & (iii) of sub-para 38.2 above, of which details shall be furnished by the Supplier.

39. PUBLICITY & ADVERTISING

- 39.1 Supplier shall not without the written permission of Purchaser/Consultant make a reference to Purchaser/Consultant or any Company affiliated with Purchaser/Consultant or to the destination or the description of goods or services supplied under the contract in any publication, publicity or advertising media.

40. REPEAT ORDER



- 40.1 Purchaser reserves the right, within 6 months of order to place repeat order up to 25% of the original quantity without any change in unit price or other terms and conditions.

41. LIMITATION OF LIABILITY

- 41.1 Notwithstanding anything contrary contained herein, the aggregate total liability of Supplier, excluding his liability towards infringement of patent, trade mark or industrial design rights under the contract or otherwise shall be limited to 100% of value of Purchase order, except that this clause shall not limit the liability of the Supplier for following:

- (i) In the event of breach of any Applicable Law;
- (ii) In the event of fraud, Willful Misconduct or illegal or unlawful acts, or gross Negligence of the Supplier or any person acting on behalf of the Supplier; or
- (iii) In the event of acts or omissions of the Supplier which are contrary to the most elementary rules of diligence which a conscientious Supplier would have followed in similar circumstances; or
- (iv) In the event of any claim or loss or damage arising out of infringement of Intellectual Property; or
- (v) For any damage to any third party, including death or injury of any third party caused by the Supplier or any person or firm acting on behalf of the Supplier in executing the Contract.

However, neither party shall be liable to the other party for any indirect and consequential damages, loss of profits or loss of production.

42. COMPLETION CERTIFICATE AND EXECUTION CERTIFICATE

- 42.1 No Completion Certificate shall be issued against orders for supply of goods only. However, for these cases, a copy of Good Receipt (GR) duly signed by concerned Store-in-charge will be forwarded to the Supplier.
- 42.2 Completion Certificate, in case of Purchase Orders for supply of Goods along with associated/incidental Services (like erection, installation, commissioning etc.) should be issued after completion of supplies/services in accordance with Contract.
- 42.3 Completion of supplies, for issuance of completion certificate, shall be completion of supply and acceptance of Goods in all respect as per provisions of Contract.
- 42.4 **Application for Completion Certificate:** When the Supplier fulfills his obligation under the Contract he shall be eligible to apply for Completion Certificate. The Purchaser/Consultant shall normally issue to the Supplier the Completion Certificate within one month after receiving any application thereof from the Supplier after verifying from the completion documents and satisfying himself that the supplies have



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been made in accordance with and as set out in the Contract.

42.5 **Completion Certificate:** Within one month from receipt of application from Supplier after the completion of the Supplies in all respects as specified above at clause no. 42.4, the Supplier shall be furnished with a certificate by the Purchaser/Consultant such completion. Purchaser's/Consultant's certification about completion of supplies in all aspects shall be binding and conclusive.

42.6 **Execution Certificate:** Execution Certificate during currency of Rate contract can be issued by Purchaser/Consultant against written request from Supplier.

43.0 PROVISIONS FOR BUY-BACK ITEMS:

The following provision for Buy-Back shall be applicable in the Contract, only if there is a specific mention of its applicability in ITB or SCC of Tender Document.

43.1 Old materials will be handed over to the Supplier in terms of the contract with proper documentation on "as is where is basis". The Supplier is required to take away such materials out of BGCL immediately after handing over to them.

43.2 The Supplier will not sell these materials to any Purchaser's employee without written permission of Purchaser/HR Department-Purchaser, to be obtained by the Purchaser employee(s). Even after such permission is obtained by employee(s), the Supplier is free to take decision whether to sell such item(s) to Purchaser employee(s) or not.

43.3 The Supplier will maintain a separate record for such sales to Purchaser employees and will make the same available as and when required by Purchaser.

43.4 The Supplier will accept payment only by Cheque/Demand Draft/e-banking (NEFT) for sale of old item(s) to BGCL employee(s).

43.5 The Supplier is required to take away the buy-back items out of BGCL premises at his cost within 14 days of notice. Failure or any delays of Supplier for removal of buy-back items, the Purchaser shall be entitled to recover handling and storage charges @5% of the buy-back value of such items for each month or part of a month without relieving the Supplier from any other related liability. In the event of the Supplier's failure to remove the same within a period of 6 months, the Purchaser will take action for removal through auction or sale on behalf of the Supplier and at his risk in all respects. The buy-back amount deducted from payment and proceed of such action or sale will be adjusted towards handling, storage and overhead charges of BGCL. The decision of Purchaser w.r.t. such removal and the amount of the proceeds shall be final and binding on the Supplier. The Purchaser shall in no way be responsible for any deterioration or damage to the Equipment under any circumstances whatsoever. Further, such action shall be considered as poor-performance and action will be taken as per procedure in this regard.

44.0 CONFIDENTIALITY:

The Supplier, it's Sub-Contractor and their personnel shall not, either during the term or within two (2) years after the expiration of this Contract, disclose any proprietary or



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confidential information related to work / Project, this Contract, or Purchaser's business or operations without the prior consent of the Purchaser.

45.0 INTELLECTUAL PROPERTY RIGHT:

The Supplier shall retain the copy right and other intellectual property rights in the Supplier's document and other design documents made by (or on behalf of) the Supplier. Subject to the confidentiality obligations, by signing the Contract, within the value of Contract, the Supplier shall be deemed to give to the Purchaser a non-terminable, transferable, non-exclusive and royalty-free right to copy, use and communicate the Supplier's documents for the operation, maintenance, repair of the Goods/Work / Plant, training and Statutory purposes, but not for any other purpose. Such documents of the Supplier shall not be used, copied or communicated to a third party by or on behalf of the Purchaser for the purposes other than those permitted, without the Supplier's Consent.

46.0 ACTION IN CASE OF CORRUPT/ FRAUDULENT/ COLLUSIVE/ COERCIVE PRACTICES AND POOR PERFORMANCE:

The procedure for action in case of Corrupt/ Fraudulent/ Collusive/ Coercive Practices containing provisions for putting a Bidder/Supplier on suspension and/or banning list (as the case may be) if such an agency has indulged in Corrupt/ Fraudulent/ Collusive/ Coercive Practices. The Procedure is also enclosed as Appendix-I to this GCC. Further, Bidder/Supplier accepts and solemnly affirms that they would adhere to the Fraud Prevention Policy of BGCL and shall not indulge themselves or allow others (working in BGCL) to indulge in fraudulent activities and that they would immediately apprise the Owner/BGCL/Employer / Organization(s) of the fraud/ suspected fraud as soon as it comes to their notice. Concealment of facts regarding Bidder/Supplier's involvement in fraudulent activities in connection with the business transaction(s) of BGCL is liable to be treated as crime and dealt with by the procedures of BGCL as applicable from time to time. The Fraud Prevention Policy document is available on BGCL's website (www.bgcl.co.in).

47.0 VENDOR PERFORMANCE EVALUATION

The procedure for evaluation of performance of Supplier containing provisions for putting a Bidder / Supplier on suspension and/or holiday list (as the case may be) is enclosed as Appendix II to this GCC.



Appendix -1

PROCEDURE FOR ACTION IN CASE OF CORRUPT /FRAUDULENT/COLLUSIVE/COERCIVE PRACTICES

A Definitions:

- A.1 “Corrupt Practice” means the offering, giving, receiving or soliciting, directly or indirectly, anything of value to improperly influence the actions in selection process or in contract execution.
- “Corrupt Practice” also includes any omission for misrepresentation that may mislead or attempt to mislead so that financial or other benefit may be obtained or an obligation avoided.
- A.2 “Fraudulent Practice” means and include any act or omission committed by a agency or with his connivance or by his agent by misrepresenting/ submitting false documents and/ or false information or concealment of facts or to deceive in order to influence a selection process or during execution of contract/ order.
- A.3 “Collusive Practice amongst bidders (prior to or after bid submission)” means a scheme or arrangement designed to establish bid prices at artificial non-competitive levels and to deprive the Employer of the benefits of free and open competition.
- A.4 “Coercive practice” means impairing or harming or threatening to impair or harm directly or indirectly, any agency or its property to influence the improperly actions of an agency, obstruction of any investigation or auditing of a procurement process.
- A.5 “Vendor/Supplier/Contractor/Consultant/Bidder” is herein after referred as “Agency”
- A.6 “Appellate Authority” shall mean Committee of Directors.
- A.7 “Competent Authority” shall mean the authority, who is competent to take final decision for Suspension of business dealing with an Agency/ ies and Banning of business dealings with Agency/ies and shall be the CEO.
- A.8 “Allied Agency” shall mean all concerns which come within the sphere of effective influence of the banned/suspended agency shall be treated as allied agency. In determining this, the following factors may be taken into consideration:
- a) Whether the management is common;
 - b) Majority interest in the management is held by the partners or directors of banned/ suspended agency;
 - c) Substantial or majority shares are owned by the banned/ suspended agency and by virtue of this it has a controlling voice.
 - d) Directly or indirectly controls, or is controlled by or is under common control with another bidder.



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e) All successor agency will also be considered as allied agency.

A.9 “Investigating Agency” shall mean any department or unit of GAIL /BGCL investigating into the conduct of Agency/ party and shall include the Vigilance Department of the GAIL/ BGCL, Central Bureau of Investigation, State Police or any other agency set up by the Central or state government having power to investigate.

A.10 "Obstructive practice": materially impede the procuring entity's investigation into allegations of one or more of the above mentioned practices either by deliberately destroying, falsifying, altering; or by concealing of evidence material to the investigation; or by making false statements to investigators and/ or by threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or by impeding BGCL 's rights of audit or access to information.

B Actions against bidder(s) indulging in corrupt /fraudulent/ collusive/ coercive practice

B.1 Irregularities noticed during the evaluation of the bids:

If it is observed during bidding process/ bids evaluation stage that a bidder has indulged in corrupt/fraudulent /collusive/coercive practice, the bid of such Bidder (s) shall be rejected and its Earnest Money Deposit (EMD) shall be forfeited.

Further, such agency shall be banned for future business with BGCL for a period specified in para B 2.2 below from the date of issue of banning order.

B.2 Irregularities noticed after award of Contract

(i) During execution of contract:

If an agency, is found to have indulged in corrupt/fraudulent/ collusive/coercive practices, action shall be initiated as per procedure mentioned at Clause no. E for putting the agency on banning list.

After conclusion of process and issuance of Speaking order for putting party on banning list as per process defined in para E, the order (s)/ contract (s) where it is concluded that such irregularities have been committed shall be terminated and Contract cum Performance Bank Guarantee (CPBG) submitted by agency against such order (s)/ contract (s) shall also be forfeited. Further such order/ contract will be closed following the due procedure in this regard.

The amount that may have become due to the contractor on account of work already executed by him shall be payable to the contractor and this amount shall be subject to adjustment against any amounts due from the contractor under the terms of the contract. No risk and cost provision will be enforced in such cases.

Suspension of order/ contract:

Further, only in the following situations, the concerned order (s)/ contract(s) (where Corrupt/Fraudulent/Collusive/ Coercive Practices are observed) and payment shall be suspended after issuance of Suspension cum Show Cause Notice:



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- (i) Head of Corporate Vigilance Department/CVO based on the investigation by them, recommend for specific immediate action against the agency.
- (ii) Head of Corporate Vigilance Department/CVO based on the input from investigating agency, forward for specific immediate action against the agency.

Suspension cum Show Cause Notice being issued in above cases after approval of the competent authority (as per provisions mentioned under Clause no. D) shall also include the provision for suspension of Order (s)/Contract (s) and payment. Accordingly, after issuance of Suspension cum Show Cause Notice by C&P Department, the formal communication for suspension of Order (s)/ Contract (s) and payment with immediate effect will be issued by the following with copy to concerned F&A:

- (i) **For Projects cases:** concerned Project Managers in case of Purchase Orders and concerned Construction-in Charge (where PMC is EIC)/ Engineer-in-Charge (EIC) in case of Contracts.
- (ii) **For other than Projects cases:** concerned Dealing officer in case of Purchase Orders and concerned Engineer-in-Charge (EIC) in case of Contracts.

During suspension, Contractor/ Service Providers will be allowed to visit the plant/ site for upkeep of their items/ equipment, BGCL's issued materials (in case custody of same is not taken over), demobilizing the site on confirmation of EIC, etc.

In addition to above, Recovery of payments including advance payments, if any, made by along with interest thereon at the prevailing rate shall be recovered.

(ii) After execution of Contract and during Defect Liability Period (DLP)/ Warranty/Guarantee Period:

If an Agency is found to have indulged in corrupt/fraudulent/ collusive/coercive practices, after execution of contract and during DLP/Warranty/Guarantee Period, the Agency shall be banned for future business with BGCL for a period specified in para B 2.2 below from the date of issue of banning order.

Further, the Contract cum Performance Bank Guarantee (CPBG)/CPS submitted by Agency against such order (s)/ contract (s) shall be forfeited.

(iii) After expiry of Defect liability period (DLP)/ Warranty/Guarantee Period

If an Agency is found to have indulged in corrupt/fraudulent/ collusive/coercive practices, after expiry of Defect liability period (DLP)/ Warranty/Guarantee Period, the Agency shall be banned for future business with BGCL for a period specified in para B 2.2 below from the date of issue of banning order.

B.2.2 Period of Banning

The period of banning of agencies indulged in Corrupt/Fraudulent/Collusive/Coercive Practices shall be as under and to be reckoned from the date of banning order:

S. No.	Description	Period of banning from the date of issuance of Banning order



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1	Misrepresentation/False information other than pertaining to BEC of tender but having impact on the selection process. For example, if an agency confirms not being in holiday in BGCL/ GAIL/PSU's PMC or banned by PSUs/ Govt. Dept., liquidation, bankruptcy & etc. and subsequently it is found otherwise, such acts shall be considered in this category.	06 Months
2	Corrupt/Fraudulent (except mentioned sl. no. 1 above) /Collusive/Coercive Practices	01 years
2.1	If an agency again commits Corrupt/Fraudulent (except mentioned sl. no. 1 above) /Collusive/ Coercive Practices in subsequent cases after their banning, such situation of repeated offense to be dealt with more severity	2 years (in addition to the period already served)
3	Indulged in unauthorized disposal of materials provided by BGCL.	2 years
4	If act of vendor/ contractor is a threat to the National Security	2 years

C Effect of banning on other ongoing contracts/ tenders

- C.1 If an Agency is put on Banning, such Agency should not be considered in ongoing tenders/future tenders.
- C.2 However, if such an Agency is already executing other order (s)/ contract (s) where no corrupt/fraudulent/ collusive/coercive practice is found, the Agency should be allowed to continue till its completion without any further increase in scope except those incidental to original scope mentioned in the contract.
- C.3 If an Agency is put on the Banning List during tendering and no irregularity is found in the case under process:
- C.3.1 After issue of the enquiry /bid/tender but before opening of Technical bid, the bid submitted by the Agency shall be ignored.
- C.3.2 After opening Technical bid but before opening the Price bid, the Price bid of the Agency shall not be opened and BG/EMD submitted by the Agency shall be returned to the Agency.
- C.3.3 After opening of price, BG/EMD made by the Agency shall be returned; the offer of the Agency shall be ignored & will not be further evaluated. In case such agency is lowest (L-1), next lowest bidder shall be considered as L-1.

D. Procedure for Suspension of Bidder

D.1 Initiation of Suspension

Action for suspension business dealing with any agency/(ies) shall be initiated when

- (i) Corporate Vigilance Department, based on the fact of the case gathered during



investigation by them recommend for specific immediate action against the Agency.

- (ii) Corporate Vigilance Department, based on the input from Investigating agency, forward for specific immediate action against the Agency.
- (iii) Non performance of Bidder/Service Provider leading to termination of Contract/ Order.

D.2 Suspension Procedure:

- D.2.1 The order of suspension would operate initially for a period not more than six months and shall be communicated to the Agency and also to Corporate Vigilance Department. Period of suspension can be extended with the approval of the Competent Authority by one month at a time with a ceiling of six months pending a conclusive decision to put the Agency on banning list.
- D.2.2 During the period of suspension, no new business dealing shall be held with the Agency.
- D.2.3 Period of suspension shall be accounted for in the final order passed for banning of business with the Agency.
- D.2.4 The decision regarding suspension of business dealings shall also be communicated to the Agency.
- D.2.5 If a prima-facie, case is made out that the agency is guilty on the grounds which can result in banning of business dealings, proposal for issuance of suspension order and show cause notice shall be put up to the Competent Authority. The suspension order and show cause notice must include that (i) the agency is put on suspension list and (ii) why action should not be taken for banning the agency for future business from BGCL.

The competent authority to approve the suspension will be same as that for according approval for banning.

D 3 Effect of Suspension of business:

Effect of suspension on other on-going/future tenders will be as under:

- D.3.1 No enquiry/bid/tender shall be entertained from an Agency as long as the name of Agency appears in the Suspension List.
- D.3.2 If an Agency is put on the Suspension List during tendering:
 - D.3.2.1 After issue of the enquiry /bid/tender but before opening of Technical bid, the bid submitted by the Agency shall be ignored.
 - D.3.2.2 After opening Technical bid but before opening the Price bid, the Price bid of the Agency shall not be opened and BG/EMD submitted by the Agency shall be returned to the Agency.
 - D.3.2.3 After opening of price, BG/EMD made by the agency shall be returned; the offer of the agency shall be ignored & will not be further evaluated. In case such agency is lowest (L-1), next lowest bidder shall be considered as L-1.
- D.3.3 The existing contract (s)/ order (s) under execution shall continue.
- D.3.4 Tenders invited for procurement of goods, works, services and consultancy services shall have provision that the bidder shall submit a undertaking to the effect that (i) neither the bidder themselves nor their allied Agency/(ies) are on banning list of BGCL or the Ministry of Petroleum and Natural Gas and (ii) bidder is not banned by any



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Government department/ Public Sector.

F. Appeal against the Decision of the Competent Authority:

- F.1 The Agency may file an appeal against the order of the Competent Authority for putting the Agency on banning list. The appeal shall be filed to Appellate Authority. Such an appeal shall be preferred within one month from the of receipt of banning order.
- F.2 Appellate Authority would consider the appeal and pass appropriate order which shall be communicated to the party as well as the Competent Authority.
- F.3 Appeal process may be completed within 45 days of filing of appeal with the Appellate Authority.
- G. Wherever there is contradiction with respect to terms of 'Integrity pact', 'GCC' and 'Procedure for action in case of Corrupt/Fraudulent/ Collusive/Coercive Practice', the provisions of 'Procedure for action in case of Corrupt/Fraudulent/ Collusive/Coercive Practice' shall prevail.



Appendix 2

PROCEDURE FOR EVALUATION OF PERFORMANCE OF VENDORS/ SUPPLIERS/ CONTRACTORS/ CONSULTANTS

1.0 GENERAL

A system for evaluation of Vendors/ Suppliers/Contractors/ Consultants (*referred elsewhere as "Service Provider"*) and their performance is a key process and important to support an effective purchasing & contracting function of an organization.

Performance of all participating Vendors/ Suppliers/Contractors/ Consultants need to be closely monitored to ensure timely receipt of supplies from a Vendor, completion of an assignment by a Consultant or complete execution of order by a contractor within scheduled completion period. For timely execution of projects and meeting the operation & maintenance requirement of operating plants, it is necessary to monitor the execution of order or contracts right from the award stage to completion stage and take corrective measures in time.

2.0 OBJECTIVE

The objective of Evaluation of Performance aims to recognize and develop reliable Vendors/ Suppliers/Contractors/ Consultants so that they consistently meet or exceed expectations and requirements.

The purpose of this procedure is to put in place a system to monitor performance of Vendors/ Suppliers/Contractors/ Consultants associated with BGCL so as to ensure timely completion of various projects, timely receipt of supplies including completion of works & services for operation and maintenance of operating plants and quality standards in all respects.

3.0 METHODOLOGY

i) Preparation of Performance Rating Data Sheet

Performance rating data Sheet for each and every Vendor/ Supplier/Contractor/Consultant for all orders/Contracts with a value of Rs. 50 Lakhs and above is recommended to be drawn up. Further, Performance rating data Sheet for orders/contracts of Vendor/Supplier/Contractor/ Consultant who are on watch list/holiday list/ banning list shall be prepared irrespective of order/ contract value. These data sheets are to be separately prepared for orders/ contracts related to Projects and O&M within 30 days after execution of Order/ Contract. Format, Parameters, Process, responsibility for preparation of Performance Rating Data Sheet are separately mentioned.

ii) Measurement of Performance

Based on the parameters defined in Data Sheet, Performance of concerned Vendor/ Supplier/Contractor/ Consultant would be computed and graded accordingly. The measurement of the performance of the Party would be its ability to achieve the minimum scoring of 60% points in the given parameters.



iii) Initiation of Measures:

Depending upon the Grading of Performance, corrective measures would be initiated by taking up the matter with concerned Vendor/ Supplier/Contractor/ Consultant. Response of Vendor/ Supplier/Contractor/ Consultant would be considered before deciding further course of action.

iv) Implementation of Corrective Measures:

Based on the response of Vendor/ Supplier/Contractor/ Consultant, concerned HOD would recommend for continuation or discontinuation of such party from the business of BGCL.

v) Orders/contracts placed on Proprietary/OEM basis for O&M will be evaluated and, if required, corrective action will be taken for improvement in future.

4.0 **EXCLUSIONS:**

The following would be excluded from the scope of evaluation of performance of Vendors/ Suppliers/Contractors/ Consultants:

- i) Orders/Contracts below the value of Rs. 50 Lakhs if Vendor/ Supplier/Contractor/ Consultant is not on watch list/holiday list/ banning list.
- ii) Orders for Misc./Administrative items/ Non stock Non valued items.

However, concerned HOD will continue to monitor such cases so as to minimize the impact on Projects/O&M plants due to non-performance of Vendors/ Suppliers/Contractors/ Consultants in all such cases.

5.0 **PROCESS OF EVALUATION OF PERFORMANCE OF VENDORS/ SUPPLIERS/ CONTRACTORS/ CONSULTANTS**

5.1 **FOR PROJECTS**

- i) Evaluation of performance of Vendors/ Suppliers/Contractors/ Consultants in case of PROJECTS shall be done immediately with commissioning of any Project.
- ii) On commissioning of any Project, EIC (Engineer-in-charge)/ Project-in-charge shall prepare a Performance Rating Data Sheet (Format at Annexure-1) for all Orders and Contracts.
- iii) Depending upon the Performance Rating, following action shall be initiated by Engineer-in-charge/Project-in-charge:

S1. No.	Performance Rating	Action
1	POOR	Seek explanation for Poor performance
2	FAIR	Seek explanation for Fair performance
3	GOOD	Letter to the concerned for improving performance in future
4	VERY GOOD	No further action



iv) Reply from concerned Vendor/ Supplier/Contractor/ Consultant shall be examined. In case of satisfactory reply, Performance Rating data Sheet to be closed with a letter to the concerned for improving performance in future.

v) When no reply is received or reasons indicated are unsatisfactory, the following actions need to be taken:

A) Where performance rating is “POOR” (as per Performance Rating carried out after execution of Order/ Contract and where no reply/ unsatisfactory reply is received from party against the letter seeking the explanation from Vendor/Supplier/Contractor/ Consultant along with sharing the performance rating)

Recommend such defaulting Vendor / Supplier / Contractor / Consultant for the following action:

1. Poor Performance on account of Quality (if marks obtained against Quality parameter is less than 20):

(a) First Instance: Holiday (Red Card) for One Year

(b) Subsequent instance (s) in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: Holiday (Red Card) for Two Years

2. Poor Performance on account of other than Quality (if marks obtained against Quality parameter is more than 20):

(a) First such instance: Advisory notice (Yellow Card) shall be issued and Vendor/Supplier/Contractor/ Consultant shall be put on watch list for a period of Two (2) Years.

(b) Second such instance in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/Consultant: Putting on Holiday (Red Card) for a period of One Year.

(c) Subsequent instances (more than two) in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: Putting on Holiday (Red Card) for a period of Two Years.

B) Where Poor/Non-Performance leading to termination of contract or Offloading of contract due to poor performance attributable to Vendor/Supplier/Contractor/Consultant

(a) First instance: Advisory notice (Yellow Card) shall be issued and Vendor/Supplier/Contractor /Consultant shall be put on watch list for a period of Two (2) Years.

Further such vendor will not be allowed to participate in the re-tender of the same supply/work/services of that location which has terminated / offloaded. Moreover, it will be ensured that all other action as per provision of contract including forfeiture of Contract Performance Security (CPS) etc. are undertaken.



However, such vendor will be allowed to participate in all other tenders and to execute other ongoing order/ contract(s) or new contract/ order (s).

The Yellow card will be automatically revoked after a period of two years unless the same is converted into Red Card due to subsequence instances of poor/ non-performance in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant.

(b) **Second instances** in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: **Holiday (Red Card)** for period of One Year and they shall also to be considered for Suspension.

(c) **Subsequent instances (more than two)** in other ongoing order (s)/ contract(s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: **Holiday (Red Card) for period of Two Years and they shall also to be considered for Suspension.**

(C) Where Performance rating is “FAIR”:

Issuance of warning to such defaulting Vendor/ Supplier/Contractor/ Consultant to improve their performance.

5.2 FOR CONSULTANCY JOBS

Monitoring and Evaluation of consultancy jobs will be carried out in the same way as described in para 5.1 for Projects.

5.3 FOR OPERATION & MAINTENANCE

- i) Evaluation of performance of Vendors/ Suppliers/Contractors/ Consultants in case of Operation and Maintenance shall be done immediately after execution of order/ contract.
- ii) After execution of orders a Performance Rating Data Sheet (Format at Annexure- 2) shall be prepared for Orders by Site C&P and for Contracts/Services by respective Engineer-In-Charge.
- iii) Depending upon Performance Rating, following action shall be initiated:

S1. No.	Performance Rating	Action
1	POOR	Seek explanation for Poor performance
2.	FAIR	Seek explanation for Fair performance
3	GOOD	Letter to the concerned for improving performance in future.
4	VERY GOOD	No further action



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- iv) Reply from concerned Vendor/ Supplier/Contractor/ Consultant shall be examined. In case of satisfactory reply, Performance Rating data Sheet to be closed with a letter to the concerned for improving performance in future.
- v) When no reply is received or reasons indicated are unsatisfactory, the following actions need to be taken:

A) Where performance rating is “POOR” (as per Performance Rating carried out after execution of Order/ Contract and where no reply/ unsatisfactory reply is received from party against the letter seeking the explanation from Vendor/Supplier/Contractor/ Consultant along with sharing the performance rating)

Recommend such defaulting Vendor / Supplier / Contractor / Consultant for the following action:

1. Poor Performance on account of Quality (if marks obtained against Quality parameter is less than 20):

(a) First Instance: Holiday (Red Card) for One Year

(b) Subsequent instance (s) in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: Holiday (Red Card) for Two Years

2. Poor Performance on account of other than Quality (if marks obtained against Quality parameter is more than 20):

(a) First such instance: Advisory notice (Yellow Card) shall be issued and Vendor/Supplier/Contractor/ Consultant shall be put on watch list for a period of Two (2) Years.

(b) Second such instance in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/Consultant: Putting on Holiday (Red Card) for a period of One Year

(c) Subsequent instances (more than two) in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: Putting on Holiday (Red Card) for a period of Two Years.

B) Where Poor/Non-Performance leading to termination of contract or offloading of contract due to poor performance attributable to Vendor/Supplier/Contractor/Consultant

(a) First instance: Advisory notice (Yellow Card) shall be issued and Vendor/Supplier/Contractor /Consultant shall be put on watch list for a period of Two (2) Years.



Further such vendor will not be allowed to participate in the re-tender of the same supply/work/services of that location which has terminated / offloaded. Moreover, it will be ensured that all other action as per provision of contract including forfeiture of Contract Performance Security (CPS) etc. are undertaken.

However, such vendor will be allowed to participate in all other tenders and to execute other ongoing order/ contract(s) or new contract/ order (s).

The Yellow card will be automatically revoked after a period of two years unless the same is converted into Red Card due to subsequence instances of poor/ non-performance in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant.

(b) **Second instances** in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: **Holiday (Red Card)** for period of One Year and they shall also to be considered for Suspension.

(c) **Subsequent instances (more than two)** in other ongoing order (s)/ contract(s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: **Holiday (Red Card) for period of Two Years and they shall also to be considered for Suspension.**

(C) Where Performance rating is “FAIR”: Issuance of warning to such defaulting Vendor/ Supplier/Contractor/ Consultant to improve their performance.

6.0 REVIEW & RESTORATION OF PARITES PUT ON HOLIDAY

- 6.1 An order for Holiday passed for a certain specified period shall deemed to have been automatically revoked on the expiry of that specified period and it will not be necessary to issue a specific formal order of revocation.

Further, in case Vendor/ Supplier/Contractor/ Consultant is put on holiday due to quality, and new order is placed on bidder after restoration of Vendor/ Supplier/Contractor/ Consultant, such order will be properly monitored during execution stage by the concerned site.

7.0 EFFECT OF HOLIDAY

- 7.1 If a Vendor/ Supplier/Contractor/ Consultant is put on Holiday, such Vendor/ Supplier/Contractor/ Consultant shall not be considered in ongoing tenders/future tenders.
- 7.2 However, if such Vendor/ Supplier/Contractor/ Consultant is already executing any other order/ contract and their performance is satisfactory in terms of the relevant contract, should be allowed to continue till its completion without any further increase in scope except those incidental to original scope mentioned in the contract. In such a case CPBG will not be forfeited and payment will be made as per provisions of concerned contract. However, this



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would be without prejudice to other terms and conditions of the contract.

7.3. Effect on other ongoing tendering:

- 7.3.1 After issue of the enquiry /bid/tender but before opening of Technical bid, the bid submitted by the party shall be ignored.
- 7.3.2 After opening Technical bid but before opening the Price bid, the Price bid of the party shall not be opened and BG/EMD submitted by the party shall be returned to the party.
- 7.3.3 After opening of price, BG/EMD made by the party shall be returned; the offer of the party shall be ignored & will not be further evaluated. In case such agency is lowest (L-1), next lowest bidder shall be considered as L-1.

8.0 While putting the Vendor/ Supplier/Contractor/ Consultant on holiday as per the procedure, the holding company, subsidiary, joint venture, sister concerns, group division of the errant Vendor/ Supplier/Contractor/ Consultant shall not be considered for putting on holiday list.

Any bidder, put on holiday, will not be allowed to bid through consortium route also in new tender during the period of holiday.

9.0 If an unsuccessful bidder makes any vexatious, frivolous or malicious complaint against the tender process with the intention of delaying or defeating any procurement or causing loss to BGCL or any other bidder, such bidder will be put on holiday for a period of six months, if such complaint is proved to be vexatious, frivolous or malicious, after following the due procedure.

10. **APPEAL AGAINST THE DECISION OF THE COMPETENT AUTHORITY:**

- (a) The party may file an appeal against the order of the Competent Authority for putting the party on Holiday list. The appeal shall be filed to Appellate Authority. Such an appeal shall be preferred within one month from the receipt of Holiday order.
- (b) Appellate Authority would consider the appeal and pass appropriate order which shall be communicated to the party as well as the Competent Authority.
- (c) Appeal process may be completed within 45 days of filing of appeal with the Appellate Authority.
- (d) “Appellate Authority” shall mean Committee of Directors.

11. **ERRANT BIDDER**

In case after price bid opening the lowest evaluated bidder (L1) is not awarded the job for any mistake committed by him in bidding or withdrawal of bid or modification of bid or varying any term in regard thereof leading to re-tendering, BGCL shall forfeit EMD if paid by the bidder and such bidders shall be debarred from



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participation in retendering of the same job(s)/item(s).

Further, such bidder will be put on Watch List (Yellow Card) for a period of two years after following the due procedure. However, during the period in watch list such vendor will be allowed to participate in all other tenders and to execute other ongoing order/ contract (s) or new contract/ order (s).

In case of subsequent instances of default in other tender(s) during aforesaid watch list period, the action shall be initiated as per provision of sl. no. 2 of para A of Clause no. 5.1 (v) and 5.3 (v).

The Yellow card will be automatically revoked after specified period unless the same is converted into Red Card.

12. In case CBIC (Central Board of Indirect Taxes and Customs)/ any tax authority / any equivalent government agency brings to the notice of BGCL that the Supplier has not remitted the amount towards GST (CGST & SGST/UTGST or IGST) collected from BGCL to the government exchequer, then, that Supplier shall be put under Holiday list of BGCL for period of six months after following the due procedure. This action will be in addition to the right of recovery of financial implication arising on BGCL.



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Annexure 1

Bengal Gas Company Limited
PERFORMANCE RATING DATA SHEET (FOR PROJECTS/ CONSULTANCY JOBS)

- i) Project/Work Centre
- ii) Order/ Contract No. & Date
- iii) Brief description of Items
Works/Assignment
- iv) Order/Contract value (Rs.)
- v) Name of Vendor/Supplier/
Contractor/ Consultant
- vi) Contracted delivery/
Completion Schedule
- vii) Actual delivery/
Completion date

Performance Parameter	Delivery/ Completion Performance	Quality Performance	Reliability Performance#	Total
Maximum Marks	40	40	20	100
Marks Allocated				

Note:

Remarks (if any)

PERFORMANCE RATING (**)

Note

(#) Vendor/Supplier/Contractor/Consultant who seek repeated financial assistance or deviation beyond contract payment term or seeking direct payment to the sub- vendor/sub-contractor due to financial constraints, then '0' marks should be allotted against Reliability Performance.

(*) Allocation of marks should be as per enclosed instructions (**)

Performance rating shall be classified as under:

Sl. No.	Range (Marks)	Rating
1	60 & below	POOR
2	61-75	FAIR
3	76-90	GOOD
4	More than 90	VERY GOOD

Signature of Authorized Signatory:
Name:

Designation:



Instructions for allocation of marks

1. Marks are to be allocated as under:

1.1 DELIVERY/ COMPLETION PERFORMANCE 40 Marks

Delivery Period/ Completion Schedule	Delay in Weeks	Marks

a) Upto 3 months	Before CDD	40
Delay upto 4 weeks		35
	8 weeks	30
	10 weeks	25
	12 weeks	20
	16 weeks	15
More than 16 weeks		0

b) Above 3 months	Before CDD	40
Delay upto 4 weeks		35
	8 weeks	30
	10 weeks	25
	16 weeks	20
	20 weeks	15
	24 weeks	10
More than 24 weeks		0

1.2 QUALITY PERFORMANCE 40 Marks

For Normal Cases: No Defects/ No Deviation No failure: 40 marks

i) Rejection Defects	Marks to be allocated on prorata basis for acceptable quantity as compared to total	10 marks

quantity for normal cases

ii) When quality failure endanger	Failure of severe nature - Moderate nature	0 marks 5 marks

system integration - low severe nature and safety of the system 10-25 marks

iii) Number of deviations	1. No deviation	5 marks
	2. No. of deviations < 2	2 marks
	3. No. of deviations > 2	0 marks



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1.3

RELIABILITY PERFORMANCE

20 Marks

A.	FOR WORKS/CONTRACTS	
i)	Submission of order acceptance, agreement, PBG, Drawings and other documents within time	4 marks
ii)	Mobilization of resources as per Contract and in Time	4 marks
iii)	Liquidation of Check-list points	4 marks
iv)	Compliance to statutory and HS&E requirements or Reliability of Estimates/Design/Drawing etc. in case of Consultancy jobs	4 marks
v)	Timely submission of estimates and other documents for Extra, Substituted & AHR items	4 marks
B.	FOR SUPPLIES	
i)	Submission of order acceptance, PBG, Drawings and other documents within time	5 marks
ii)	Attending complaints and requests for after sales service/ warranty repairs and/ or query/ advice (upto the evaluation period).	5 marks
iii)	Response to various correspondence and conformance to standards like ISO	5 marks
iv)	Submission of all required documents including Test Certificates at the time of supply	5 marks



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Annexure 2

Bengal Gas Company Limited
PERFORMANCE RATING DATA SHEET
(FOR O&M)

- i) Location
- ii) Order/ Contract No. & date
- iii) Brief description of Items
Works/Assignment
- iv) Order/Contract value (Rs.)
- v) Name of Vendor/Supplier/
Contractor/ Consultant
- vi) Contracted delivery/
Completion Schedule
- vii) Actual delivery/
Completion date

Performance Parameter	Delivery Performance	Quality Performance	Reliability Performance#	Total
Maximum Marks	40	40	20	100
Marks Allocated				

Remarks (if any)

PERFORMANCE RATING (**)

Note

(#) Vendor/Supplier/Contractor/Consultant who seek repeated financial assistance or deviation beyond contract payment term or seeking direct payment to the sub- vendor/sub-contractor due to financial constraints, then '0' marks should be allotted against Reliability Performance

(*) Allocation of marks should be as per enclosed instructions (**)

Performance rating shall be classified as under

Sl. No.	Range (Marks)	Rating
1	60 & below	POOR
2	61-75	FAIR
3	76-90	GOOD
4	More than 90	VER GOOD

Signature of Authorised Signatory:

Name:

Designation:



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Instructions for allocation of marks (For O&M)

1. Marks are to be allocated as under

1.1 DELIVERY/ COMPLETION PERFORMANCE 40 Marks

Delivery Period/ Completion Schedule	Delay in Weeks	Marks

a) Upto 3 months	Before CDD	40
Delay upto 4 weeks		35
	8 weeks	30
	10 weeks	25
	12 weeks	20
	16 weeks	15
More than 16 weeks		0

b) Above 3 months	Before CDD	40
Delay upto 4 weeks		35
	8 weeks	30
	10 weeks	25
	16 weeks	20
	20 weeks	15
	24 weeks	10
More than 24 weeks		0

1.2 QUALITY PERFORMANCE 40 Marks

For Normal Cases : No Defects/ No Deviation/ No failure: 40 marks

i) Rejection/Defects	Marks to be allocated on prorata basis for acceptable quantity as compared to total quantity for normal cases	10 marks
ii) When quality failure endanger system integration and safety of the System	Failure of severe nature - Moderate nature - low severe nature	0 marks 5 marks 10-25 marks
iii) Number of deviations	1. No deviation 2. No. of deviations < 2	5 marks 2 marks
3. No. of deviations > 2		0 marks



1.3

RELIABILITY PERFORMANCE

20 Marks

A.	FOR WORKS/CONTRACTS	
i)	Submission of order acceptance, agreement, PBG, Drawings and other documents within time	4 marks
ii)	Mobilization of resources as per Contract and in Time	4 marks
iii)	Liquidation of Check-list points	4 marks
iv)	Compliance to statutory and HS&E requirements or Reliability of Estimates/Design/Drawing etc. in case of Consultancy jobs	4 marks
v)	Timely submission of estimates and other documents for Extra, Substituted & AHR items	4 marks
B.	FOR SUPPLIES	
i)	Submission of order acceptance, PBG, Drawings and other documents within time	5 marks
ii)	Attending complaints and requests for after sales service/ warranty repairs and/ or query/ advice (upto the evaluation period).	5 marks
iii)	Response to various correspondence and conformance to standards like ISO	5 marks
iv)	Submission of all required documents including Test Certificates at the time of supply	5 marks



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SECTION-V

Scope of Work (SOW)

&

Technical Specification



SCOPE OF WORK (SOW)

The scope of work indicates minimum requirement for each 1200 SCMH CNG Compressor package at Kolkata GA area having at least following CNG equipment and associated accessories.

For 1200 SCMH motor Driven Compressor

1200 SCMH Motor Driven Compressor

PLC, Alarms etc.

Inlet PRV, Valve, Tubing's, other accessories etc.

Electrical Panel & its accessories etc.

For 1200 SCMH Engine Driven Compressor

1200 SCMH Engine Driven Compressor

PLC, Alarms etc.

Inlet PRV, Valve, Tubing's, other accessories etc.

Electrical Panel & its accessories etc.

The bidder may be required to carry out all related activities that may be required for successful completion of the work at each CNG Station having 1200 SCMH Compressor package, as per directions of the Engineer in Charge (EIC).

1. CONTRACTOR SCOPE

A. SUPPLY, ERECTION, INSTALLATION & COMMISSIONING

Successful Supply, Erection, Installation & commissioning of 1200 SCMH Motor Driven CNG Compressor-11 No. 1200 SCMH Engine Driven CNG Compressor-01 at Site & its accessories including Electrical panel, Air Compressor, Leak detection system, CO2 Flooding system, PLC of compressor Package, CNG Piping, around the compressor area and other auxiliaries with the compressor package etc. The contractor shall provide all necessary tools, tackles, chain-pulley block, hoist, equipment, trolley, fork-lift, pick-up, crane etc which may be necessary required during erection & installation of compressor etc. covered under the contractor scope.

All Type of Cable (Main motor power supply, UPS, Panel, Instrument cable) with requires gland Supply, Laying, Testing & Termination of PCV Insulated PVC Sheathed etc. covered under the contractor scope.

B. SCOPE OF SUPPLY & WORK FOR COMPREHENSIVE OPERATION & MAINTENANCE:

Any spare part required during the contract period shall be supplied by contractor free of cost to client. Further, all the consumable, lubricating oil, coolant, Manpower, DM Water, Housekeeping etc required for carrying out the comprehensive Operation & Maintenance of complete compressor package during the contract period, including periodic/scheduled, breakdown maintenance of continuous and uninterrupted operation of compressor packages shall be in the scope of contractor



and shall be kept in stock. Electricity shall be supplied free of cost to the contractor.

C.1. CNG COMPRESSOR OPERATION:

Providing services for Round the Clock (24X7) Operation for each 1200 SCMh CNG Compressor Package including - Compressor, Instrument Air Compressor/ dryer, PLC, Valves, Tubing etc, complete to the satisfaction of BGCL & as per OEM recommendations in order to ensure smooth operation and minimize downtime of compressor packages.

The contractor will deploy well qualified, trained and experienced operators in 8. hourly shift pattern (2 Shift & Reliever Shift) for 365 days of operation per year including closed holidays and Sundays. Operators with minimum qualification of X + ITI. Diploma Engineers will be preferred. 3rd shift will be done through auto mode . However the maintenance if, any at each shift to be ensured by contractor as mentioned in SCC .

Logging of equipment running, equipment availability, break down report, shut down report, maintenance report, various reports including logging of vital parameters of CNG compressor such as Oil level, Coolant level, Opening Closing of all Mass Flow Meters, daily inspection reports, gas consumption report, gas dispatch report etc as may be prescribed by BGCL need to be submitted from time-to-time.

The operation of UPS and daily recording of vital parameters in contractor scope.

Observance of Safety Rules and Regulations prevalent in the Gas & Electrical based installations, specifically Compressed Natural Gas, Fire Drills, DCP operation, firefighting, and spreading awareness. Ensure Safety of Man and Machine at all the times.

Housekeeping of the compressor area.

Close supervision of all operational activities and control.

C.2. COMPREHENSIVE MAINTENANCE

The contractor shall to keep all the spares, consumable, lubricant, coolant, maintenance team required for carrying out periodic, Breakdown, Emergency Maintenance etc of the CNG compressor package including Electrical panel, Air Compressor, Leak detection system, CO2 Flooding system, CNG Compressor, PLC of compressor Package, CNG Piping, around the compressor area and other auxiliaries with the compressor package, Air Compressor etc. so as to minimize the down time of any equipment.

Non availability of compressor package due to unavailability of manpower's/ spares shall be liable for penalty as per SCC clause no 20.

The contractor shall provide all necessary tools, tackles, chain-pulley block, hoist, equipment, trolley,



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fork-lift, pick-up etc, which may be necessary during to carry out maintenance, calibration etc. covered under the contractor scope.

Any export service required from principal company Or OEM (of any equipment in the package) shall be arranged by the contractor or his agent at his own risk & cost. All arrangement like phone, fax, computer, Internet etc required for correspondence with above personnel shall be arranged by contractor.

Submission of Monthly Preventive, Scheduled and Emergency/ Breakdown maintenance reports to EIC along with the supporting documents.

The maintenance team will assist any unplanned/emergency maintenance of equipment installed at CNG Station.

The contractor shall use only OEM certified spares during the maintenance. In case the schedule maintenance of the OEM manual recommends checking replacing parts like, valve springs, valve plate, piston, piston rods, piston rings, O-rings, Filters, valve assembly Suction, discharge, replaceable part of packing, valve internals, bearing, belts etc after certain time interval same shall be replaced or used. Any untoward consequences for non- replacement of such part shall be responsible of the contractor.

During the preventive maintenance/ handing over of machine, any wear limits of all component of compressor package will be determined/analyzed on pro rata basis from the last date of spares replacement and considering total running hours of machine, Joint decision for replacement of parts will be taken with due consideration to total running hours of package.

Painting of the equipment is to be done by the contractor for safety of equipment, as per direction of EIC.

A detailed report of all spares & consumable used have to be maintained by the contractor, having details of part No., Qty used expected running hours before replacement etc. The same has to be submitted monthly to Bengal Gas Company Ltd.

All routine and periodic check/ Inspection required to be done as per OEM recommendation shall be done by the contractor. Instrument required for above inspection like Venire Caliper, Micrometer, Screw Gauge, Fill Gauge, Bore Gauge, Vibration Meter etc shall be in the scope of contractor and these instruments shall be calibrated every year.

All spares parts to be replaced in the compressor package should be brand new and unused. Inspection of each spares parts to be utilized in the CNG compressor will be carried out by BGCL representative.

All leak chock/ Inspection of the associated SS tubing, fittings, Valves and hose of the compressor package (i.e. Inlet & Outlet of compressor) shall be done by contractor.



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The contractor shall ensure that compressor running parameters are recorded in daily log book including all vital parameters and Maintenance record of Preventive, Schedule, Breakdown, Emergency and spares used. The format of log book to be finalized in consultation with EIC in line with OEM specification/ recommendation. All stationary including printed material shall be in the scope of contractor. Supply of Logbook is in the scope of OEM.

The contractor shall submit a copy of monthly/ quarterly and yearly performance report to the EIC in the both soft and hard form including condition monitoring and safety Interlock checks. All the stationary including the printed material shall be in scope of contractor

The entire maintenance/ inspection job carried out by contractor shall be recorded and report of the same shall be jointly signed by owner representative.

The EIC will be final authority to take the decision with regards to maintenance replacement of parts or any disagreement between the contractor and owner during the execution of contract.

The contractor shall either maintain master equipment duly calibrated from NABL accredited laboratories within test due life or engage any NABL accredited laboratories for calibration of Instruments (all type) & Contractor shall submit calibration certificates issued by NABL accredited agency.

The contractor shall carry out calibration of safety relief valve, Gas Detector, Flame detector every six Months or earlier as per requirement or instruction of EIC. Also yearly calibration of all instruments including Pressure Gauges, Temperature gauges, Transmitters, Switches etc. shall be in the scope of contractor.

Calibration shall be done from Govt approved laboratories and shall be carried out 15 days prior to the calibration due date. In case POP-UP of any valve; the same shall be calibrated immediately.

The contractor shall carry out Ultrasonic test (UT) of Pressure vessel on yearly basis.

The calibration of Compressor All Mass Flow meter shall be done once in a year through Mass Flow meter OEM or BGCL approved agency. (Spare Mass Flow meter provided by contractor)

The contractor shall carry out Functional test of PRVs on yearly basis.

The periodic maintenance required to be done as per OEM recommendation shall be taken up promptly. The contractor shall plan such maintenance during non-peak hours and in consultation with EIC. Any maintenance needs to be taken up shall be well planned in advance with due approval of the EIC. The scope shall be including preparation of maintenance schedule for carrying out the maintenance during the contract period.

Anything required over and above what is specified for safe & satisfactory maintenance of the equipment package shall be included by the contractor in his scope.



In general, the contractor has to carry out full comprehensive Operation & Maintenance of the CNG Compressor Package at the CNG station, thereby making available the equipment in always running condition, through the supply of adequate skilled Supervisor/technician, OEM Spares, OEM recommended consumable and any other specialized service.

C.3. SCHEDULED MAINTENANCE

All activities required to be carried out as per instruction of EIC.

All kind of machinery, tools, tackles and consumable items required to complete the above job are in the scope of the contractor.

Hourly Maintenance to be planned/carried out as per OEM recommendation with replacement of brand new spares.

De-coupling of starter motor / electrical lockout of starter motor to be done before proceeding.

Complete depressurizing of the equipment along with pipe fittings before proceeding with maintenance.

Scheduled maintenance shall be categorized as monthly, Hourly basis. The tasks may be rescheduled based on equipment health as per instruction from EIC and as per OEM recommendation/ schedule.

Monitoring vibration conditions will be carried out in scheduled maintenance.

In addition to the jobs in, the following jobs need to be carried out at each scheduled maintenance.

Inspection/cleaning/ repair/ replacement of valves, fittings and other piping's.

Checking of diaphragms, O-rings, gaskets. Replacements if required.

Adjustment of PRVs.

Checking the alignment of compressor coupling and performing alignment is required.

Checking for freeness/ abnormal sounds/vibration monitoring of all rotating/ reciprocating parts.

Checking for any wear and tear of Internal parts like crank shaft, camshaft, piston

Maintenance of lubricator assembly, if required.

Inspection of valves. In case of any damaged parts, necessary steps to be taken as per instruction of EIC.

Boxing up of dismantled parts & connection of all associate piping with proper gasket & fasteners.



Maintenance /inspection of all other accessories like instrumentation gauges, pipe fittings, joints, PLC, electrical connections.

Cleaning/ house-keeping of the equipment including the foundation area.

The job shall be deemed completed only after successful trial including leak testing.

C.4. ROUTINE MAINTENANCE

Routine maintenance shall include the following in addition to OEM recommended checks

Checking for any abnormal sounds, vibration, loose bolts including foundation bolts and attending the problem if required.

Checking Engine oil level and quality and oil top up if required. Both Compressor Crankcase oil and lubricator oil to be maintained.

Draining of Condensate from blow down vessel daily.

Cleaning of filters/strainers, and replacing them if required.

Checking for any leaks in pipe fittings and attending the leaks with proper, gaskets, O-rings, PTFE as applicable.

Maintaining of Daily LOG Sheets

2. BENGAL GAS COMPANY LIMITED OBLIGATIONS

Provide working place (having basic utilities including power supply etc) for maintenance team

Provide uninterrupted controlled power supply for PLC and other electrical equipment.

Dry and clean gas for compressor

Public utilities like washrooms, rest room with electrical fittings like tube and fan.

3. MAINTAINING SAFETY AT CNG STATION

The contractor shall Providing 2 sets of uniform, Safety shoes - 01 on yearly basis & other personal protective equipment and identity cards to all personnel deployed at the station for the work. Uniform/I - cards for Technician/Operator shall be Sky Blue shirt & Navy Blue Pant with embossing of Bengal Gas Company Ltd Logo, Only Cotton. T-Shirt will not be acceptable.

BENGAL GAS COMPANY LIMITED (BGCL)

**CITY GAS DISTRIBUTION PROJECT
TECHNICAL SPECIFICATION FOR THE PROJECT**

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1.0 GENERAL

Project : CITY GAS DISTRIBUTION PROJECT AT KOLKATA
Client : BENGAL GAS COMPANY LTD.
Items : CNG EMD 1200 SCMH ONLINE COMPRESSORS- 11 & GED 1200 SCMH ONLINE COMPRESSOR -1 – PART B
ARC Period : 24 Months
AMC Period : 60 Months

Bengal Gas Company Limited, a joint venture of M/s GAIL (India) Limited and Greater Calcutta Gas Supply Corporation Limited (GCGSCL), a company of GoWB, has been set up to develop City Gas Distribution (CGD) Network in Kolkata for distribution of CNG and PNG to various consumer segments.

Presently, Bengal Gas Company Limited is expanding City Gas Distribution Networks (CGDN) to supply Natural Gas to Domestic, Commercial, Industrial and Automobile consumers in the Kolkata city and parts of adjoining districts of North 24 Parganas, south 24 Paraganas, Howrah, Hooghly and Nadia.

ITEM No.	Description of Items	UOM	QTY
1	ELECTRIC MOTOR DRIVEN 1200 SCMH COMPRESSOR AND ITS ASSOCIATED AUXILIARIES – PART A		
1.1	Design, Engineering, Manufacturing, Supply including packaging and forwarding, insurance, handling, loading and unloading at Client's store /site of Skid mounted Electric Motor driven 1200 SCMH CNG Compressor Package with explosion proof electric & control panel having suction pressure of 19 kg/cm²(g), inlet line pressure range of 16 – 49 kg/cm²(g) (performance range 16 to 22 kg/cm²(g) with discharge pressure 255 kg/cm²(g) with 8 bank Priority panel. The package shall be inclusive of: a) String test of complete compressor package along with gas engine and accessories at packagers' factory. b) Special tools & tackles required for erection and commissioning (list of tools & tackles to be furnished by the bidder) c) Design, Engineering, Manufacturing, Supply including packaging and forwarding, insurance, handling, loading and unloading at Client's store / site of 1.5 KW electric motor driven air compressors with dryer and 500 water litre capacity air receiver complete with all accessories and auxiliaries as required.	Nos.	11
2	GAS ENGINE DRIVEN 1200 SCMH CNG COMPRESSORS AND ITS ASSOCIATED AUXILIARIES (SUPPLY) – PART B		

2.1	d) Design, Engineering, Manufacturing, Supply including packaging and forwarding, insurance, handling, loading and unloading at Client's store /site of Skid mounted gas engine driven 1200 SCMH CNG Compressor Package with explosion proof electric & control panel having suction pressure of 17.5 kg/cm²(g), inlet line pressure range of 16 – 49 kg/cm²(g) (performance range 16 to 19 kg/cm²(g) with discharge pressure 255 kg/cm²(g) with 8 bank Priority panel. The package shall be inclusive of: e) String test of complete compressor package along with gas engine and accessories at packagers' factory. f) Special tools & tackles required for erection and commissioning (list of tools & tackles to be furnished by the bidder) g) Design, Engineering, Manufacturing, Supply including packaging and forwarding, insurance, handling, loading and unloading at Client's store /site of air compressor of capacity 7.5 KW-, discharge pressure approx 16 kg/cm²g, 1000 water litre capacity air receiver for instrumentation air with PRV, air dryer along with all accessories and auxiliaries.	Nos.	1
3.0	INSTALLATION, COMMISSIONING, TESTING ETC.		
3.1	In case, Compressor(s) is delivered to stores due to non-readiness of site, loading, Re-transportation from stores to unloading at site within the same city. (Refer note 4 of MR)	Nos.	12
3.2	Installation, commissioning & Field performance test of Compressor Package including air compressor system at site.	Nos.	12
4.0	LUMP SUM ANNUAL OPERATION, REPAIR & COMPREHENSIVE MAINTENANCE ETC.		
4.1	Lump sum Annual operation, repair & comprehensive maintenance charges per Compressor Package including air compressor for 1st year warrantee period inclusive of all manpower, spare parts, lubricants etc.	Nos.	12
4.2	Lump sum annual operation, repair & comprehensive maintenance charges per Compressor Package including air compressor for second year i.e., after first year of warranty period inclusive of all manpower, spare parts, lubricants etc.	Nos.	12
4.3	Lump sum annual operation, repair & comprehensive maintenance charges per Compressor Package including air compressor for third year i.e., after second year of AMC inclusive of all manpower, spare parts, lubricants etc.	Nos.	12
4.4	Lump sum annual operation, repair & comprehensive maintenance charges per Compressor Package including air compressor for fourth year i.e., after third year of AMC inclusive of all manpower, spare parts, lubricants etc.	Nos.	12
4.5	Lump sum annual operation, repair & comprehensive maintenance charges per Compressor Package including air compressor for fifth year i.e., after forth year of AMC inclusive of all manpower, spare parts, lubricants etc.	Nos.	12

Notes:

1. Inspection shall be carried out by Owner/Consultant. Cost of inspection shall be borne by the vendor.
2. Inlet piping shall be of class 300# (filter, inlet valve and 3-way valve).
3. Delivery location of the Compressors shall be intimated to the supplier before dispatch.
4. Quantity indicated against Sl. No. 3.1 is for evaluation purpose, actual quantity may vary.

**TECHNICAL SPECIFICATION
FOR
ELECTRIC MOTOR DRIVEN
1200 SCMH CNG
COMPRESSOR – PART A**

2.0

SCOPE

- 2.1 The intent of this tender is to outline minimum requirement for design, engineering, manufacturing, assembly, inspection, testing, packaging, supply, erection & commissioning including performance acceptance test at site along with operation and comprehensive AMC during 1 (one) year warranty period and subsequent 4 (Four) year period including supply of all spares and consumable items for “ ELECTRIC MOTOR DRIVEN RECIPROCATING CNG ON-LINE COMPRESSOR PACKAGES ” as required for dispensing CNG to vehicles at various locations in allotted GA as per this technical specification and applicable codes as referred. Various parts of this specification shall be read in conjunction with each other and in case where the different parts of this specification differ, the more stringent requirement shall govern.
- 2.2 Online compressors have to be installed at the CNG outlets of owner and other oil marketing company (OMC) retail outlets located in allotted GA as per the instructions of engineer in charge to increase the pressure of natural gas for dispensing in vehicles.
- 2.3 Bidder shall be responsible for supply, erection, commissioning and field trial run. Noise level test and performance test of all packages at sites. The field trial run of the compressor will be for minimum of 4 hours (can be in multiple runs) and the package should be kept under observation for 72 hours for stable operation and no major breakdown in which satisfactory performance of the package together with all accessories auxiliaries and controls shall be established for satisfactory performance for specified operating conditions.
- 2.4 It will be the endeavor of all the parties to get the Performance Acceptance Test (PAT) at site conducted within a period of 20 days from the start of commercial operation of a particular package. The bidder has to keep the compressors operational round the clock in three shifts or as defined by EIC and all the expenditures including spares and consumables, oil etc. To make the compressors operational shall have to be borne by the bidder. The power required to run the compressors will be provided by OWNER/ OMC. The contractor shall maintain the compressors in sound mechanical condition at all times. The contractor shall rectify the defects notified by owner immediately and should submit all the history log sheets and spares availability status along with the report in the format mutually agreed between owner and the bidder.
- 2.5 The bidder shall depute adequate numbers of qualified, experienced and competent persons and supervisors for smooth maintenance of the compressors. The maintenance staffs have to be available round the clock daily throughout the year.
- 2.6 Periodic inspections of safety valves, transmitters, pressure vessel gauge and any other equipment as per statutory norms of state factory rules. SMPV and gas cylinder rules shall have to be carried out by the

bidder at his own cost during the period of maintenance by the bidder. The inspections have to be carried out by competent persons as per advice of engineer-in-charge and certificates have to be submitted to owner.

- 2.7 The bidder has to maintain an office at site with telephone and fax facility and keep his services personnel ready to attend problems any time of the day. Name and mobile phone number of in-charge of the services team has to be provided to engineer-in-charge / his representatives.
- 2.8 The bidder shall allow weekly rest and restrict daily working hours of his workmen as per relevant act/law/and rule made there under. However no work shall be left incomplete/ in dismantled condition on any holiday/weekly rest. Technician provided shall have minimum qualification of ITI. The bidder in person or his authorized representative shall be available on regular basis to interact with engineer –in-charge.
- 2.9 The work force deployed by the bidder for the maintenance services at the CNG installation in at site shall be of sound relevant technical professional expertise which is otherwise also essential from the safety point of view of the personnel of the contractor as well as for the installation.
- 2.10 All personnel of the bidder entering on work premises shall be properly and neatly dressed while working on premises of the company including work sites.
- 2.11 Bidder shall maintain proper record of his working employee's attendance and payment made to them.
- 2.12 The bidder's representative/supervisor shall report on regular basis to the shift-in-charge at owner control rooms for day to day working.
- 2.13 All the safety rules and regulations prevailing and applicable from time to time at the installations as directed by owner will be strictly adhered to by the contractor and his workforce.
- 2.14 The bidder shall plan schedule maintenance in consultation and prior permission of engineer in-charge or his representatives.
- 2.15 The bidder shall be responsible for the discipline and good behavior of all his personnel deployed to carry out the services. In case of any complaint received against any of his employee, he shall arrange to replace such persons within 24 hrs of notice issued by the engineer-in-charge. The decision of the engineer-in-charge in this matter shall be final and binding on the contractor.
- 2.16 The bidder shall arrange to provide identity cards to his workforce at his own cost. The contractor's personnel shall be required to carry their respective identity cards while on duty and produce on demand. Without valid identity cards, they will not be allowed to enter into the CNG station.
- 2.17 Engineer-in-charge shall have authority to issue instructions to the contractor from time to time during the contract period necessary for the purpose of proper and safe execution of the contract and the contractor shall carry out and bound by the same. In case of non-fulfillment of any obligations under the contract and /or non-execution of any instruction issued by engineer-in-charge as per terms and conditions of the contract,

engineer-in-charge shall have power to withhold payment for an amount equivalent to the amount to be spent for execution the obligations/instructions issued by him. The decision of engineer-in-charge in this regard will be final and binding to the contractor.

- 2.18 Receipt at site, storage in warehouse as per manufacturer's recommendation and safety and security from theft and breakage/damage during transportation, handling at site.
- 2.19 Submission of drawings & documents.
- 2.20 Erection, O&M and all others relevant manuals for compressor & its accessories, priority panel, electrical motor & all instrumentation.
- 2.21 All Type of Cable (Main motor power supply, UPS, Panel, Instrument cable) with requires gland Supply, Laying, Testing & Termination of PCV Insulated PVC Sheathed etc. covered under the contractor scope.
- 2.22 Any foundation pocket required for grouting of compressor package to be made/prepared by OEM/vendor. BGCL will only provide the RCC Foundation.
- 2.23 **GENERAL**

The contractor must follow the OPERATION & MAINTENANCE REQUIREMENT as stated below but not limited to and ensure to provide trouble free services as defined in the bid documents.

A. ACCOMMODATION/ TRANSPORTATION/ MEDICAL

The contractor shall make his own arrangement for the accommodation of his personnel at respective locations and subsequent transportation arrangement for them from their place of residence to work place or any other place as required and owner shall have no obligation in this respect.

B. DISCIPLINE

The contractor shall be responsible for the discipline and good behavior of all his personnel deployed in the services contracted out and should any complaint be received against any of his employee, he shall arrange to replace such persons within 24 hours of notice issued by the Engineer-in-Charge. The decision of the Engineer –in-Charge in this matter shall be final and binding on the contractor.

C. GATEPASS / IDENTITY CARD

The contract shall arrange to supply / renew identity card to his workforce at his own cost, if so required by OWNER for security or for any other reasons. Those contractor's personnel shall be required to carry their respective identity cards while on duty and produce on demand.

D. RIGHT TO GET SERVICES CARRIED OUT THROUGH OTHER AGENCIES

Nothing contained herein shall restrict OWNER from accepting similar service from other agencies, at its discretion and at the risk and cost of the contractor, if the contractor fails to provide the said services any time.

The maintenance services shall be provided in terms of shift pattern or the round the clock basis as mentioned in the bid document.

- E. OWNER will notify the start date for operation and Comprehensive Maintenance services.

After the successful completion of test run & commissioning, system taking over certificate shall be issued by the owner.

2.24 OPERATION AND MAINTENANCE OF COMPRESSOR PACKAGES

- i. The contractor shall deploy adequate number of technicians / supervisors / Engineers / helpers as well as tools, spares, consumables and equipment for smooth and proper maintenance of the Compressor supplied in terms of the contract. In case required to meet operational requirements, the contractor shall augment the same as per direction of 'Engineer-in-Charge. Contractor to submit a detailed organogram with key person details before starting maintenance of the compressor package.
- ii. The contractor is required to carry out all services as mentioned in the Scope of Services and Schedule of Rates on all the 365 days including Sunday and all Holiday & around the clock.
- iii. The contractor shall allow weekly rest and daily working hours to his workmen as per the relevant Act/Law/and Rule made there under. However, no work shall be left incomplete/unattended on any holiday/weekly rest. Technician/operators provided shall have minimum qualification of ITI. Contract in person or his authorized representative shall provide the services on daily basis to interact with Engineer-in-charge and deployed workman.
- iv. The work force deployed by the contractor for maintenance service of Compressors, shall be of sound relevant technical professional expertise which is otherwise also essential from the safety point of view of the personnel of the contractor as well as for the installation.
- v. Contractor has to ensure the safety of man and machine all the times. Damages to equipment due to negligence will be recovered as per the decision of Engineer-in-Charge, which will be final.
- vi. Regarding work completion, the decision of the Engineer-in-Charge will be final and binding.
- vii. The contractor shall make his own arrangements to provide all facilities like lodging, boarding and transport etc. to his workmen.
- viii. All personnel of the contractor entering on work premises shall be properly and neatly dressed and shall wear uniform, badges while working on premises of the Owner including work sites.
- ix. Contractor shall maintain proper record of his working employee's attendance and payment made to them.
- x. The contractor's representative/supervisor shall report daily to the Shift-in-Charge for day to day working.
- xi. All the safety rules and regulations prevailing and applicable from time to time at the installations as directed by OWNER will be strictly adhered to by the contractor.
- xii. It will be the responsibility of the contractor to pay as per the minimum

wages of the appropriate government applicable under the Minimum Wage Act 1948.

- xiii. The services shall be provided in terms of shift pattern on the round the clock basis. The contractor is responsible to provide effective and efficient services in all shifts and assure that there is no disruption in the services for want of any resources.
- xiv. The contractor shall establish a central control room to operate 24 hours, seven days a week where complaint regarding non-performance of the Compressors in terms of the contract can be lodged. Further, the contractor shall deploy adequate number of technicians/ supervisors / engineers at various site offices in consultation with Engineer-in-Charge to provide trouble free maintenance of the Compressors.
- xv. All arrangements for communication from control room to the contract person working on job under the services shall be the responsibility of the contractor, viz. cell phone / walky-talky.
- xvi. The successful bidder shall indemnify the Owner from any claim of the contract labour.
- xvii. The successful bidder shall comply to all the rules regarding PF,ESI etc. as stated in the tender document All the jobs mentioned under scope of services shall be carried out as per sound engineering Practices, work procedure documentation, recommendation of the manufacturer and as per the guidelines/direction of engineer-in-charge of authorized representative.
- xviii. Summary of breakdown hours station wise with analysis shall be submitted to CNG control room on a fortnightly basis both in hard and soft form as per OWNER format.
- xix. The contractor has to submit the following documents on monthly basis along with the bill:
- xx. Preventative maintenance compliance report for that month along with the detailed service report.
- xxi. Details of the compressor breakdown, summary of break down hours for that month and the cumulative break down hours along with breakdown response time.
- xxii. Compressor parameter log book for the month.
- xxiii. Certificate to be given by the bidder stating that they have complied with all the labour regulations and are following the minimum wages act.
- xxiv. All consumables, lubricating oil, coolant required for carrying out preventive / any type of maintenance shall be in the scope of supplier during the warranty period. The warranty spares shall be supplied by the vendor during the warranty period as per warranty clause.
- xxv. All tools, tackles and fixtures required for carrying out the above maintenance of the compressor shall be in scope of the bidder. The scope will also include handling equipment's like crane, forklift, chain pulley block, etc required during any maintenances activity.
- xxvi. Any correspondence required to be made with the company or OEM or various offices shall be made by the bidder or bidder's agent. All

arrangements like phone, fax, computer, Internet etc required for above correspondences shall be arranged by the bidder at his own cost.

- xxvii. The periodic maintenance required to be done as per OEM recommendation shall be taken up promptly. The bidder shall provide the detailed preventative maintenance schedule along with estimated down time required for each type of maintenance schedule, list of spares and their quantities required for each type of maintenance schedule per compressor, type and number of man days required for each type of maintenance schedule per compressor.
- xxviii. The bidder shall plan such maintenances during non-peak hours and in consultancy with the Engineer In Charge (EIC) of OWNER. Any maintenance that needs to be taken up shall be well planned in advance with due approval of the EIC.
- xxix. The bidder shall use only OEM's certified spares during maintenances. All spares shall be kept in sealed OEM stamped packages. The packages shall be opened in front of OWNER representative during maintenance. In case, the schedule maintenance of the OEM manual recommends to check and replace parts like valve spring, valve plates, piston rings etc. after certain time interval, same shall replace or used further only on approval from the OWNER's representative. However any untoward consequences for non-replacement of such parts shall be the responsibility of the bidder and spares, repair required to put back the unit into operation will be to bidders account.
- xxx. All routine and periodic checks / inspections required to be done as per OEM recommendation shall be done by the bidder. Instruments required for above inspection like vernier calliper, micrometer screw gauge, fill gauges, bore gauge etc shall be in scope of the bidder and these instruments shall be calibrated every year.
- xxxi. All parts replaced by the bidder during the above contract period shall be properly packed and handed over to OWNER, on replacement.
- xxxii. The contractor shall submit a copy of the daily / weekly / fortnightly / monthly / bimonthly / quarterly and yearly performance report to the EIC in both soft and hard form. All stationery including the printed material such as compressor parameter log book, complaint log book, service report, break down summary report etc. shall be in scope of the bidder.
- xxxiii. All the maintenance / inspection job carried out by the bidder shall be recorded in a service report and the report of the same shall be jointly signed by OWNER representative and submitted immediately after carrying out the maintenance. Service report format shall be approved by OWNER.
- xxxiv. The EIC will be final authority to take decision with regards to maintenance or replacement of parts or any disagreement between the bidder and OWNER, during the execution of the contract.
- xxxv. The bidder shall carryout calibration of gas detectors and flame detectors every six months or earlier as per requirement or instruction of EIC of OWNER. Also yearly calibration of all instruments such as pressure gauges, transmitters, switches, etc shall be in the scope of the bidder. Mass flow meters shall calibrate every 12 months. In addition to the

above all safety relief valves shall also be tested and calibrated every Six Months.

- xxxvi. Calibration shall be done from government-approved laboratories and shall be carried out at least 15 days prior to the calibration due date.
- xxxvii. The bidder shall keep 1 set of safety relief valves in spare for the purpose of calibration.
- xxxviii. The bidder shall carry out retesting of pressure vessels including blow down vessel periodically i.e. every year or earlier as per Gas Cylinder rules 2016 / Static & Mobile Pressure Vessels Rules.
- xxxix. All spares, consumables, oil and lubricants required for carrying out the Operation and Maintenance of the complete compressor packages including periodic breakdown and any other materials required for operation and maintenance of the compressor packages, shall be provided by the bidder.
- xl. All tools, tackles including special tools and tackles and fixtures required for carrying out the above maintenance of the compressor shall be in scope of the bidder. The scope will also include handling equipment's like crane, forklift, chain pulley block, etc required during the any maintenances activity.
- xli. Any correspondence required to be made with the principal company or OEM or various offices shall be made by the bidder or bidder's agent. All arrangements like phone, fax, computer, internet etc required for above correspondences shall be arranged by the bidder at his own cost.
- xl.ii. The periodic maintenance required to be done as per OEM recommendation shall be taken up promptly. The bidder shall plan such maintenances during non-peak hours and in consultancy with the Engineer-In-Charge (EIC) of OWNER. Any maintenance that needs to be taken up shall be well planned in advance with due approval of the EIC. The scope shall include preparation of maintenance schedule for carrying out the maintenance during the contract period.
- xl.iii. In case, the schedule maintenance of the OEM manual recommends to check and replace parts like valve spring, valve plates, piston rings etc. after certain time interval, same shall replaced or used further only on approval from the OWNER's representative.
- xl.iv. All routine and periodic checks / inspections required to be done as per OEM recommendation shall be done by the bidder. Instruments required for above inspection like vernier calliper, micrometer screw gauge, fill gauge, bore gauge etc shall be in scope of the vender.
- xl.v. Bidder to provide Preventive maintenance schedule based on running hours / periodicity of the compressor package.
- xl.vi. All parts replaced by the bidder during the above contract period shall be properly packed and handed over to OWNER, on replacement.
- xl.vii. The contractor shall submit a copy of the daily / weekly / fortnightly / monthly / bimonthly / quarterly and yearly performance report to the EIC in both soft and hard form.

3.0 CODES AND STANDARDS

The following National & International Codes & Standards of Latest editions shall be applicable. OISD 179, NFPA-52: 1995 or equivalent

NFPA – 37: STANDARD FOR THE INSTALLATION AND USE OF STATIONARY COMBUSTION ENGINES AND GAS TURBINES

NFPA – 12: STANDARD ON CO₂ EXTINGUISHING SYSTEM

IS: 325/ IEC or International standards. : THREE PHASE INDUCTION MOTORS - SPECIFICATION

IS: 6382: CODE OF PRACTICE FOR DESIGN AND INSTALLATION OF FIXED CO₂ FIRE EXTINGUISHING SYSTEM

Applicable ANSI, ASTM, NEC, NEMA code.

API – 618: RECIPROCATING COMPRESSORS FOR PETROLEUM, CHEMICAL AND GAS INDUSTRY SERVICES

API – 11P 2nd edition: SPECIFICATION FOR PACKAGED RECIPROCATING COMPRESSORS FOR OIL AND GAS PRODUCTION SERVICES

API – 661: SPECIFICATIONS FOR AIR COOLED EXCHANGERS

ASME Section – VIII Div – 1/2: DESIGN CODES FOR PRESSURE VESSELS.

Gas Cylinder Rules 2016.

Standard Specifications of Bureau of Indian Standards (BIS).
Specifications/Recommendations of IEC.

Indian Electricity Rules.

Indian Explosives Act.

TEMA – C - Water cooled heat exchangers ASME / ANSI – B-31.3 Code for Process Piping

3.1 Precedence

In case of any conflict among the various documents, the following preferential order shall govern:

1. Data sheets/drawings
2. Technical Specification
3. International standards/codes as applicable
4. Indian Standards / codes as applicable

Compliance with these specifications shall not relieve the bidder of the responsibility of furnishing equipment and accessories of proper design,

material and workmanship to meet the specified operating conditions.

No deviations to the technical requirements and to the scope of supply specified in this enquiry document shall be accepted and offers not in compliance to the same shall be rejected. In case a deviation is required due to inherent design of the equipment offered, the bidder shall list all such deviations at one place giving reasons thereon.

Bidder shall necessarily furnish the following along with the bid, without which the offer shall be considered incomplete:

- (1) Proven Track Record Formats, duly filled in along with general reference list shall be submitted for the earlier supplied CNG compressor packages as per the BEC requirements.
- (2) Checklist duly filled in with regards to scope of supply
- (3) Completely filled in Data Sheets of compressor, motor
- (4) Deviations if any to this Technical Specification
- (5) Tentative Lay out/key plan/General Arrangement Drawing indicating size of skids, center distance between skids and space required along with maintenance requirements
- (6) (a) Utilities requirements (b) Electrical Load summary
- (7) Data Sheets of compressor, motor, instrumentation & controls

3.2 Ambient Conditions

Complete compressor package shall be suitable to work under the following climatic conditions:

The climatic conditions to be considered for selection, design and derating of equipment shall be as indicated below:

- i. Amb. temp min/max⁰C : 2 ⁰C / 47.5 ⁰C
- ii. Design wet bulb temp (WBT), ⁰C : 27 ⁰C
- iii. Design relative humidity % : 90
- iv. Altitude above MSL, M : 650
- v. Wind velocities km/hr (max) : 160
- vi. Air Cooler discharge Design ⁰C : 52⁰C DBT, 27⁰C WBT & 90% RH

Typical Gas Composition Range

	Normal Gas Composition	Design Gas Composition
C1	82.43- 99.10	91.01
C2	7.27- 0.90	5.23
C3	3.47- 0.00	0.88
i-C4	0.65-0.00	0.08
n-C4	0.78-0.00	0.09
i-C5	0.17-0.00	0.03
n-C5	0.13-0.00	0.01

C6	0.10-0.00	0.05
C7	0.00-0.00	0.00
N2	0.06-0.00	0.22
CO2	4.93-0.00	2.4
H2O	0.01-0.00	0.00
TOTAL	100.00	100
Average Calorific Value (Kcal/SCM)	8950- 8150	8302.3

NOTE: Compressor guaranteed performance shall be estimated for the design gas composition and performance shall be reported for the two extreme gas compositions above.

4.0 SCOPE OF SUPPLY FOR EACH COMPRESSOR PACKAGE

The scope of work/services to be provided by the bidder shall be inclusive of but not limited to:

- i. Design, Engineering, Manufacture, assembly, testing at manufacturer's works, erection, commissioning, field trial runs, Equipment performance test along with associated electricals, instrumentation etc. as per bid document.
- ii. 3 nos. mass flow meters to measure the Natural Gas consumption at packages inlet, package discharge (both Coriolis type) and package loss / venting (thermal type) with spool piece for online test arrangement. All 3 no. of mass flow meters should be of approved make and should have local display and should be weather proof. The flow meters should be enabled with MODBUS/RS 485 communications.
- iii. Instrumentation and control system as specified on data sheets, P&ID including Local panel, Console/Local gauge boards, PLC.
- iv. Common structural steel skid for the compressor- Motor combination and for all auxiliary systems
- v. Air-cooled heat exchanger for inter stage and discharge gas.
- vi. 8 line for 1200 SCMH (3 bank) Priority Panel at Package Discharge.
- vii. All interconnecting oil, gas, water, air piping within the compressor package.
- viii. Impulse and pneumatic piping/Tubing for all valves, fittings as specified & required for mounting the instruments. Block and bleed valves to be provided for Pressure gauges and pressure Transmitters.
- ix. Separate junction boxes for different type of signals like intrinsically safe signals, alarm, shutdowns, thermocouples, RTDs etc. for interfacing to local panel.
- x. NRV at final discharge
- xi. Structural supports within the compressor package for all piping, instruments etc.
- xii. One no. relief valve at each stage discharge, first (1st) stage suction and Blow down Vessel.
- xiii. Y- Type strainers, valves, sight flow indicators, check valves, auto &

manual drain traps etc. as required for various auxiliary systems i.e. frame lube oil, cylinder lubrication system, cooling water systems etc.

- xiv. Coupling/V-belts/pulleys.
- xv. Acoustic enclosure for Compressor package, with two number L.E.L detectors and two UV detectors in one enclosure.
- xvi. Common CO2 extinguishing system consisting of two cylinders, piping, valves and control systems as per details given in this specification.
- xvii. Inlet and outlet manual and automatic isolating valves for maintenance & emergency.
- xviii. Complete Erection, Testing & Commissioning of compressor packages.
- xix. Run test and Performance acceptance test at site
- xx. Supply of all essential spares as specified, erection & commissioning spares.
- xxi. One set of priced spare parts catalogue along with the priced bid (Commercial bid), as built drawings and Operation & Maintenance catalogue with each compressor package.
- xxii. An oil drain pot outside of the package shall be provided to collect all drains from packing, distance pieces, processes etc. The capacity of the drain pot should not be more than 2.5 Liters.
- xxiii. Only air cooled, Lubricated/Non lubricated with suction/discharge volume bottles (dampers) as applicable for each stage (separators) with manual drains and automatic drain system, lube oil system, closed circuit cooling water system (console type)/Air cooled as required.
- xxiv. Priority refueling system outside of the package or as per vendors design.
- xxv. Drive belt, if used shall be anti-static fire retardant type.
- xxvi. Duplex suction filters to be provided at the inlet of package with Differential Pressure gauge after Y- type strainer.
- xxvii. Two stage filtration at discharge so as to limit oil carryover is to be provided.
- xxviii. Three no. Emergency stop button (push type) along with one hooter in office/customer interface room with its required cable.
- xxix. Wires mesh type guard for heat exchanger fan.
- xxx. Secondary lubrication system with check valve protector, HP (High Pressure) Filter (for all lubricating points) & DNFT (Digital No Flow Timer) flow switches with standby pump. Secondary lubrication system with divider block shall be provided.
- xxxi. Erection, O&M and all others relevant manuals for compressor & its accessories, priority panel, electrical motor & all field instruments.
- xxxii. Annual Operation and comprehensive maintenance services for a period of 1(one) year during the warranty period, including supply of all spares and consumable items.
- xxxiii. Annual Operation and comprehensive Maintenance services for a period of 4 (Four) year after the warranty period including supply of all spares and consumable items.

xxxiv. Supply and laying of all required cable (Main cable, UPS cable, PLC cable, Panel cable, ESD cable, Air compressor cable, instrument cable) in bidder scope.

4.1 Exclusions

The following are excluded from the scope of the bidder:

- i. All civil works and foundation design, however the bidder shall furnish all the relevant data for design of any pedestal if required.
- ii. All piping beyond battery limits except from air compressor & air piping for air and piping from CO2 cylinders up to the enclosure.
- iii. Three banks Cascades.
- iv. CNG Dispensers and Interconnected SS tubes & fittings.

5.0 BATTERY LIMITS

4.1 DELETED

4.2 All customer interface connections (i.e. Gas inlet & gas outlet) shall be brought out to the package edge. Gas inlet shall be terminated in nozzles with isolation valves having flange connections and gas outlet (priority panel outlet connection) shall be terminated through high-pressure 3/4" full bore ball valves with 3/4" end connectors.

4.3 As and where specified on the data sheets all vents (i.e. Relief valve, distance piece, packing and starting air) shall be man folded and terminated at skid edge outside the enclosure and vented to safe height (3 M from ground) at package roof. Silencer has to be provided in the starting air vent line.

4.4 All drains from different process equipment's, distance piece and packing shall be man folded and terminated as single point for customer interface duly flanged with isolation valve. Drains should be through a common header and discharge to be allowed in a pit to avoid spillage around compressor package.

6.0 UTILITIES

- i. Any auxiliary motor above 10 hp shall be provided with soft starter (three phase controlled) type starter. Single phase motor will be not acceptable above 1 hp rating.
- ii. Bidder shall make his own provision for Instrument air if required with an electric motor driven air compressor with a suitably sized receiver & Refrigerant type air drier system. Air Compressor motor should be 415 V squirrel cage motor L&T make DOL / star delta starter having overload protection, single phase preventer.
- iii. Oil Drain should be through a common header and discharge to be allowed in pot outside the package (capacity not more than 2.5 liter's) to avoid spillage around the compressor package.
- iv. All electrical and instrumentation terminals shall be as specified.
- v. Purchaser shall provide 415 V, 3Ph, 50Hz, 4 wire electric power for compressor motor drive at a single point.
- vi. Purchaser shall provide the 230V, 50Hz, 1Ph UPS, for LCP at single

point in the electrical room.

7.0 GENERAL DESCRIPTION

The CNG Compressor is to be installed at CNG station. The gas will be tapped from OWNER pipeline. The gas composition is as detailed in this document.

A. GENERAL DATA

1.1	Compressor type	
1.1.1	lubricated/Non Lubricated	
1.2	Type of cooling	Gas cooling and cylinder cooling should be by air only.
1.3	No of compression stages	03
1.4	Cylinders	Horizontal Balanced Opposed design with lined cylinder/ trunk piston
1.5	Maximum intake temperature	35 0C
1.6	Compressor package BKW at Specified flow including all losses such as mechanical, leakage, transmission & power absorbed by compressor driven and other electric Driven auxiliaries.	To be indicated in KW Detailed break up to be given as per Technical Annexure –I
1.7	Maximum motor power	To be indicated with 10 % margin over BKW
1.8	Drive mode	V- belts/Direct coupled. If Belt Driven, idler pulley for tensioning of Belts is required. Direct drive (from prime mover to compressor) is preferred over belt driven. Power Transmission should be through flexible coupling

B. COMPRESSOR PERFORMANCE DATA

2.1	Gas pressure at compressor inlet	Refer below Section 2.5
2.2	Compressor Discharge Pressure	255 Kg/Cm2 g at 52 deg. C (Max)
		Compressor Discharge temperature 52 °C (After cooler) with ambient air temperature of 47.5°C and gas inlet temperature of 35°C (max.).
2.3	Compressor speed	To be indicated by bidder.
2.4	Ambient Conditions	

2.4.1	Ambient temperature	2.0 0C to 47.5 °C.	
2.4.2	Maximum relative humidity	90 %	
2.4.3	Elevation		
2.5	Required guaranteed capacities of electric motor driven compressor packages at rated suction pressure and discharge pressure as mentioned below:		
	Rated Suction pressure at which guaranteed flow is required, and at 35 deg. C (MAX), in Kg/Cm2 g.	Rated Discharge pressure in Kg/Cm2 g and at 52 deg C (MAX.)	Guaranteed capacity at rated suction and discharge pressure in Sm3/hr (SCMH)
	16	255	1200

Hereinafter the rated suction pressure, where guaranteed flow is required, will be referred to as Rated Suction Pressure, which means 16 Kg/cm²g for 1200 SCMH compressors. Suction pressures will be measured at inlet flange of the compressor package. Bidder has to ensure that compressors are designed such that the desired flow is achieved (without any negative tolerance) at Rated Suction Pressure.

Note: -

- a) No advantage shall be given in case bidder offers compressor with flows higher than as detailed above for various types.
- b) Bidders offer shall be based on firm and final compressor model on which basis the offer shall be evaluated and no alternate compressor model or change of model, after submission of bid shall be entertained / considered. This is very important and all bidders shall take full cognizance of this matter before submitting the bid.
- c) Bidder to indicate the capacity and absorbed power of the offered compressors at various suction conditions starting from 14 Kg/Cm2 g to 19 Kg/Cm2 g (Temperature 40 deg C max.) and 255 Kg/Cm2g and 52 deg. C (max) discharge condition.

Performance curves and tables i.e. Flow versus suction pressure and temperature, and power curves i.e. absorbed power versus suction pressure and temperature at specified discharge conditions shall be furnished. In addition to above, flow capacity and absorbed power values for suction conditions from 14 Kg/Cm2 g to 19 Kg/Cm2 g in steps of 0.5 Kg/Cm2 shall also be given in tabular form. The graph shall be plotted at various suction pressures ranging from 14 Kg/Cm2g to 19 Kg/Cm2g and at various suction temperatures ranging from 20o to 40o C. Similarly, the graphs shall be plotted at various discharge pressures ranging from 200 Kg/Cm2g to 255 Kg/Cm2g, however at 52 0 C (max) discharge conditions.

- d) Bidder to note that the compressor package required shall be suitable for operating at a suction pressure from 14 Kg/Cm2g to 19 Kg/Cm2g at 40 deg. C. Reduction of suction pressure by means of pressure regulating valve (PRV) is to be achieved. Gas inlet pressure regulator of 300# class rating with inlet pressure range of 10 kg/cm2 to 45 kg/cm2 with an outlet discharge range of 10 Kg/Cm2 g to 30 Kg/Cm2 g adjustable.

- e) Bidder to note that negative tolerance on the guaranteed capacity will not be acceptable. Also no advantage shall be given for positive tolerance of the capacity.

8.0 SAFETY

- a) All controls shall operate in a fail-safe mode i.e. failure of any control shall not lead to running equipment in unsafe mode.
- b) The hazardous area classification Class-I, Division I, Group D as per NEC or Zone I, Group II A/ II B as per IS/ IEC. Certificate from recognized agency to the effect that equipment supplied and/or installed conform to above area classification. All Devices shall meet the requirement for the specified area classification in which they are installed, including instrumentation leads.
- c) Bidder needs to submit the copy of valid type approval for compressor packages from PESO. The PESO certificate should be valid as on due date of Tender. It will be the responsibility of the successful bidder to keep the PESO approval valid throughout the contract execution period.
- d) All exposed rotating parts shall be provided with adequate guards of non-sparking type.
- e) Driver belt if used shall be of anti-static and fire-resistant type.
- f) Piping shall be arranged in a manner so as to provide clear headroom and accessibility within the package. Adequate clearances shall be provided for all the engineered components.
- g) Each package ENCLOSURE shall have two nos. (2) LEL detectors (IR Type) and two nos. (2) Ultra Violet (UV) fire detectors to cover the enclosure effectively as already spelt in the scope of supply.
- h) All material used in the package shall be flame retardant.
- i) Relief valves shall be provided at suction and discharge and each inter stages of compressor with setting as per cl.7.20.4 of API-11P with R.V. venting as per cl. 7.20.4 of API-11P. All vented to common relief valve header.

8.1 Carbon Dioxide (CO₂) Flooding System

- a) CO₂ flooding system should be installed for the protection of CNG compressor by automatic actuation system. The package should be protected by automatic operated CO₂ flooding system designed as per NFPA-12.
- b) Gas Detection by installation of hydrocarbon gas detector (IR type) with self-check function and transmitter with adjustable alarm levels (0-100% of flammability range) with preset of 10%, 20% and 50%.
- c) Installation of flame detector (UV-IR type) with self-check function and transmitter, alarm & shutdown on detection of flame.

- d) CO2 flooding system will consist of 2 nos. brand new CO2 cylinders of 45 Kg capacity. One cylinder will act as main & other as stand by, which shall have identical arrangement and connected to the system. The cylinders should be placed in a shed raised above ground level to protect from weather and direct sunrays as per Gas Cylinder Rules, 2016. Cylinders shall be fitted with automatic actuated Valves, Solenoid valves.
- e) No extra utility as air, inert Gas shall be made available by OWNER/used by the supplier to operate the system other than the UPS.
- f) Cylinder should be ISI marked as per IS: 7285 and CCOE approved.
- g) The System shall be designed to operate on 24 V DC supply. FRLS (Fire resistant low smoke) cables shall be used for the wiring of the system.
- h) Interlock of CO2 Flooding system with compressor as per following sequence:
 - i) Compressor shall trip on detection of gas at preset level and close the inlet & Outlet valve
 - j) Compressors shall trip on detection of flame at preset level and automatic discharge of CO2 gas shall take place from the main cylinder simultaneously.
 - k) Compressors shall not start if the CO2 Flooding System is faulty or Pressure is low, not working, SWITCHED OFF etc. The compressor shall be able to start only when the CO2 Flooding System is in healthy working condition.
 - l) Maintenance Override Switch shall be provided to keep the system off during maintenance.
 - m) Selector switch shall be provided to put Main/Stand by Cylinder in line at the turn of a switch as per requirement.
 - n) Alarm panel for CO2 Flooding System shall be integral with the main compressor panel. Necessary displays as system ON, OFF, FAULT, RESET, Gas/ Flame indication, Remote actuation of solenoid valve, distinguished hooter etc., shall be provided for CO2 flooding system.
 - o) CO2 Cylinders shall be provided outside the package at a safe place/ Safe Distance, where it is not exposed to fire in case of fire in the compressor. Facility shall be made to operate the system both manually from remote with the help of a switch/ call point and with help of pull down lever on cylinders.
 - p) Suitable online weight (CO2) loss monitoring/ indication device to be provided to ascertain the health of the CO2 flooding system.
 - q) All installation shall be compatible for hazardous area Class 1, Division 1, Group-D for Methane Gas.
 - r) The system designed by the supplier shall be duly approved by Owner/ Owner's representative.
 - s) Technical specifications, Operation and Maintenance Manual, CCOE

Certificate, Approval/ Manufacturing certificates for cylinders and cylinder valves, gas detectors, flame detectors, solenoid valves etc. shall be furnished by the supplier along with system. Software and hardware, calibration procedure shall be provided by the supplier along with the supply sufficient enough to handle the system independently. Necessary tools (1 set) shall be provided with the system.

- t) System shall be offered for testing to OWNER by the supplier after commissioning at site by creating actual Gas leak and Gas fire situations and actual discharge of CO₂ Gas from the Cylinders. This shall form a part of performance test and thereby acceptance of the package. The cylinders have to be refilled by the vendor at no extra cost to OWNER after performance test. If the system fails during testing, subsequent testing and refilling would be at vendor's cost.
- u) Warning and Operating instructions to be displayed at equipment as per the statutory/ safety regulations.
- v) Piping of CO₂ flooding system shall be seamless high pressure pipe of Schedule 40 of ½" 12 mm of appropriate length with a minimum safe distance from CNG Compressor, The fittings like elbows, Tees, Union, sockets should be of same schedule and capacity for installation in a high pressure system as per NFPA-12.
- w) Flameproof online weighing system, complete frame with shed and all accessories should be of good quality, weighing scale should be of reputed make.
- x) Specifications:
 - Valve for CO₂ High Pressure Hose:**
 - i. As per BIS specifications
 - ii. Operating Media: CO₂
 - iii. Body Material: Brass, BIS: 319
 - iv. Ball: SS 316
 - v. Pin: SS 316
 - vi. Seal: Teflon (PTFE - Polytetrafluoroethylene)
 - vii. Working Pr.: 60Bars
 - viii. Test Pressure: 90 Bars for 1 min
 - ix. Weight: 70gm
 - x. Outlet Size: ¾ BSP (British Standard Pipe Parallel) at manifold end --
 - xi. Inlet Size: ½" BSP (British Standard Pipe Parallel) at CO₂ Discharge Hose end
 - xii. Temp. Range: -29° C to 66° C

Hose Adopter:

- i. As per BIS specifications

- ii. Operating Media: CO₂
- iii. Body Material: Mainly Brass
- iv. Test Pressure: 250 Bar
- v. Max. Working Load: 150 Bar
- vi. Temp. Range: -29° C to 66° C

Discharge Nozzle:

- i. As per BIS specifications
- ii. Operating Media: CO₂
- iii. Body Material: Lead Tin Bronze as per BIS: 318:1981
- iv. Design Nozzle Pr.: Not less than 20.6 kgf/cm² at 27° C
- v. Test Pressure: 140 kgf/cm²
- vi. Marking for Code No. (on the basis of equivalent single orifice dia.): As per BIS: 6382:1982
- vii. Temp. Range: -29° C to 66° C

High Pressure Hoses:

- i. As per BIS 7285:1974
- ii. Operating Media: CO₂
- iii. Hose Type: Double wire braided (perforated) rubber covered
- iv. Min. Bursting Pr.: 420 kgf/ cm² at 54° C
- v. Length: 40 cm
- vi. Cross-section: ½"
- vii. End Connection: ½" BSP (F) xW21.614 TPI
- viii. End Fittings: Brass
- ix. Temp. Range: -29° C to 66° C

8.2 Following warning and caution signage shall be marked on the housing/package:

“No Smoking”

Caution notice “This Machine may automatically start at any time”.

“Flammable Gas”

9.0 BASIC DESIGN OF COMPRESSOR

- 9.1 Following specification is intended to give the bidder the technical and operating conditions the compressor must fulfill.
- 9.2 The bidder shall meet all applicable statutory codes, national law and local regulation for safety and environment protection.
- 9.3 The design shall conform to API 618 / API 11P, 2nd edition / other relevant reputed international standards (bidders to indicate).
- 9.4 Cylinders of compressor should be horizontal balanced/ trunk piston design. Vertical blocks are not acceptable. Compressor shall utilize preferably separate suction and discharge valves. Valve should be of preferably plate or spring type (non-metallic type) developed specifically

for Natural gas.

- 9.5 Compressor cylinder shall be provided preferably with removable liners.
- 9.6 Latest technology shall be applied to the piston ring to ensure reliability and oil control with polymer rings fitted to the final stage. The bidder to indicate the life of piston rings of all stages in terms of running hours.
- 9.7 Each pressurized component of the compressor package shall be subjected to hydraulic proving test and the final assembly shall be performance tested and certified.
- 9.8 The inter stage and final stage cooler tube material shall be carbon steel. Bidder to submit cooler sizing calculation for review.
- 9.9 All gas piping shall be designed, fabricated and tested in accordance with ANSI B 31.3.
- 9.10 The relief valve sizing shall be in accordance to IBR, ASME code for boiler & pressure vessel and API RP- 520. The relief valve and associated piping shall be sized for full block discharge.
- 9.11 Compressor maximum vibrations of cylinders shall not exceed 10 mm/sec. unfiltered peak velocity. Maximum vibration level installed compressor frame shall not exceed an unfiltered peak velocity of 5 mm/sec or as per IEC code penalty unfiltered peak to peak vibration whichever is less. The bidder shall provide for all structural support within the package so that these levels can be achieved.
- 9.12 In case of lubricated cylinder & packing design, single plunger force feed mechanical lubricator shall provide lubrication to compressor cylinders. Lubricators with double ball check valve shall be provided at each lubricator point. Digital no flow timer shall be provided to stop the compressor in case of loss of cylinder lubrication.
- 9.13 The bidder along with the offer shall furnish the recommended lubricating oil type, grades & specification along with their quantity and frequency of change. The recommended oil shall be compatible with gaskets, O-ring, seals, packing, lubricator parts and other parts coming into contact.
- 9.14 Gauge panel with physical gauges for temperature and pressure shall be provided and should be visible from outside of the package. LCD display as an extension of PLC display is not acceptable.
- 9.15 Proper oil draining system for the package is required as applicable. Packager should provide proper pocket system in package structure for draining coolant/ oil from inside the package. Package base frame block must be interconnected & slope must be provided.
- 9.16 Level trips of oil & coolant must be provided with wire open alarm.
- 9.17 All package flow meters should have isolation valve in upstream and NRV/Valve at downstream of flow meter. Flow meters which are on piping should be connected with flexible hoses and should have proper clamping support to avoid vibration so that correct readings are observed.
- 9.18 All cables entries should be from bottom in the FLP boxes (local control panel). There should be no cabling from the bottom of the package. All the cables should be routed from the side or top for easy trouble

shooting.

- 9.19 All instruments and their cables should be at appropriate distances from the exhaust line/hot parts as per applicable codes & standards
- 9.20 Status of all field instruments viz. switches should be displayed on PLC.
- 9.21 Direction of flow should be marked on the pipe line and nomenclature of all vessels (e.g. 1st stage discharge dampener etc.) should be written on them. Cross head inspection windows should be transparent for easy of inspection during running. Set values should be prominently marked on the gauges.
- 9.22 Part / Equipment / Accessories to be included
- a) Gas tight crankcase.
 - b) Packing case & pressure packing.
 - c) Drive motor with pulley/flywheel
 - d) Inter-stage coolers for all stages.
 - e) Final cooler.
 - f) Oil pump, oil filter
 - g) Oil cooler.
 - h) Crankcase breather piped back to suction.
 - i) Oil/moisture separators appropriate for selected cylinder configuration.
 - j) Automatic condensate drains system for all separators to remove oil / moisture periodically and ease starting.
 - k) Separator drain valves piped to collection drain block suitable for connection to gas recovery system.
 - l) Safety relief valve on each stage of compression.
 - m) Safety relief valve discharges connected to common manifold suitable to allow dispersion of gas via a vent stack and flame arrestor / trap.
 - n) PRV (Pressure Relief Valve) at the inlet of the system.
 - o) BDV (Blow down Vessel) at the inlet of the system.
 - p) Interconnecting piping between cylinders, coolers and separators.
 - q) Pulsation dampeners.
 - r) Interconnecting water piping between radiator and compressor.
 - s) Interconnecting instrumentation piping.
 - t) Suction & Discharge Mass flow meter
 - u) Thermal Mass flow meter for vent loss
 - v) Priority panel with SS tubing
- 9.23 Offered package shall be complete with compressor, electric motor, piping, cooling system, suction and discharge filters, priority fill system, control panel safety and control devices and other accessories required for automatic and safe operation of the system. The supply shall include all interconnecting piping/tubing/cables. Cooling system shall be of closed circuit type. Only air cooled compressor block is acceptable.

9.24 The compressor package control system shall be designed for unattended safe operation in automatic mode and shall unload, start, load, stop safely. The compressor shall start in auto in case high bank storage pressure falls below 200 bar and stop once the pressure in all three banks of storage cascade and mobile cascade reaches 250 bar.

9.25 8 line (3 bank - Cascade) priority fill system, for 1200 to be provided. The priority fill system shall ensure filling as per following sequence:

➤ **FOR 1200 SCMH (MOTHER STATION): 8 Line**

A : When Compressor is running

- i. Priority no. 1: Car dispenser Low bank
- ii. Priority no. 2: Car dispenser Medium bank
- iii. Priority no.3: Car dispenser High bank
- iv. Priority no.4: Bus dispenser (Single bank filling)
- v. Priority no.5: High bank of storage Cascade
- vi. Priority no.6: Medium bank of Storage Cascade
- vii. Priority no.7: Low bank of storage cascade
- viii. Priority no.8: Mobile cascade mounted on Light commercial Vehicle (Single bank filling)

B : When Compressor is not running

When the compressor is not running, the valves of priority panel shall take the position so that gas available in the stationary car cascade and bus cascade can be dispensed. The priority of dispensing from car cascade shall be as follows

- i. Priority no.1: Low bank of storage cascade
- ii. Priority no.2: Medium bank of Storage Cascade
- iii. Priority no.3: High bank of storage Cascade

9.26 Priority system should be designed so that the gas flow from stationary cascade to dispenser is possible even with the Compressor shutdown & de-energized

Compressor shall be designed to ensure flow capacity as follows:

S r. No.	Suction Pressure	Flow Capacity
1.	Minimum flow capacity as on-line compressor at suction pressure of 16 bar at 35 Degree C.	1200 sm ³ /hr

Maximum BkW = As per bidders design

Motor Rating = To be indicated by the Bidder

Maximum power requirement including the accessories to be indicated by the bidder and shall be minimum for the requested performance.

Noise level shall not exceed 75 ± 3 dBA at 1m from the compressor package enclosure at any point.

- 9.27 Framework shall be mounted on a suitable skid type base, external-lifting lugs shall be provided at each corner. For 1200 scmh, bidder should quote their most optimized footprint area package. PLC can be placed separately (outside of the canopy) for optimization of the foot print area. Maximum footprint of compressor Package shall be as under,
- a) For 1200 SCMH, the foot print of the package shall be limited to 10m².
- 9.28 The compressor package control system shall be so designed that the first item to go into alarm condition shall "Lock out" to indicate the cause of the trip though the cause of the trip may have disappeared. The lock out condition shall be manually reset.
- 9.29 DELETED
- 9.30 The compressor shall be vented into BDV before restarting in order to avoid overload to the main drive. In any case venting of gas to atmosphere is not allowed. There is need to have a blow down vessel so that gas is vented to vessel. The size of the BDV should be the sufficient to allow main drive to start. BDV volume to be designed in such a way that gas accumulated in the process should not be vented out in any case of stopping/ emergency push of package. Calculation for BDV volume shall be considering 20% higher than calculated volume and it should be calculated on higher range (19 bar) of the operating pressure (14 bar to 19 bar). Bidder shall submit calculation for same at the time of designing/drawing approval to client. BDV should be preferably placed on top of package and if placed inside package, it should be in vertical position.
- 9.31 Prime mover (Electric Motor)
- The motor shall be flame proof/ explosion proof and confirm to IS: 2148 suitable for zone 1 group II area as per IS/IEC. The Motor shall be of standard frame size as per IS/IEC and rated for continuous duty with high efficiency and shall be designed for VFD/ Soft Starter starting. The Motor shall be provided with class 'F' insulation, however, temperature rise shall be limited to the temperature specified for class 'B' insulation as per IS and shall be suitable for voltage variation of 415V+ 10%. The bidder shall indicate the guaranteed total power requirement in KW. The motor rating shall be 110% of the greatest BkW required by the compressor.
- 9.32 Motor Specification (To be provided separately for 1200 SCMH)
- i. Electric Motor**
- a) Type of drive Totally Enclose Fan Cooled (TEFC) high efficiency as per IEEMA standard-19-2000
- b) Protection Flame proof & weather proof enclosure
- c) Insulation Class F however winding temperature limited to class B
- d) Mounting Horizontal Foot Mounting
- e) Specification standard By Bidder
- f) Supply Voltage(assumed) 415+ 10% volt, 3 phases, 50+ 5%Hz

- g) Synchronous speed By bidder
- h) Motor rating By Bidder
- i) Motor Efficiency By Bidder
- j) Power factor By Bidder
- k) Speed of motor By Bidder
- l) Nos. of hot starts of motor minimum 4 per hours
- m) Coupling Type By Bidder
- n) Torque speed curve By Bidder
- o) Starting torque speed, thermal withstand curve load, current speed curve, Efficiency power factor vs load curve by Bidder

ii. Motor Accessories

- a) Compressor grooved flywheel (if any)
- b) Motor grooved drive pulley (if any)
- c) Drive VEE belts (if any)
- d) Flexible coupling for direct drive
- e) Drive guard
- f) Adjustable motor slide rails for belts tensioning to be used (if any)

Note:

- 1) Motor shall be three phase, AC, asynchronous, flameproof, high efficiency (IE# or better, as per IEC60034-30), Ex'd' rated, continuous duty, service factor 1.1, on IEC standard type. Designing shall be done on basis of 50 degrees package ambient temperature. Motor shall be suitable for VFD starter. Service factor shall not play any role in finalizing the rating of motor.
- 2) Main Motor Starter: Variable Frequency Drive (Heavy Duty) with input line and DC choke, along with other safety measures.
- 3) Considering all de-rating factors as applicable, rating of VFD (at 50 degree Celsius) shall match or be greater than the selected main motor rating.
- 4) VFD panel, LCP or any other power/ control panel need to be appropriately forced cooled to maintain the temperature favorable for switch gear employed in panel.
- 5) Appropriate cable (wrt: size, material, and shielding) to be used for VFD drive.
- 6) Routing of VFD and power cable shall be separated from control supply/ instrument cables.
- 7) Some of the items indicate only Indian makes. Successful foreign bidders may take prior approval of any other make also for which complete technical credentials of the proposed vendors shall be required to be submitted for evaluation by Purchaser/ Consultant

iii. Cooling system

- a) Each compressor package shall be complete with its own cooling system. The cooler shall be air-cooled heat exchanger. The gas temperature after after-cooler shall not exceed 52 degree C.
- b) Special attention to be given while designing the gas cooler considering the local conditions. Bidders shall ensure that final delivered gas temperature is less than 520C.
- c) Direction of flow should be marked on the pipe line and nomenclature of all vessels (e.g. 1st stage discharge dampener etc.) should be written on them. Cross head inspection windows if applicable should be transparent for ease of inspection during running. Set values should be prominently marked on the gauges.
- d) Packages design should be such that its vent should not go upward (package vent in vertical direction not required) i.e opening of package vent should be in horizontal directional with duct arrangement.

9.33 Oil Filter

The ingress of oil into CNG adversely effects vehicle emission and storage system. Lubricated cylinder compressors are allowed and vendor shall supply oil separators after cooler at each stage with automatic and manual drain. The maximum permissible oil content in CNG is 5 PPM.

Contractor to supply a proven, maintenance free oil removal system after after-cooler to remove oil from compressed gas. The offered oil mist removal system shall restrict the oil to less than 5PPM in discharge of compressor during the entire life cycle of compressor package operation.

9.34 Gas recovery system

If required, the Contractor shall provide gas recovery system with gas recovery vessel. The gas recovery vessel shall be provided with pressure relief valve and necessary instrumentation to avoid cold flaring of gas. Gas recovery vessel shall be ASME/IBR code designed.

9.35 Piping & Appurtenances

The materials for gas piping shall be seamless carbon steel of ASTM A-106 Grade B. The piping / tubing at the outlet of the compressor and of priority fill system shall be of seamless stainless steel of proper pressure rating and specifications as under:

SS TUBING SPECIFICATIONS:

- a) Seamless SS Tubing
- b) Material of construction Stainless Steel 316L
- c) Tube hardness shall be less than 80 RB
- d) Sizes : Metric system (inch)
- e) Max Working Pressure : 350 barg

SS FITTINGS & VALVES SPECIFICATIONS:

- a) Material of construction Stainless Steel 316
- b) Sizes : Metric/SI

- c) Standard : ASTM/ ASME/ DIM
- d) End connections : Single or Double ferrule Compression type / NPT
- e) Max Working Pressure : 350 bar
- f) PSV Vent Line to be extended above the package to safe height.
- g) Dedicated Air compressor of adequate capacity

9.36 Electrical System

- a) All electrical equipment of compressor package shall be installed in accordance with NFPA 70, NEC for Class 1, Division 1, Group D, and IS 5571 and shall have approval of a recognized certifying authority.
- b) OWNER shall provide 415+/- 10% volts, 3 phase and 50+/- 3% Hz electrical connection at CNG station electrical panel only. Vendor shall distribute electrical power to all equipment and control system by providing cables and suitable switch-gear distribution panel.
- c) The electrical power supply distribution panel, switch gear panel and starter shall meet the requirement for the specified area classification in which they are installed, including instrumentation leads.
- d) Semiconductor fuses to be provided, where applicable.
- e) All illumination fittings should be single phase AC supply based.
- f) All wire/ cable to be used in compressor and panel shall be of copper conductor and FRLS type through proper cable tray conduit etc.
- g) Compressor package should always start on NO-LOAD of compressor for all start method (AUTO or MANUAL mode), selected for operation of compressor, no matter whatever may be the last stopping mode of the compressor viz, programmed or un-programmed. Loading in motor in no manner shall be more than the value as defined by motor manufacturer in motor characteristic curves.
- h) Sufficient space to be provided for Motor JB for cable glanding work.
- i) Multifunction meter to be provided for metering of package total energy and other parameters (viz; KVAH, KWH, Voltage, current, PF, Frequency, MDI (KVA), MD (KWH).
- j) Multifunction meter also required for fan motor electrical parameters monitoring.
- k) Bidder to ensure that spares and service support of all switchgears, VFD, instruments, or meter etc used in package/ panel, shall be available in Indian market.
- l) The power factor (PF) of the whole electrical system should not be below 0.95. Motor feeder shall be provided with energy meter, heavy duty switch, HRC link type with single phase presenter fuses, contactor (AC-3 Duty), bi-metal relay switch fuse unit, voltmeter, push buttons, earth leakage relays, indication lamps for start/stop/trip/ etc.
- m) Ammeters shall be provided for all motors above 3.7. KW rating. Stop push buttons shall be lockable and have stay put except in case of critical devices such as lube oil pumps etc.

9.37 Earthing System

The design & installation of earthing system shall be as per IS 3043 or equivalent international specification. One or more no of earth plates with provision of inter connection to main earth grid shall be provided. All hardware used for earthing system shall be hot dip galvanized or zinc passivated.

All cables shall be terminated at equipment by means of double compression type compression glands and shall be flame proof cable glands if located in hazardous area.

9.38 Phase sequence preventer (Current based) shall be provided

9.39 Vibration

Compressor maximum vibration of cylinders shall not exceed 10 mm/sec unfiltered peak velocity. Maximum vibration level of installed compressor frame shall not exceed an unfiltered peak velocity of 5mm/sec or 200 micron unfiltered peak-to-peak vibration whichever is less. The bidder shall provide for all structural support within the package so that these levels can be achieved.

10.0 INSTRUMENTATION & CONTROLS

10.1 All the instruments and control shall be suitable for area Class I, Group D, Division1

10.2 All package mounted transmitters & temperature elements shall be intrinsic safe as per IEC 79-11 and solenoid valves, switches and related junction boxes shall be flame proof 'd' as per IEC 79-1. Other special equipment / instrument, where intrinsic safety is not feasible or available, shall be flame proof/ explosion proof as per IEC 79-1. All pressure gauges shall have an accuracy of +/- 1% of FSD (full scale division) and 100mm / 63mm dial size. Pressure sensing elements shall be minimum of SS316 and movement of SS304. All pressure gauges on process lines having range more than 40kg / cm²g shall be with two isolation valves or needle valve.

10.3 There shall be provision of two; Coriolis based mass flow meters inside the compressor package one for suction and one for discharge. Flow meters shall be suitably installed and clamped as per OEM guidelines/ recommendations to avoid measurement errors due to external vibration. Relevant calibration certificates to be provided. Flow meters must have integral display to show instantaneous values of mass flow. The totalizer readings from the flow meter should be communicated to PLC and PLC shall record the flow readings. Shift wise, day wise and month wise flow totalizer readings should be available in PLC display.

10.4 The temperature gauge shall be generally mercury in steel field type. Capillary tubing shall be min. SS304 with SS flexible armoring. The gauge shall have an accuracy of +/-1% FSD and 100mm dial size. The range shall be 1.5 times of operating temperature. Skin type temperature gauges shall not be used. In PLC pressure process values should be taken from pressure transmitters and should be independent from pressure gauges installed on local gauge panel. Temperature process values should be taken from temperature transmitters and should be

independent from temperature gauges installed on local gauge panel. The compressor package instrumentation & control is to be configured for manual as well fully automatic control system including starting, shutdown as applicable for unattended operation.

- 10.5 Individual (2/3 core) cabling is required for each field instrument from field JB to avoid multiple JB's and multicore cables in field for easy trouble shooting & replacement.
- 10.6 Each cable shall be neatly tagged & dressed for each instrument with ferrule.
- 10.7 There shall be provision of relay for DO cards between PLC & SOV & barriers/ isolators for DI cards between field & PLC. The barriers and isolators should be either single or double channel in place of multichannel for easier replacement.
- 10.8 All the instrumentation shall be capable or operating for full range of operation.
- 10.9 Separate junction boxes shall be provided for each type of signal i.e. analog, digital, solenoids RTD, thermocouple, and intrinsic safe and for power supply. No cable shall share power & signal.
- 10.10 Suitable bypass for interlocks shall be provided for start-up.
- 10.11 Compressor package shall be provided with the following indicators:
 - i. Pressure indicator at 1st stage suction & discharge and other stage discharge.
 - ii. Oil pressure indicator on each pressure lubrication system
 - iii. Oil levels indicator, field mounted
 - iv. Hour meter
 - v. Non- resettable electromechanical hour meter on local control panel.
 - vi. Compressor jacket water coolant temperature indicator on local gauge panel
 - vii. Hydraulic oil cooler inlet & outlet temperature on local gauge panel (if required)
 - viii. Hydraulic oil pressures each stage on local gauge panel (if required) The Compressor package shall be provided with the following trip devices:
 - a. Low oil level protection devices
 - b. High oil temperature devices
 - c. Low suction pressure protection devices
 - d. High discharge temperature protection device
 - e. Coolant flow low devices
 - ix. Flame detection
 - x. Gas detection
 - xi. Emergency stop devices
 - xii. Fail safe/ wire break alarm for safe operation
 - xiii. Interlocking provision in PLC program for tripping of machine
 - xiv. The compressor package shall be furnished with the following trip logic that shall stop the compressor and suction of compressor shall be isolated:

- a) On high oil temperature
 - b) On low suction gas pressure
 - c) On high discharge pressure
 - d) On high discharge gas temperature
 - e) On coolant flow low
 - f) On fire detection
 - g) On gas detection
 - h) On pressing manual stop button at local control panel
 - i) On pressing emergency stop devices
- 10.12 Compressor package shall be furnished with following tripping circuit (the motor shall stop and suction of compressor shall be isolated)
- On actuation of gas detector alarm.
 - On actuation of flame detection alarm.
 - On pressing of manual stop button at compressor package
 - On pushing of emergency stop button
- 10.13 Each compressor package shall be provided with an audible and visual alarm system for annunciation on compressor abnormalities.
- 10.14 Junction box shall be of explosion proof type with 10-20% extra terminal strip & cable gland shall be of double compression type.
- 10.15 Gas detectors and flame detectors should be mounted within the canopy.
- 10.16 ESD button (3 Nos.) with require cables shall be provided by bidder (Customer Interface room, locally mounted on package and Panel room). A separate hooter for customer interface room shall be provided with annunciation window alarm of individual protection device.
- 10.17 Emergency shutdown devices.
- The emergency shutdown (ESD) system is also in scope of vendor. This shall be in accordance with NZS 5425. A fail safe system shall be designed and incorporated to isolate cascades storage from dispensers, stop compressor isolate the compressor suction storage line and cut off power supply on activation of ESD switch. This ESD switch shall have to be manually reset to restart the compressor package again.
- 10.18 Local Control Panel
- a) There shall be three independent ports available in the PLC with all the parameters available on each individual port.
 - b) Out of three ports, from first port there shall be an arrangement to retrieve the data in external storage device such as memory card/ pen drive. Data may be required in suitable format as per OWNER engineer in charge discretion. This will include critical temperature, pressure, flow, running hour information etc. Depending upon the parameters calculation of gas loss, efficiency, normalized efficiency etc. is also required.
 - c) Second 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. Data should be stored at 2 places simultaneously, in case of failure of one device data can be retrieved from second device. Trends, alarms, events should be logged for at least 3 months on day/ hour/ minutes/ basis.

- d) PLC shall have facility to store the data & event upto to 15 days in case of communication break between PLC & SCADA system. All the stored data shall be downloaded in SCADA system automatically with time stamping after establishment of communication.
- e) Third port shall be available for any third party interface which shall be OPC compliant for networking or SCADA. The recorded data or part of the data may be required to transmit to remote locations over open/ secured network through internet/ Ethernet using local cable/ data card/ sim card (GPRS/LTE). Modem/ router or any other medium to transmit the data should be available. Vendor shall provide protocol details to OWNER and also provide necessary support for third party interface for remote data connectivity.
- f) 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. PLC components/ system shall be tropicalized, MIL standard adopted with complete wiring and necessary terminals. Wiring to be color coded with cross ferruling in position. PLC shall be capable of carrying out on line routines for at least ten separate loops without affecting the scan, cycle & updating time etc. PLC shall be configured as a remote terminal unit of supervisory computer and data acquisition system complete with GPRS and Ethernet connectivity. One card for transferring and accessing data from minimum twenty devices with RS485 port shall be provided. In case of failure of master/ active controller/ CPU, standby controller/ CPU should take over the control in seamless and bump less manner. All values & data should be available through both the controllers immediately, i.e. there should be no data loss.
- g) Successful bidder to include in scope live demonstration of remote monitoring of all PLC logged parameters in one machine at his works. OWNER may ask for the same. However, this may be required to be demonstrated at site.
- h) PLC based logic circuits shall be used for control & interlock of the compressor package with RS485 SCADA Connectivity as per details in Annexure-IX.
- i) Local control panel shall be furnished with annunciation window alarm of individual protection device and a common hooter for audible alarm.
- j) Local panel should have separate push button for start, stop, emergency stop, alarm acknowledge, alarm rest & test button for checking healthiness of annunciation system.

- k) PLC shall be housed inside flameproof IIA/ IIB (Ex'd'). Local operator panel shall also be provided on the flameproof enclosure. The operator panel is provided for parameterization, indication, monitoring, and alarms and first out sequence of the system. PLC system shall have memory modules for storing user programs, symbol lists, program comments and should facilitate debugging/ trouble shooting without the application program. Program shall be as per IEC 61131 and communication shall be in English for each run. Program should have signal/ parameter tags as labels for easy identification/ troubleshooting. Each section of the program whether it is in the form of rung or page or network should have comment to classify the interlock being executed. A soft copy of the program should be sent by email/ portable hard disc/pen drive.
- l) PLC & electronic shall be housed in flameproof control panel & shall be mounted on compressor skid itself. Main cable entry shall be bottom to up. Also control panel shall have 2 nos. spare 2.5 sq mm slots with copper gland arrangement.
- m) Bidder to quote for complete package with all relevant panels required for the compressor to perform as desired. The electric panel shall consist of electric MCC, switchgear, contractors, power supply distribution panel etc. and shall be located in hazardous area. The compressor package with control panel (including PLC and other controls) and other electric/ electronic instruments etc. shall meet hazardous area classification of Class I, Division I, Group D as per NEC or Zone I, Group IIA/ IIB as per IS/ IEC.

10.19 Priority fill system

Contractor shall supply 3-bank of cascade (8 line for 1200 scmh) priority fill system with compressor top-up facility inclusive of regulating valves, check, by pass valves & liquid filled pressure gauges all mounted in a stainless steel panel. All fittings and tubes used in priority system shall be of stainless steel 316 of suitable pressure rating. The priority fill system is to be installed to ensure that vehicle filling takes priority over cascade filling and direct CNG to three storage banks in correct sequence. The compressor shall shut down once all three-cascade storage banks are filled to 250 bar g. Compressor shall start on pressing of manual start push button & automatically when the cascade storage high bank pressure of compressor falls to 200 bar and shutdown automatically when all 3 stages of stationery cascade and mobile cascade are filled to a pressure of 250barg.

10.20 Documents to be provided with package (02 Copies)

- a. Operation and Maintenance Manual (In English) – 02 Copies
- b. Calibration certificates of all instruments & devices
- c. P&ID Diagrams
- d. Interlock Block Diagrams
- e. Bill of Material with Tag No & Technical Specifications
- f. Wiring Diagram of Electrical & Instrument Panel

- g. Electrical Power & Control Diagram
- h. Specifications of Electric Motor & Characteristic Curves
- i. Foundation Drawings
- j. Capacity vs. Suction Pressure curve
- k. Capacity vs. Energy Consumption curve
- l. List of spares for nine years of operation and maintenance. The list of spares should include ordering specification and manufacturer's catalogues and price.
- m. List of special tools & tackles to be provided along with the bid.

11.0 SKID AND ENCLOSURE

- 11.1 Each compressor module shall be housed within a purpose built SS 304 acoustic enclosure or in case of mild steel the surface shall be treated with anti-rust coatings followed by UV resistant epoxy paint for durability and rust protection. The units shall incorporate a rigid framework with a combination of fixed and removable panels. Filling of Class A melamine self-extinguishing polyurethane (PU) foam specifying the maximum burn extent, with UL certification or better shall be used in acoustic enclosure.
- 11.2 The enclosure shall be assembled onto the package base plate at the supplier's works to give a fully transportable unit.
- 11.3 Enclosures shall be designed to include cooling air inlet and outlet louvers together with a forced ventilation system to prevent the possibility of gas build up inside the enclosure. Suitable interlocks shall be built in for clearing entrapped gases (if any) within the enclosures before the startup of the electric motor / compressor. Packages design should be such that its vent should not go upward (package vent in vertical direction not required) i.e. opening of package vent should be in horizontal directional with duct arrangement.
- 11.4 The maximum temperature within the enclosure shall be limited to ambient + 8 Deg C. Adequate ventilation fans shall be provided to meet the above and also to account heat dissipation of the coolers/ all other components.
- 11.5 Enclosures shall be engineered to give a noise level of maximum 75+3 dBA measured at 1 meter as standard, utilizing Melamine filled self-extinguishing, low smoke Polyurethane (PU) foam. Specifying maximum burn extent with UL certification covering aluminum or steel with perforated steel inner face. Materials shall be non-combustible to deter spread of flame requirements.
- 11.6 The enclosure shall be designed for ease of access to the equipment within and has suitable entry doors.
- 11.7 To prevent the discharge of gas into the enclosure, all safety relief valves within to be connected to a manifold. From this connection a single pipe passes through the enclosure roof to a vent stack to allow satisfactory dispersion of gas at a height of minimum 3m above ground level.
- 11.8 A viewing window at operating level to be fitted to allow monitoring of gauges, etc. without entering the enclosure.

- 11.9 External emergency stop push-button shall be fitted to wall of enclosure close to main access door. Total 3 Nos. of Emergency shut off push buttons with hooter. One to be provided local at package mounted area, one in panel room and one in customer interface room (control / sales room). Bidder to assume that the sales / control room and compressor area, each, will be max 50 Mtrs away from the compressor. Bidders to include the cables along with cable trays / flexible PVC ducts for Emergency stop push buttons and have to install the same at the site. Cables shall be PVC insulated with steel armored and of 1.1 KV grade. Any unutilized cables shall be returned to OWNER with no extra cost.
- 11.10 Enclosure shall have gas detection & Fire detection system consisting of 2 nos. Infrared type LEL detectors and 2 nos. flame detectors (UV type) shall be provided. The detectors shall be re- calibrated at site during commissioning. Also the performance of the detectors shall be demonstrated at the time of commissioning.
- 11.11 Adequate fixed flameproof lighting (minimum at 2 locations) shall be provided inside the enclosure.
- 11.12 Bidder shall optimize the compressor package for minimum possible space requirements considering space constraints of sites where the compressors are proposed for installation.
- 11.13 Suitable gradient shall be provided on the enclosure roof for rain drainage and to avoid water pockets. Enclosures shall be designed with proper rain protection in the ducting or any other cut out to protect the inside equipment from rain water.
- 11.14 For handling of all heavy parts for maintenance purpose suitable lifting arrangement shall be provided i.e. beam fitted with chain hoist arrangement. The chain hoist arrangement i.e. chain pulley block shall be removable type, which can be disassembled and shifted onto the other machines. 1no. each shall be provided for tendered quantity of compressors. Eye bolt arrangement shall be provided on heavier components like electric motor, cylinder crankcase, and wherever felt necessary for lifting during maintenance.
- 11.15 The bidder shall also provide 1 nos. monkey ladder for safe climbing on the top of the canopy along with hand railing on the top for ease of maintenance and operation.
- 11.16 Jack arrangement required for alignment of the motor.
- 11.17 All FLP lighting inside enclosure should have LED lamp.
- 11.18 The bidder shall be providing a degree of protection equivalent to IP44 as defined in AS 1939.
- 11.19 All the pressure temperature & level indicators shall be visible from outside of enclosure.
- 11.20 The package shall be protected by automatically operated CO2 flooding system designed as per NFPA-12, which should have minimum following features as stated clause 4.1 of technical specification.

12.0 PAINTING AND PROTECTION

Packing shall be sufficiently robust to withstand rough handling during ocean shipment & inland journey. Sling points shall be clearly indicated on crates.

Painting of Internal process piping should be as per international colour coding standard, e.g- Gas line-Yellow, Water line- green, Airline-Blue, Fire suppressing system – Red etc. The paint shall be chosen, primed and applied to have a service life of ten years the exterior of equipment and enclosure is required to be corrosion free for ten years.

13.0 INSPECTION & TESTING

- a) For all the shop inspection & tests specified to be witnessed by approved TPI and OWNER or OWNER's authorized representative. The bidder has to provide 15 days advance notice prior to said inspection & test. The bidder shall be responsible for all sub bidders of specified inspection & testing requirements. The bidder shall arrange approved TPI on his own cost.
- b) Bidder shall keep following data available for at least 5 years for examination by purchaser.
- c) All necessary certification of materials, such as mill test reports.
- d) Purchaser specification for all items on bills of materials.
- e) Test data to verify that requirement of the specification have been met
- f) Result of quality control test.
- g) Pressure retaining parts including auxiliaries shall be hydrostatically tested with water at following minimum test pressure for a minimum period of 1 hour:
 - Cylinder: 1-1/2 times maximum allowable working pressure.
 - Cylinder cooling jacket & packing case 1-1/2 times coolant pressure but not less than 8 barg effective.

13.1 Mechanical Running Test (MRT)

- a) These tests shall have mechanical operation of compressor, driver and accessories, Instruments, control system and the coolers.
- b) The MRT for the 25% compressors block of the lot shall be carried out with job or shop driver including complete job driving system i.e., job driven V-belt, job pulleys etc., for 2 hours continuously at the premises of compressor block OEM. The compressor need not be pressure loaded for MRT test. During this test following shall be recorded at agreed intervals (as applicable).
 - i. Vibration levels measured on cylinders and frame
 - ii. Bearing temperature
 - iii. Oil cooler inlet and outlet temp
 - iv. Subsequent to satisfactory run the compressor shall be examined as per

standard procedure & following shall be examined as minimum:

- v. Bore & other parts by opening a valve
- vi. Piston & cylinder clearance
- vii. Visual examination of position rod, cylinder guide bore without dismantling.

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.

13.2 Mechanical String Test

Mechanical String Test for 4 hrs is a mandatory requirement to be performed at packager's shop before dispatch in presence of Owner's representatives (or a third party as arranged by Bidder and approved by Owner). This test can be clubbed up with the Mechanical Run Test of compressor as specified above, provided the job driver & lube Oil system is used for the test. At least 25% of the package lot ordered shall be string tested. String test on N2 or air is not acceptable. It shall be on natural gas.

13.3 Erection, Testing & commissioning at Site

The bidder shall be responsible for erection, testing, commissioning & performance test and noise level test of all packages at site. Commissioning of various equipment and systems shall be carried out by the bidder as per the accepted procedures and as per the instruction of the manufactures of the equipment. The units will be considered commissioned only after the successful performance tests are carried out by the bidder. The bidder shall arrange crane and transport package from BGCL MS/Store to site/foundation.

The bidder shall ensure integrity of compressor package and safety of electrical supply system available at back end while testing package, at site.

13.4 Field Trial Run

Bidder shall conduct a field trial run of each compressor package for 72 hrs. (can be in multiple runs) at CNG Station as per QAP in which satisfactory operation of complete package together with all accessories/auxiliaries controls shall be established for specified operating conditions without any major breakdown prior to the start of operation and maintenance period as defined in the contract. During the field trial run the bidder will be allowed a maximum of THREE attempts to complete the above specified test i.e. only for reasons not attributable to the vendor. The Equipment shall be considered commissioned after the successful completion of Field Trial Run. All punch points raised by OWNER should be completed before performing the FTR. The bidder shall record data of field trial run

13.5 Noise Level Test

During the field trial run, noise level test shall be carried out and bidder

shall demonstrate /achieve the granted noise level. All necessary instruments /accessories required for fields trial run and noise level test shall be arranged by the bidder.

13.6 Performance Acceptance Test (PAT)

Before conducting performance acceptance test at site, Bidder is required to clear all punch points (if any) raised by OWNER / OWNER's authorized representative.

Compressor Package Performance test at sites shall be carried out as per ASME PTC9. All necessary instruments/accessories required for this test at site shall be arranged by the bidder and repatriated after successful performance test by the bidder.

All such instrument shall be pre-calibrated. In case any defect/deficiency is noticed under the specified site conditions bidder shall first rectify the same and repeat the performance test. Bidder to quote for performance test per compressor package separately at site inclusive of boarding, lodging office space, local transport for bidder personnel and hiring ;of local contractor, crane etc. bidder shall be liable to pay all local taxes, levies applicable and strictly comply with rules, laws prevailing in India.

Performance test shall be conducted at site for minimum 4 hours continuous duration at guaranteed parameters as quoted by the bidder (PAT procedure shall be in accordance with ASME-PTC-09).

However, if load is not available at site intermittent running for 4 hours shall be permitted with maintaining minimum continuous operation of ½ hour. Bidder to submit PG test procedure for review / approval. Complete package shall be performance tested as a module whereby along with motor & compressor performance bidder shall demonstrate all controls, shutdown, trips/alarms etc.

The test shall be the basis of, acceptance/rejection of the package thereon. Bidder shall submit the detail test procedure for the same, which shall be approved by OWNER. The test for the package shall be witnessed by OWNER/ OWNER's representatives.

14.0 GUARANTEE, LOADING AND PENALTY CRITERIA

The bidder shall furnish the guaranteed value for the following:

- a) Compressor Capacity: Compressor shall guarantee the capacity as mentioned in Guaranteed Parameters.
- b) Compressor BKW: Bidder shall indicate guaranteed BKW including all losses such as mechanical, transmission etc.
- c) Motor Power Output of the Prime Mover (KW)
- d) Total power required for the package including power consumed by accessories.

Compressor Capacity (As applicable for 1200 SCMH)

- a) Bidder shall guarantee 1200 SCM/hr capacity (as the case may be) of compressor with design case gas composition, at suction pressure

of 16 kg/cm²g, suction temperature of 35°C, discharge pressure of 255 kg/cm²g with the negative tolerance for errors in instruments and measurements.

- b) Since the compressor suction pressure varies from 14 kg/cm²g to 19 kg/cm²g the compressor shall be sized / selected for specified capacity of 1200 SCMH at 16 kg/cm²g (with no -ve tolerance) whereas the driver shall be selected on the basis of compressor B kW with either 14 kg/cm²g or 19 kg/cm²g whichever is higher.
- c) For calculation purpose 1kg of CNG = 1.33 SCM
- d) The same shall be used to establish the capacity at test bed during package performance test.

14.1 **LOADING AGAINST ENERGY CONSUMPTION:**

The compressor package shall be designed in such a way that Energy Consumption (KWH/Kg) should be minimum for production of CNG.

Bidder shall indicate actual energy consumption for their compressor package. This quoted figure will be used for evaluation and total quoted price for all compressors towards supply, special tools & tackles, erection and commissioning will be loaded as per following formulas:

For 1200 SCMH Compressor

$$F = (G - L_b) \times H \times I \times N$$

Where,

F = Loading amount in Rs.

G = Bidder's Energy consumption rate quoted in KWH for producing 1200SCM of CNG

G- = Bidder's energy consumption rate over and above L_b

H = Cost of Energy INR 8/Kwh

I = Factor towards lifecycle in hours @ 73000 hours

N = Number of machines

L_b- Lowest quoted energy consumption rate in KWH for producing 1200SCM of CNG

The financial loading on account of energy/power consumption shall not exceed 10 % of package cost (SOR A.1.1 & A.2.1) for bidders.

14.2 **LOADING AGAINST 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 of gas consumption, then 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, erection and commissioning will be loaded as per following formulas:

$$F = (G-0) \times H \times I \times N \times W$$

Where,

F = Loading amount in Rs.

G = Vent/Leakage rate quoted in percentage

(G-0) = Bidder's vent /leakage rate above 0%

H = Cost of Natural Gas per Kg – Rs. 55.00 /- per kg

I = Factor towards lifecycle in hours @ 73000 hours

N = Number of Machines

W = 903 for 1200 SCMH

Note: Loading amount in INR. will be loaded with Price bid prior to RA, however, the loaded value will not be subject to decrement during RA.

14.3 PENALTY TOWARDS EXCESS GAS LOSS:

At the start of O&M period or even at any point of time 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: $F = [G - \{(Q / 903 \text{ (for 1200 SCMH)}) \times D\}] \times H$

Where,

F = Penalty in Rupees to be deducted from O&M bill

G = Monthly Vent/Leakage loss observed during O&M period in KG

Q = Vent / Leakage loss quoted in Percentage

H = Cost of Natural Gas/Kg – Rs. 55/- per Kg

D = Production during the month (Discharge Meter)

considering:

G above shall be taken as (Suction – Discharge) OR Reading from Vent Mass Flow Meter, whichever is higher.

Note: - Accuracy of Mass Flow Meter considers as per OEM Guideline and bidder may submit the same.

14.4 PENALTY TOWARDS EXCESS ENERGY CONSUMPTION:

At the start of O&M period or even at any point of time during the O&M period, cost towards excess power consumption beyond quoted figure shall be deducted from O&M bills.

Following calculations shall be used for deduction towards excess power

consumption.

$$F = (G-Q) \times H$$

Where,

F = Monthly Penalty in Rs.

G = Monthly Actual power consumption (KWH)

Q = Guaranteed consumption rate quoted by supplier for every 903 Kg of CNG

903 (for 1200 SCMH respectively)

X

CNG produced during the month

H = Cost of power Rs. 8/Kwh

14.5 **PENALTY TOWARDS PACKAGE EFFICIENCY LOSS**

This penalty shall be imposed on compressor blocks not capable of delivering rated capacity of 1200 SCMH Following calculations shall be used for penalty towards package efficiency loss:

$$F = 2 \times \{(1200 \times H \times RD \times AD) - M\}$$

Where,

F = Penalty Amount in Rupees

H = Hours clocked in a month

RD = Average Relative density for the month using GC Data

AD = Air Density = 1.22541

M = Discharge mass flow during the month in Kgs

Note:

- 1) Gauge Pressure at Station Inlet shall be used as benchmark for imposition of penalties and not suction pressure being displayed at the PLC.
- 2) Pressure regulator shall not be used to reduce the pressure at the compressor block inlet below 16 Kg/Cm².
- 3) In case pipeline pressure at the station itself is less than 16 Kg/Cm², then the penalty shall be imposed if the package delivery falls below discharge values corresponding to the station pressure.

14.6 **Penalty for Non-Performance during Period of Operation & Maintenance**

Details of Penalty for non-performance of equipment's

- a. On normal day (i.e. the day other than the schedule maintenance day):
 - i. The party has to ensure that the equipment is available for operation

for minimum 20 hours per day and on an average the equipment availability has to be 98% in a month.

- ii. If the equipment is down for more than 4 hours on any day, Penalty would be applicable as follows:
 - 4 to 12 hours: Rs. 20,000/-
 - Beyond 12 hours: Rs. 40,000/- per day.

In case of daily availability, it is 20 hrs. but monthly average availability is below 98%. Then penalty @ of 10,000 per % or part thereof shall be applicable.

Note: If there is carry-over of breakdown from previous month to next month (for example if machine breaks down on last day of a month and is not operational till next month) then the penalty will be calculated on cumulative basis & the invoice for the final bill will be paid once the machine is operational.

b. On schedule maintenance day:

- i. The party would be required to carry out the recommended schedule/preventive maintenance of the equipment for which the party has to indicate the time required for each type of schedule maintenance.
- ii. If the equipment is down for more than 4 hours & up to 12 hours beyond the time indicated for the agreed schedule maintenance, the party would be penalized Rs. 20,000/- and for more than 12 hours Rs. 40,000/- per day.
- iii. In any case, the maximum penalty imposed in a month for non-performance of the equipment turns out to be 50% or more of the amount of O&M charges to be paid to the party per month per compressor (a complete cost break up of O&M charges need to be furnished by the bidder during bid), OWNER will take necessary actions as per terms and conditions of the contract for such non-performance.

15.0 SPECIAL TOOLS AND TACKLES

- 15.1 Special tools & tackles for erection and commissioning and for operation & maintenance are required to be arranged by successful bidder.
- 15.2 Vendor shall maintain sufficient spares to fulfill the warranty & subsequent nine years period requirements. In case of additional requirement during the warranty period, if any spare part is taken from OWNER, the same shall be replaced to OWNER with new part supported by necessary document for its authenticity of being new & original spare part.

16.0 DOCUMENTATION

- i. The drawings/documents to be submitted by the bidder shall be divided in three categories:

- a. Drawing documents to be supplied with the bid.
- b. Drawing /document to be submitted for approval (After award of work).
- c. Drawing/document to be submitted for information (After award of work).
- ii. The bidder shall submit list of drawings, which shall be submitted by them in above three categories. All drawing /document shall be submitted in 6 sets of soft copy in pen drive/hard drive
- iii. Title block of each drawing shall contain at least following information: Name of the Owner :
 Name of the Consultant :
 Name of the Project :
 Name of Bidder :
 Descriptive title :
 Drg. No :
 Revision No :
 Sheet No./ Total No. of sheet in the drawing :
- iv. Bidder shall furnish relevant calculation and protection relay setting table for the equipment /system being supplied by them, It shall also contain the manufacture's catalogue, operation and maintenance manuals for all types of relays/components used,
- v. The bidder shall submit all drawing within specified time, in requisite number, for each equipment/item for approval.
- vi. Approval of drawings by Owner.
- vii. The bidder shall submit furnish drawings as indicated/agreed for each item for approval of the Owner/Consultant.
- viii. Owner/Consultant will scrutinize drawing/data furnished by Bidder and comments, if any, will be communicated to the Bidder within 2 weeks from the date of receipt.
- ix. The Bidder shall submit all the drawings/documents in six (6) sets. All the drawing of sub-bidder/bidders etc. shall be checked by Bidder for correctness and compliance with requirement of order/contract and signed before submission to Owner.
- x. The drawings shall be stamped in either of following category and one print shall be returned to the Bidder.
 - i. "APPROVED"
 - ii. "APPROVED SUBJECT TO INCORPORATION OF COMMENTS"
 - iii. "NOT APPROVED"
 - iv. "FOR INFORMATION ONLY"
- xi. Wherever drawings are returned to the Bidder with the marking "Approved"

subject to incorporation of comments” the bidder shall make the necessary modifications/corrections and resubmit the revised drawings and data for final approval.

- xii. Bidder shall be responsible for correctly incorporating all the points conveyed to him and resubmit the drawings to the Owner for final approval. Specified number of copies of approval drawing and reproducible of specified quality shall be submitted after the final approval of drawings.
- xiii. Approval of drawing by owner shall not relieve the suppliers of his contractual obligations and responsibility for engineering design, workmanship, materials and performance of equipment, Work shall be carried out exactly as indicated on the approved drawings and data and no alterations shall be made without the written approval of the Owner,
- xiv. If any subsequent alterations are found necessary and approved by the Owner, all drawings and data affected by such alterations shall be duly revised and re-submitted for the approval.
- xv. Bidder shall incorporate/cause to incorporate all change made in the drawings from approval stage to the handing over of equipment and submit as built drawings in the requisite sets (these will be in addition to the sets submitted at the time of approval/for information and up to commissioning). The drawing to be submitted shall include all the drawings submitted for approval, information as also the drawings required for normal operations, troubleshooting repair, and maintenance and testing of equipment etc.
- xvi. Bidder shall submit the following drawings/data/document in bound volume prior to submission of final bill to the Owner in soft and hard copies (2 Sets).
- xvii. All drawings submitted to Owner for approval information
- xviii. Equipment manufacturing drawings submitted for information of Owner.
- xix. Equipment drawings required for operation and maintenance.
- xx. Fault calculations, protection relay setting calculations and recommended settings.
- xxi. Inspection reports, factory and site test certificates in bounded volume.
- xxii. As built drawings incorporating all site modifications.
- xxiii. Instruction manuals
- xxiv. Operation and maintenance procedures for individual equipment and total system.

ANNEXURES

(BIDDER TO SUBMIT FILLED UP ANNEXURES FOR 1200 SCMh)

ANNEXURE – I: GUARANTEED PARAMETERS (1200 SCMh MOTOR DRIVEN)

For Basis of loading and penalty

Sr. No.	Parameter	Bidder's Data	Unit
1	Compressor Capacity at suction pressure @ 16kg/cm ² (g) (1200SCMH) (basis for penalty)	1200	SCMH
2	Power consumption of package in KWH for 1200 SCMh delivery (basis for loading and penalty)		KWH
3.	Gas loss as % of production, including loss from SRV, due to oil top ups and idling (basis for loading & penalty)		%

Guaranteed General Package Data

Sr. No.	Parameter	Bidder's Data	Unit
4	Compressor BkW in KW @ Rated Conditions (No + ve tolerance)		KW
5	Compressor BkW in KW @ RV Set Conditions (No + ve tolerance)		KW
6	Net of all auxiliaries/package ventilation loads in KW		KW
7	Site rated BkW of Electric Motor (No – ve tolerance)		KW
8	Noise level @ 1 meter from enclosure (required 75 ± 3 DBA)		DB
9	Footprint area of compressor package (10 SQMtr)		M X M

Note:

- Bidder to quote the data in the above table.
- Bidder shall quote the guaranteed parameters for suction pressure of 16kg/cm² and temperature 35degc, discharge pressure of 255 Kg/cm² at maximum temperature of 52deg C.
- Conversion factor for Kg to SCM is 1 kg = 1.33 SCM
- Bidder has to guarantee that offered compressor package will deliver minimum 1200 SCMh under the condition described above. Delivery of less than 1200 SCMh is not acceptable and will be summarily rejected.
- Bidder to submit separate table for 1200 SCMh compressor package offered.

ANNEXURE – II: COMPRESSOR DATA SHEET FOR 1200 SM3/HR

1.0	PROJECT: CNG Expansion Project		DATA SHEET NO:	
1.1	NO. OF UNITS	:	As per SOR	DRIVE: Electrical Motor
1.2	DUTY	:	Continuous	LOCATION: As per SOR
2.0	OPERATING CONDITIONS			
2.1	Service/Stage	:	Compressor for CNG Stations/ Three or Two	
2.2	Gas Handled	:	Natural Gas	
2.3	Composition (%)	:	Natural Gas	
2.4	Corrosive due to:			
2.5	Molecular Weight at Intake (Avg.)			
2.6	Cp/Cv at intake/compressibility Factor			
2.7	Relative Humidity			
2.8	Suction Temperature (°C)	:	35°C max	
2.9	Suction Pressure (Kg/cm ² , Gauge)	:	14-19 Kg/cm ² Gauge	
2.10	Discharge Temperature (°C)	:	Maximum 52°C After Cooler	
2.11	Discharge Pressure (Kg/cm ² , G)	:	255Kg/cm ² (Gauge)	
2.12	Required Capacity (SM ³ /hr.) : 1200			Driver Motor Rating: KW
2.13	Drive arrangement Direct Coupling/V-belt			
2.14	Standard Conditions referred to	:	Standard Atmospheric pressure (1.033 Kg/cm ² abs) and Temperature of 15.6°C	
3.0	SITE CONDITIONS			
3.1	Place	:		Installation: Outdoor
3.2	Site Ambient Temp. (°C)	:	Min : 2 °C Max : 47.5 °C	Max. Relative Humidity (%) : 90%
3.3	MSL – 650 m			
3.4	Area Classification	:	Class1 Div1 Group D or Zone 1 Div1 Group IIA Group IIB	
4.0	APPLICABLE CODES & SPECIFICATIONS			
4.1	Compressor	:	API 11P, 2nd edn. ; API 618	Piping: ASME/ANSI B 31.3
4.2	Driver	:	Electrical Motor Data Sheet	
4.3	Air Cooled Exchangers	:	API 661	Water cooled exchangers : TEMA 'C'
4.4	Pressure Vessel	:	ASME Sec. VIII Div.1/2	Control Panel : Refer Tech Specs
5.0	MANUFACTURER'S SPECIFICATION			
5.1	Name	:		Model:
5.2	No. Off	:		Compressor RPM/Stroke (mm):
5.3	Type	:		Drive Arrangement:
5.4	Service/Stage			
5.5	Mol. Wt. At Intake (Avg.) (Gas Composition)	:		Cp/Cv Value/ Compressibility Factor at Intake
5.6	Adiabatic Power (KW)	:		Shaft Power @ RV set pressure (KW)

5.7	Driver Rating & Speed (KW/RPM)	:		Noise level:
5.8	Suction Line (Size/ Rating)	:		Discharge Nozzle (Size/Rating)
5.9	Direction of Rotation from Driving End:			
5.10	Compressor Weight :	Max. Erection Weight:	Max. Maintenance Weight::	
5.11	Diff. Pr. In Suc. Strainer, Piping, puls Dampener:		Diff. Pr. In after Cooler	
5.12	PERFORMANCE DATA OF PACKAGE			
	Gas	Suction Pr 14 kg/cm2g		
		Ist Stage	IIInd Stage	IIIrd Stage
	Mol. Wt at intake			
	Specific Gravity			
	Cp/Cv Value / compressibility Factor at intake			
	Cp/Cv Value / compressibility Factor at discharge			
	Suction Pressure, kg/cm2 g			
	Suction Temp. °C	40		
	Suction capacity, SM3 / Hr			
	Discharge pressure, kg/cm2 g			
	Discharge Temp. Adiabatic °C			
	Discharge Temp. Actual, °C			
	shaft power, Kw			
	V-belt / coupling losses, kW			
	Shaft power at RV set pressure including			
	V-belt / coupling losses, kW			
	Volumetric Efficiency, %			
	Valve lift			
	Valve lift area			
	Valve velocity (Average) M/sec			
5.13	DESIGN DATA	Suction Pressure 19 Kg/ Cm2g		
		Ist Stage	IIInd Stage	IIIrd Stage
	Mol. Wt at intake			
	Specific Gravity			
	Cp/Cv Value / compressibility Factor at intake			
	Cp/Cv Value / compressibility Factor at discharge			
	Suction Pressure, kg/cm2 g			
	Suction Temp. °C	40		
	Suction capacity, SM3 / Hr			
	Discharge pressure, kg/cm2 g			
	Discharge Temp. Adiabatic °C			
	Discharge Temp. Actual, °C			
	Shaft power, kW			
	V-belt / coupling losses, kW			
	Shaft power at RV set pressure including			
	V-belt / coupling losses, kW			
	Volumetric Efficiency, %			
	Valve lift			
	Valve lift area			

	Valve velocity (Average) M/sec			
6.0	CYLINDER & PACKAGING DATA			
6.1	Service / stage	Ist Stage	IIInd Stage	IIIrd Stage
6.2	Cylinder bore (mm/No. off)			
6.3	Single / Double Acting			
6.4	Liner (yes/ No.)			
6.5	Type of Valves			
6.6	Piston Displacement (M3/Hr)			
6.7	Volumetric Efficiency (%) Min/ Nor/max			
6.8	Mean Piston Speed(m/sec) [<3.5 m/sec]			
6.9	Suction / discharge valve gas velocity (m/sec)			
6.10	Relief valve setting (kg/cm2 g)			
6.11	Max. allowable cylinder pressure (kg/cm2 g)			
6.12	Max. allowable cylinder temperature (°C)			
6.13	Pneumatic Test By (kg/cm2 g)			
6.14	Hydrostatic test (kg/cm2 g)			
6.15	Hydrostatic test water jacket (kg/cm2 g)			
6.16	Suction / discharge nozzle orientation			
6.17	No.of suction / discharge valves			
6.18	Piston Rod Dia (mm)			
6.19	Piston Load			
	-Max. Rod load gas compression, Kg			
	-Max. Rod load gas tension, Kg			
	- Rod load (Inertia alone) compression, Kg			
	- Rod load (Inertia alone) tension, Kg			
	-Rod load rated Pr. (gas + inertia) compression, Kg			
	-Rod load rated Pr. (gas + inertia) tension, Kg			
	-Rod load at R.V set Pr. (gas + inertia) compression, Kg			
	-Rod load at R.V. set Pr. (gas + inertia) tension, Kg			
6.20	Max. Permissible Piston Rod loads (kg)			
6.21	Rod packing cooling by liquid (yes/No.)			
6.22	Rod packing lubrication (Yes/No)			
6.23	Rod packing vent to			
6.24	distance piece type			
6.25	Cylinder jacket cooling by			
7.0	LUBRICATION SYSTEM			
7.1	• Splash	• Force feed Lubricated		
	• Pressure lubrication including piping, valves and	• Mini Lubricated		
	• Oil filter : single	• Non Lubricated		
	• Degree of filtration	• Lubricator Driven by		
	• Oil cooler	• Compressor shaft		
	• Oil pump driven by compressor shaft	• Electric Motor (kW)		
	• Auxiliary oil pumps, if reqd,	• Lubricator equipped with sight flow indicator for each point storage tank with level gauge		
	• Pre-lube Motor driven pump, in case of splash system			
	Grade / viscosity of lube oil	Grade / viscosity of lube oil		
	Oil sump capacity	Oil sump capacity (For 500 hrs)		
	Lube oil consumption (Lt/100 Hr.)	Lube oil Consumption(Lt./100 hr)		
	Change lube oil after	Hours		
	Type of bearing : Main Big End:	Small End:		
8.0	COMPRESSOR CONTROLS			
8.1	• Automatic start / stop on storage pressure level and	• Actuators (To be included in supply)		

	manual start stop				
8.2	• Automatic drain of separators		• Manual on machine		
8.3	• Compressor to start automatically after power interruption with 10 seconds delay.		• Intermediate devices (to be included in supply)		
8.4	• Automatic recovery of gas form gas recovery vessel		• Solenoid valves		
8.5	• Automatic closing of suction isolating valve on compressor trip		• Manual -mounted in a local panel.		
			• Controller(For auto control)		
			• Pressure switches (For auto control)		
8.6	• Compressor shall unload on Power failure/ stoppage through (Vendor to indicate) • Automatically • Manually		• Any other instrument required.		
8.7	• Compressor shall load on start through (Vendor to indicate)		• Automatically • Manually		
8.8	Recommended time duration for compressor operation @ 0% capacity (minutes)				
8.9	Recommended number of starts/ stops for the Motor : Per Hours				
AUXILIARIES					
9.0	COOLERS				
9.1.1		Oil Cooler (Required)	After cooler	Inter coolers	
9.1.2	Cooler Type				
9.1.3	Tube Material				
9.1.4	Tube sheet material shell Material				
9.1.5	Shell Material				
9.1.6	ASME / IBR CODE STAMP	Yes	Yes	Yes	
9.2	Suction Strainer	Temporary	Mesh Size		
9.3	Volume Bottles / Pulsation Dampers		1st Stage	2nd Stage	3rd Stage
9.3.1	Type at Suction /Discharge				
9.3.2	Residual Pulse Amplitude (peak to peak)		3% / 3%		
9.3.3	Maximum Allowable Working Pressure (kg/cm2g)				
9.3.4	Capacity (M3)				
9.3.5	ASME / IBR CODE STAMP		Yes	Yes	Yes
9.4	Separator	1 st Suction	1st Discharge	2 nd Discharge	Final Discharge
9.4.1	Type				
9.4.2	Max allowable Pr (kg/ cm2g)				
9.4.3	Capacity (M3)				
9.4.4	ASME / IBR CODE STAMP	Yes	Yes	Yes	Yes
9.5	Oil Mist separator at final discharge to limit oil carry over to 5 PPM				
9.5.1	Type			Capacity:	
9.5.2	Max allowable Pr (kg/ cm2g)			ASME / IBR CODE STAMP: Yes	
9.6	Gas Recovery vessel			Capacity:	
9.6.1	Max allowable Pr (kg/cm2g)				
9.6.2	ASME / IBR CODE STAMP			yes	
10.0	INSTRUMENTATION				
10.1	PRESSURE INDICATION			PRESSURE SWITCHES	
10.2	Gas At inlet			Frame oil header (1 no. For Trip on low pressure.)	
10.3	Gas at discharge (each stage)			Jacket water system failure	
10.4	Frame oil Header			Compressor discharge Pr high (Each stage)	
10.5	Frame oil filter (Differential local)			Compressor discharge Pr Low (Final stage)	

10.6	Gas at after cooler exit (local)	Compressor suction pressure low
10.7	Hydraulic Oil Pr. (each stage)	Compressor suction pressure high
10.8	TEMPERATURE INDICATION	Frame High vibration
	Gas at suction to compressor	TEMPERATURE SWITCHES
	Gas at Discharge of Comp (Each stage before cooler)	Temperature after compressor discharge before cool (each stage)
	Gas at after cooler	
10.9	Oil cooler oil outlet	
10.10	OTHER INSTRUMENTS	LEVEL TRANSMITTERS
10.11	Junction Box with interconnecting wiring	Suction K.O.D (for automatic drain)
10.12		Discharge K.O.D (for automatic drain)
10.13	Pressure Relief Valve at discharge each stage	BAFFLE FLOW SWITCHES OR ORIFICE DIFF. PRESS SWITCHES
10.14	Pressure Relief Valve at suction to compressor	Low cooling water flow
10.15		Water outlet -after cooler
10.16	Instruments for closed circuit cooling water system	SIGHT FLOW INDICATORS
10.17	Hour meter	As reqd. in close ckt. cooling system
10.18	Gas detection system	Sight flow indicators, cylinder and packing lubrication oil lines
10.18	Flame detection system	LEVEL GAUGE AND INDICATORS
10.19	Forced feed lubrication failure to stop comp.	Frame oil (Bull's eye type)
10.20	Priority fill panel	Packing / cylinder lubrication oil
10.21	Emergency shut down system	Make up water tank
10.22	Other instrument for safe running of compressor	
	Note : 1. Each pressure gauges and pressure switch with an isolating valve and a drain valve. Switch contacts to open under fault conditions Switch / junction box enclosure (As per the electrical area classification)	
11.0	INSTRUMENT PANEL	
11.1	PNEUMATIC CONTROLS FOR	TRIP CIRCUIT TO BE CONNECTED TO MAIN DRIVER CONTROL SWITCH
11.2	Capacity Indication	Cause of shut down
11.3	Pressure Regulator	Frame Oil Pressure-Low
11.4		Low Cooling Water Flow
11.5	PUSH BUTTONS AND SIGNAL LIGHTS FOR	
11.6	Main Motor & Aux.Motors	Compressor discharge PR.(Each stage)

11.7	Ammeters for main and Aux. Motors	Compressor suction Pr. Low
11.8	ESD	Compressor suction Pr.
11.9	Common machine trip-alarm	
11.10	Following to be included in vendor's scope of supply :	
11.11	All interconnecting oil gas water piping & tubing as per schematic attached.	
11.12	All electrical power distribution and interconnection as specified.	
11.13	Intrinsically safe system for trips (Ref. Inst. specs)	

11.14	Electrical circuits to be housed in Explosion Proof Cabinet (Refer Elect. & inst. Specs)				
11.15	Electrical circuits to be provided for repeating pre alarm and trip alarm on the local panel.				
11.16	Annunciation system with test / acknowledgement push buttons & sole first off sequences				
11.17	Motor Interlock against loaded start				
11.18	Motor Interlock against start without air cooler fan running				
11.19	Motor interlock against start without pre-lubrication				
11.20	Provision shall be made for common alarm and trip alarm				
11.21	Any additional instruments & controls required for safe operation of compressor (as recommended by compressor vendor)				
12.0	MATERIAL OF CONSTRUCTION & GRADES				
12.1	Stage	1st	2nd	3rd	Remarks
12.2	Cylinder & Head				
12.3	Liner				
12.4	Piston				
12.5	Piston Ring				
12.6	Piston Shoe (Wear Band)				
12.7	Valve seat				
12.8	Valve stop				
12.9	Valve / plate / Ring				
12.10	Valve spring				
12.11	Cylinder Packing Ring				
12.12	Crank Shaft F.S (Forged steel)	Connecting Road (CR) F.S		CR cap. Bolts FS	
12.13	Main bearing:	Big End Beating: Small end bush:			
12.14	Piston Rod	Yield strength	Hardness(RC)	Surface Finish	
12.15	Pulsation Dampers / Volume Bottles		Suction/Discharge KOD		
12.16	Non Return Valve- Shall be compressor Discharge valve type				
13.0	INSPECTION AND TESTING				
13.1	X-ray examination for welded joints for heat exch./ Press. Vessel / gas Piping (Certificate to be furnished)		NO only TC		
13.2	Ultrasonic testing for piston rod, connecting rod, crank shaft, big end bolts, main brg. studs.		YES		
13.3	Magnaflux testing for crankshaft, piston rod, connecting rod		YES		
13.4	Dye penetrant testing for cylinder liners , piston		YES		
13.5	Shop inspection by purchaser during construction		YES		
13.6	Barring over to check clearance		YES		
13.7	Mechanical running test with shop job driver at compressor vendor's works		YES		
13.8	Stripping check and internal inspection		for one comp		
13.9	Hydrostatic test of Cylinders, Pressure Vessels		Yes		
13.10	Leak proof test of crank case (min 24 hrs with With kerosene)		Yes		

13.11	Fit up test at compressor packager's	Yes
13.12	Performance Acceptance Test	YES
13.13	Field noise level test	YES
13.14	Field trial run at site for 12 hours	YES
13.15	Functional / continuity tests - control panel (At sub vendor's works)	YES

13.16	Inspection and tests of compressor vessels								
	Piston			Piston Rod					
	Cylinder and liner		Connecting Rod			Crank case			
	Crank shaft		Heat Exchangers			Valve components			
	Pressure vessels								
	Test Certificate required for								
	Auxiliary Motor & Pumps		Safety Relief Valves (Temp / F			Capacity control devices			
	Safety switches		Solenoid valves			All instruments			
	Note : 1. For electrical / instrument items, vendor shall provide certificates issued by statutory inspection authority confirming suitability of design / construction for specified Hazardous area classification.								
	Service								
	Size Type (Induced Force)					Craft/No. of Bays			
	Surface per Unit-Finned Tube (m2)					Bare Tube (m2)			
	Heat Exchanged (KW)					MTD. Eff °C			
	Transfer Rate * Finned Tube : Bare Tube, Service Clean W/m2 °C								
	PERFORMANCE DATA-TUBE SIDE								
				Min. Suc. Pr.		Normal. Suc. Pr.		Max. Suc. Pr	
				In	Out	In	Out	In	Out
	Gas Composition	Inter Cooler 1st Stage	Flow Kg/s						
			Temp °C						
			Pr. Kg/cm2						
			Total Heat KJ/Kg						
		Inter Cooler 2nd Stage	Flow Kg/s						
			Temp °C						
			Pr. Kg/cm2						
			Total Heat KJ/Kg						
		After Cooler Stage	Flow Kg/s						
			Temp °C						
			Pr. Kg/cm2						
			Total Heat KJ/Kg						
Oil Cooler Stage	Flow Kg/s								
	Temp °C								
	Pr. Kg/cm2								
	Total Heat KJ/Kg								
Water/Air Cooler Stage	Flow Kg/s								
	Temp °C								
	Pr. Kg/cm2								
	Total Heat KJ/Kg								
	Total Heat all streams KJ								
	Pressure Drop Allow/Calc. Kg/cm2 g								
	Soft Starter Data Sheet to be provided by the Compressor.								
	Performance –Data –Air Side								
	Air Quantity (Total Kgs.)								

ANNEXURE - III - DATA SHEET FOR ELECTRIC MOTOR

ITEM NO.:		As per requirement
QUANTITY:		
DESCRIPTION:		
A.	APPLICABLE SPECIFICATION AND STANDARDS	IS:325 / IEC / EQUIVALENT INTERNATIONAL STANDARDS
B.	SERVICE CONDITIONS:	
	Max. Ambient Temp. (Deg. C)	
	Min. Ambient Temp. (Deg. C)	
	Design Ambient Temp. (Deg. C)	
	Altitude Above MSL (MTS)	
	Relative Humidity (Max.) (%)	
	Environment	
	Location (Indoor / Outdoor)	
	Area (Safe / Hazardous)	
C.	SYSTEM CHARACTERISTICS:	
	Systems Voltage with $\pm$ %	415 V $\pm$ 10%
	Number of Phases	3
	Rated Frequency with $\pm$ %	50 Hz $\pm$ 5%
	Combined Variation	$\pm$ 10%
	Fault Level	25 KA
	Space Heater Supply	Space heater for 30KW & above rating motor
	Low Voltage Stator Winding Heating Supply	NA
D.	Motor Rating / Details:	
	Rated Output	As per Vendor
	Rotor Type	Squirrel Cage
	Syn. Speed (RPM)	As per pump and fan vendor
	Direction of Rotation	Bi-Directional
	Insulation Class	'F', Temperature Rise Limited to 'B'
	Duty	S1, Continuous
	Winding Treatment	Moisture Protection Varnish
	Insulation Process	Anti-Corrosive Treatment
	Starting Method	Star / delta
	Starting Current	Vendor to Furnish
	Minimum Voltage Start at Terminal	80% of 415V
	Starting Torque	Min. 200% of FLT
	Pull Out Torque	
	No. of Hot Starts	2 Nos.
	No. of Cold Starts	3 Nos.
	Shaft Extension	Required
	Type of Coupling	
	Earth Terminals	2 Nos. on Body & 2 Nos. on T. Box
	Greasing Arrangement	Yes
	Name Plate	Yes, as per IS:325
	Starter Connection	Vendor to Furnish
	Efficiency at	
	100% load	
	75% load	
	50% load	
E.	ENCLOSURE:	
	Degree of Protection	EExd IP55
	Mounting Arrangement	As per requirement.
	Type of Cooling	TEFC
F.	TERMINAL BOX	
i)	Terminal Box (Main)	1 No.
	Type	
	Fault Withstand	
	No. of Terminals	6 Nos.

		Side of Terminal Box seen from the Driven End	RHS
ii)		Auxiliary Terminal Box	--
	1.	Separate Terminal Box for	
		Space Heaters	YES
		Thermistors	--
G.		TESTS TO BE WITNESSED	
		Type Tests	CMRS test certificate to be furnished
		Routine Tests	As per IS:325
H.		ACCESSORIES	
		Anti-condensation Heaters	Yes
		PTC Thermistors	NA
		Voltage Rating of Space Heaters	230V
		Foundation Bolt	Yes
		Cable Glands	Required
		Earthing Terminals	Body & T. Box
		Motor peak Amplitude Vibration at no Load at Bearing should not exceed	40 Microns for 1500 RPM 15 Microns for 3000 RPM
		Max. Motor Noise Level Measured at a Distance of 1.5 Mts. from Motor	85 dB
I.		CABLES	
	1.	Type & Size	
		- Motor	Vender to furnish
		- Space Heater	Vender to furnish
		- Thermister	NA
	2.	Cable Lugs	
		- For Motor	Copper
		- Space Heater	Copper
		- Control Cables	NA
	3.	Cable Glands – Type Material	
		- Motor	FLS-Double Compression, Ni-Cd Plated
		- Space Heater	FLS-Double Compression, Ni-Cd Plated
		- Control Cables	FLS – Double Compression Ni-Cd Plated
		J. PAINTING	
		TYPE	Epoxy
		SHADE (AS PER IS:5)	692 (Smoke Grey)

ANNEXURE – IV LIST OF MOTORS

S.No.	DESCRIPTION	KW	DUTY	QTY.

NOTE: - Motors are in hazardous area classification Zone 1 and Zone 2. Therefore, the Motors shall be flame proof. Vendor shall furnish the list of motor(s).

ANNEXURE – V: SPECIFICATIONS OF INSTRUMENTS

SPECIFICATION OF CORIOLIS MASS FLOW METER (SUCTION)

Sl. No.	PARAMETER	REQUIREMENT
1.	Fluid	Compressed Natural Gas
2.	Measuring Principle	Coriolis Principle
3.	Operating Pressure	40 (max.) bars ,19 (Normal) bars, 8 (min.) bars
4.	Molecular Weight	17 – 22
5.	Ambient Temperature	0 – 60 °C
6.	Hazardous area classification	Class I, Div I, Gas Group D as per NEC or Zone1,Group IIA/ IIB as per IS/IEC specifications
7.	Range of operation	1100- 1300 SCM/HR (850 - 1000 KG/HR) for 1200 SCMH
8.	Accuracy	± 0.5% of indicated flow accepted (over the whole operating range on gas)
9.	Rangeability for specified accuracy (Min.)	50:1
10.	Line Size	2.0 "(Flange type),300# WNRF (Material: 316 L)
11.	Pressure drop at max. flow	< 0.2 Kg/cm ² g
12.	Repeatability	± 0.25% or better
13.	Material - Tube	SS 316 or Better
14.	End Connection	To suit the line size(2.0") , Flange connections
15.	Power supply (nominal)	230±10% V, 50±2 Hz, 1 □ UPS
16.	Outputs (Active)	
16.1.	4 – 20 mA dc	Reqd.
16.2.	Frequency	Reqd.
16.3.	RS 485	Reqd.
17.	Outputs Informations	□
17.1.	Mass Flow rate	Reqd.
17.2.	Mass totalizer, non-resettable	Reqd.
17.3.	Temperature	Reqd.
17.4.	Integral Display	Display all outputs with specified accuracy, programmable and sequential with password protection, Touch screen or touch keypad type
18.	Communication Protocol	MODBUS with RS485
19.	Mounting	Field mounting
20.	Certification	Hazardous area compatibility, Weather proof certification i.e. IP 67 ,Material Test, Manufacturer's certification, Custody Transfer approval, AGA 11 Conformance certification and Calibration Certificate on water and Natural Gas from accredited test labs with traceability acceptable internationally

SPECIFICATION OF CORIOLIS MASS FLOW METER (DISCHARGE)

Sl. No.	PARAMETER	REQUIREMENT
1.	Fluid	Compressed Natural Gas
2.	Measuring Principle	Coriolis Principle
3.	Operating Pressure	300 (max.) bars ,250 (Normal) bars, 100 (min.) bars
4.	Molecular Weight	17 – 22
5.	Ambient Temperature	0 – 60 °C
6.	Hazardous area classification	Class I, Div I, Gas Group D as per NEC or Zone1, Group IIA/ IIB as per IS/IEC specifications
7.	Range of operation	1100- 1300 SCM/HR (850 - 1000 KG/HR) for 1200 SCMH
8.	Accuracy	± 0.5% of indicated flow accepted (over the whole operating range on gas)
9.	Rangeability for specified accuracy (Min.)	50:1
10.	Line Size	0.5 "(TUBE END)
11.	Pressure drop at max. flow	< 0.2 Kg/cm ² g
12.	Repeatability	± 0.25% or better
13.	Material - Tube	SS 316 or Better
14.	End Connection	To suit the line size(0.5") ,
15.	Power supply (nominal)	230±10% V, 50±2 Hz, 1 □ UPS
16.	Outputs (Active)	
16.1.	4 – 20 mA dc	Reqd.
16.2.	Frequency	Reqd.
16.3.	RS 485	Reqd.
17.	Outputs Information	•
17.1.	Mass Flow rate	Reqd.
17.2.	Mass totalizer, non-resettable	Reqd.
17.3.	Temperature	Reqd.
17.4.	Integral Display	Display all outputs with specified accuracy, programmable and sequential with password protection, Touch screen or touch keypad type
18.	Communication Protocol	MODBUS with RS485
19.	Mounting	Field mounting
20.	Certification	Hazardous area compatibility, Weather proof certification i.e. IP 67 ,Material Test, Manufacturer's certification, Custody Transfer approval, AGA 11 Conformance certification and Calibration Certificate on water and Natural Gas from accredited test labs with traceability acceptable internationally

SPECIFICATION OF THERMAL MASS FLOW METER (TO MEASURE VENT LOSS)

SR. NO.	PARAMETER	REQUIREMENT
1	Fluid	Natural Gas
2	Measuring Principle	Thermal
3	Operating Pressure	50 mbar g
4	Molar Mass	17 -22
5	Ambient Temperature	0-60°C
6	Hazardous area classification	Class I, div I Gas Group D as per NEC or Zone 1, Group IIA / IIB as per IS / IEC Specification
7	Range of Operation	0.6 - 16 SCM/Hr 0.5 - 12 Kg / Hr
8	Measured Error Mass	± 1.5% of indicated flow accepted (over the operating range of 2-12 Kg/Hr on gas)
9	Meter Size	0.5"
10	Pressure drop at max. flow	2 mbar max.
11	Repeatability	± 0.5% or better
12	Material Tube	SS 316 or better
13	End connection	To suit the line size, flange Connections
14	Power Supply (nominal)	230 ± 10% V, 45-65 Hz UPS
15	Output (Active)	
16	RS 485	Required
17	Outputs Information	
17.1	Mass Flow Rate	Required
17.2	Mass Totalizer, non – resettable	Required
17.3	Temperature	Required
17.4	Integral Display	Display all outputs with specified accuracy, programmable and sequential with password protection. Touch Screen or Touch Keypad Type
17.5	Density	Required
17.6	Pressure	Required
17.7	Volume flow rate	Field configurable with password protection for molecular weight range: 17 to 22
17.8	Volume flow totalizer	Field configurable with password protection for molecular weight range: 17 to 22
17.9	Periodic mass & totalizer, non-resettable	Four (one each monthly, daily, fortnightly and one for configurable period)
18	Programmer	Calibration software, perpetual licence with portable hardware platform complete with all connectors, power adopter, batteries. System should be suitable for effecting calibration changes, configuring the flow meter / transmitter, storing test result, plotting and storing graphs, diagnostics, password protection etc. Carrying case, easily installable in the field for calibration set up
19	Communication	MODBUS with RS 485,
20	Mounting	Field mounting, (Vertical)
21	Certification	CCOE

SPECIFICATION SHEET FOR FLAME DETECTORS

Flame detector Type:	UV and IR Detector
Wave Length	UV radiation over the range of 185 to 260 nanometers (1850 to 2600 angstroms)
	IR radiation in the 4.35 micron range
Field of View	120° cone of vision (or) Better.
Sensitivity	Approved Performance Specification-50 feet (15.2m) distance for a 1 sq. ft (0.092m ²)heptane fire.
Response Time:	Less than 5 seconds
Status Indicator:	LEDs indicate status of Healthy, fault, and alarm conditions
Operating Medium	Natural Gas.
Nominal supply voltage:	24 VDC
Supply voltage range:	20 to 36 VDC
Maximum supply current:	400 mA during COPM only
Typical current:	80 to 150 mA Depends on relays ETC
Maximum output signal load:	600 Ohms
Electrical Specifications [OUTPUT: mA, Relay, Hart]	
(all 3 below mentioned outputs must be available in separate connectors/ ports)	
1. Analog (mA):	
Output signal range:	0 to 20 mA *
FAULT signal:	0 to 0.2 mA *
COPM fault signal:	2.0 ± 0.2 mA *
Ready signal:	4.0± 0.2 mA
IR only signal:	8.0 ± 0.2 mA
UV only signal :	12.0 ±0.2 mA
WARN signal:	16.0 ±0.2 mA
ALARM signal:	20.0 ± 0.2 mA
2.Relay Contacts: (Alarm, Fault and Auxiliary)	Fire relay (alarm)- Both Contact output NO and NC required. Fault relay - Contact output NO and NC required. Contact rating 30 VDC, 2 A or 125 VAC, 1 A
3. HART	
Protoc ol	HART protocol and Modbus with RS485
	External HART Port connector (without opening of Housing cover of Flame Detector) is required in transmitter for calibration and parameter accessing.
Vibration	As the detector shall be vibrations arising mounted inside CNG compressor canopy, the same shall be capable of withstanding from reciprocating compressor.
Approvals (sensor, Transmitter and Terminal box / Junction Box)	CCOE,CSA, FM, ATEX, HART Registered, and AMS Aware
	Class 1, Div 1, groups B, C, and D (-40°C to +65°C),Type

	4X, Exd iic,T5
SIL	SIL 3/SIL 2
CCOE	CCOE approval Must
	IP66/67, NEMA 4
Reliability	IEC 61508
AMS Aware:	Certified by AMS
RFI/EMI Protection:	Complies with EN 50130-4, EN 61000-6-4
WARRANTY	2 year warranty against sensor and electronics for the supplied product.
	ONSITE SERVICE TO BE PROVIDED DURING WARRANTY PERIOD
ACCESSORIES	Housing: Anodized aluminum with powder coated finish or equivalent (Explosion proof enclosure) Mounting: Roof mounted or wall mounted. For threaded type detectors suitable termination box (approved for use inside hazardous area) shall be provided. The detector shall be supplied with suitable Sunshade/ Deluge protection, Strombaffle, Weather protection, Dust barrier, Gassing Cap, etc as applicable protection against dust particles. .
	2 No's Cable Glands(3/4" Double compression)
FLAME DETECTOR BUILT-IN TEST	AUTOMATIC AND MANUAL TEST
FLAME DETECTOR IMMUNITY	False alarm sources like Arc welding, X-Ray's or hot vibrating object, lightening.
Manuals (soft and Hard Form)	Operation, Maintenance, Calibration and Troubleshooting
Software (soft and Hard Form)	Software or additional device, cables required for calibration or troubleshooting of instrument shall be supplied free of cost with instrument.
FLAME DETECTOR CALIBRATION	must be inbuilt or else calibration device must be supplied along with FD at free of cost.
CALIBRATION PROCEDURE	(BOTH ZERO AND SPAN) FOR THE MODEL QUOTED TO BE PROVIDED IN DETAIL

SPECIFICATION SHEET FOR GAS DETECTORS

Type	Infrared sensor with Transmitter, with Local Display or Indicator
Measurement Range	0-100% LEL
Operating Medium	Natural Gas.
Operational and Certified Temperature Range	65 °C Maximum
Power Supply	18 to 32Vdc(24Vdc nominal)
Power Consumption	< 4.5W max
Current Demand	< 235 mA at 18V
	< 190 mA at 24V
	< 155 mA at 32V
Output Signals :-	mA, Relay, Hart
(all 3 below mentioned outputs must be available in separate connectors/ ports)	
1.Analog (mA):	4-20mA,Non-Isolated,Current Source or Sink.(Default Configuration is Current Source).
Maximum 4-20mA Loop Resistance	600 Ohms
Measuring Range (0-100% FSD)	4-20 mA
Inhibit	1 to 3mA(Default 2mA)
Warning	0 to 6mA(Default 3mA)
Fault	0mA
Over-Range	20 to 21.5mA(Default 21 mA)
2.Contact output:	Relay output: (High alarm, Low alarm,Trip, Fault) Contact rating: 2 A, 230 VAC/24 VDC
3. HART	
protocol	HART protocol & Modbus RS485
	External HART Port connector (without opening of Housing cover of Gas Detector) is required in transmitter for calibration and parameter accessing.
Status Indicator:	Status indication: LED indication OR Local Display. Separate indication for No gas leak, Low alarm, High alarm, optics failure and calibration in progress shall be available
Vibration	As the detector shall be vibrations arising mounted inside CNG compressor canopy, the same shall be capable of withstanding from reciprocating compressor.
Accuracy	± 5 % LEL through-out the range
Response Time	T90<15sec or Better
ACCESSORIES	Housing: Anodized aluminum with powder coated finish or equivalent (Explosion proof enclosure) Mounting: Roof mounted or wall mounted. For threaded type detectors suitable termination box (approved for use inside hazardous area) shall be provided. The detector shall be supplied with suitable Sunshade/ Deluge protection, Strombaffle, Weather protection, Dust barrier, Gassing Cap, etc. as applicable protection against dust particles. 2 No's Cable Glands(3/4" Double compression)
WARRANTY	2 year warranty against sensor and electronics for the supplied product. ONSITE SERVICE TO BE PROVIDED DURING WARRANTY PERIOD

Safety Approval / Certificate	For both sensor, Transmitter and Terminal box / Junction Box
ATEX/UT/UT/CSA/ F M/CCOE	ATEX: BAS992259X II 2GD EEx d IIC T100°C (Tamb -40°C to +55°C) T135°C (Tamb -40°C to +65°C)
	UL / CSA Class 1, Div 1, groups B, C, and D (-40°C to +65°C) GOST and SAA
	CE, IEC, EEC, EMC, CENELEC AND Eexd.
	IP66/67, NEMA 4
CCOE	CCOE approval Must
SIL	SIL 2/SIL3
Performance Approval	EN61779 EXAM, BVS 03 ATEX G 016 X, CSA,FM C22.2 152
EMC COMPLIANCE SOFTWARE	EN 50270 ; EN 50271
Manuals (soft and Hard Form)	Operation, Maintenance, Calibration and Troubleshooting
Software (soft and Hard Form)	Software or additional device, cables required for calibration or troubleshooting of instrument shall be supplied free of cost with instrument.
GAS DETECTOR CALIBRATION	Must be inbuilt or else calibration device must be supplied along with GD at free of cost.
CALIBRATION PROCEDURE	(BOTH ZERO AND SPAN) FOR THE MODEL QUOTED TO BE PROVIDED IN DETAIL

SPECIFICATION FOR KWH METER

1	Meter type	3Phase Static Energy meter
2	Accuracy class	0.5 S as per IS14697
3	Connection	Transformer Operated
4	Rated Voltage	240V(P-N), 415V(P-P) $\pm$ 10%
5	Rated Basic current	5A
6	Rated maximum current	10A
7	Rated Frequency	50 HZ $\pm$ 3%
8	Power Factor range	Zero lag- Unity- Zero lead
9	Standards compliance	IS 14697, IEC 62052-11, IEC 62053-21, IS 15959
10	Calibration	Meter shall be calibrated at factory and no modifications should be permissible
11	Energy Audit Data	a. Meter serial number b. Date and time c. Cumulative forwarded active energy d. Cumulative reactive energy - Lag e. Cumulative reactive energy - Lead f. Cumulative forwarded apparent energy g. Cumulative Maximum Demand in kW and kVA with date and time
12	Metering philosophy	Metering should be 2 quadrant lag only and programmed accordingly
13	Auto/Manual Scroll mode	a. LCD test b. Date c. Time d. Cumulative Active Energy e. Cumulative Apparent Energy f. Cumulative Reactive Energy – Lag g. Cumulative Reactive Energy – Lead h. Active Maximum demand with date and time i. Apparent Maximum demand with date and time j. Active load k. Reactive load l. Apparent load m. Phase wise power factor n. Average power factor o. R phase voltage p. Y phase voltage q. B phase voltage r. R phase current (line) s. Y phase current (line) t. B phase current (line) u. Instantaneous average power factor with sign for lag/lead v. Frequency reading
14	Maximum demand Registration	Meter should store and display maximum demand in kW/kVA with date and time. Demand integration period should be 30 minutes. It is preferred that MD is computed using separate counter rather than by difference of initial and final energy counter.
15	Auto Reset of Maximum Demand	Meter should reset to zero and date should be customisable date

SPECIFICATIONS FOR DISCHARGE FILTER

SUPER FINE FILTER (Coalescing Filter)

Super fine filter for removal of liquid (e.g. water & oil)and solid particles down to 0.01 microns out of compressed natural gas

Residual Oil Contents less than 0.01 mg/m3.

Filter Designed: Paint Compatible CE mark in accordance with European Directive for Pressure Equipment, PED (97 / 23 / EC) Are Designed to meet the ATEX European Directive for Explosion Protection , (94 / 9 / EC) All natural gas filters in accordance to CE Eex 2GD IIB T6.

Standard equipment: Complete filter including manual drain.

Specification Filter Elements.

Filter Fabric: Borosilicate Microfiber Fabric coated with polypropylene photopolymer support - fabric.

Drainage Layer: Parafil - Fibre fabric incorporated in the filter fabric. (Without Foam Sock)

Rib Mesh : Stainless Steel VA 1.4306

Temperature : + 1 ° C to + 80 ° C

Direction of Flow : From Inside to Outside.

NOTE: Bidder to get the inspection done by TPIA accordance with European Directive for Pressure Equipment, PED (97 / 23 / EC) if CE marks are not available.

ANNEXURE – VI: VENDOR LIST

Item code / Description	AIR FILTER REGULATORS
VENDOR NAME	Remark
ASEA BROWN BOVERI LTD.	
BLUE STAR LTD	
DIVYA CONTROL ELEMENTS PVT. LTD.	
PLACKA INSTRUMENTS & CONTROLS PVT. LTD	
SHAH PNEUMATICS	
SHAVO NORGREN (I) PVT. LTD	
VELJAN HYDRAIR PVT. LTD.	
PARKER	
SWAGELOK	
VANAZ ENGINEERS LIMITED	
ITEM CODE / DESCRIPTION	COALESCENT FILTER / REGULATORS
VENDOR NAME	REMARK
ASEA BROWN BOVERI LTD.	
BLUE STAR LTD	
PLACKA INSTRUMENTS & CONTROLS PVT. LTD	

SHAH PNEUMATICS	
SHAVO NORGREN (I) PVT. LTD	
V AUTOMAT & INSTRUMENTS PVT. LTD.	
VELJAN HYDRAIR PVT. LTD.	
COMPAC NEWZEALAND	
ITEM CODE / DESCRIPTION	FIELD INSTRUMENTS (P, DP, F,L,T)
VENDOR NAME	REMARKS
ABB AUTOMATION LTD.	
ASHCROFT	
BROWN BOVERT LTD.	
MURPHY	
CCS	
WAREE	
FISHER ROSEMOUNT INDIA LIMITED	
FISHER ROSEMOUNT SINGAPORE PTE LTD.	
FUJI ELECTRIC CO. LTD.	
HONEYWELL INC.	
TATA HONEYWELL	
YOKOGAWA ELECTRIC CORPORATION	
YOKOGAWA BLUE STAR LTD.	
WIKA	
DRUCK	
BEKO	
FILTRATION TECHNIQUE	
ITEM CODE / DESCRIPTION	PRESSURE GAUGES
VENDOR NAME	REMARKS
AN INSTRUMENTS PVT. LTD.	
BADOTHERM PROCESS INSTRUMENTS B. V.	
BOURDON HAENNI S.A	
BRITISH ROTOTHERM CO. LTD	
BUDENBERG GUAGE CO. LTD.	
DRESSER INC.	
GENERAL INSTRUMENTS CONSORTIUM	
MANOMETER (INDIA) PVT. LTD.	
NAGANO KEIKI SEISAKUSHO LTD.	
WAAREE INSTRUMNETS CONSORTIUM	
BAUMER	
WALCHANDNAGER INDUSTRIES LTD.	
WIKA ALEXANDER WIEGAND & CO GMBH	
WIKA INSTRUMENTS INDIA PVT. LTD.	
DRUCK	
ASHCROFT	
BEKO	
FILTRATION TECHNIQUE	
ITEM CODE / DESCRIPTION	TEMPERATURE GAUGES
VENDOR NAME	REMARKS
GENERAL INSTRUMENTS LTD	
WIKA	
ASCHCROFT	
BAUMER	

ITEM CODE / DESCRIPTION	PRESSURE RELIEF/SAFETY VALVE
VENDOR NAME	REMARKS
ALSTHOM FLUIDS SAPAG	
ANDERSON GREENWOOD CROSBY	
BHEL (TRICHY)	
ASPRO	
DRESSER INC.	
FUKUI SEISAKUSHO CO. LTD.	
INSTRUMENTATION LTD. (PALGHAT)	
NAKAKITA SEISAKUSHO CO LTD.	
NUOVO PIGNONE SPA (ITALY)	
PARCOL SPA	
SAFETY SYSTEMS UR LTD.	
SARASIN RSBD	
SEBIN VALVES INDIA PVT. LTD.	
TAI MILANO SPA	
TYCO SANMAR LTD.	
TYCO VALVES & CONTROLS INDIA PVT. LTD	
SWAGELOK	
PARKER	
FARINOSLA	
FAINGER LASER	
MERCER	
FISHER ROSEMOUNT (EMERSON)	
OFE & OE GROUP KEYSTONE VALVES PVT. LTD	
BARODA SEBIM VALVES PVT. LTD.	
HALOL	
ITEM CODE / DESCRIPTION	SUCTION & DISCHARGE FILTER
VENDOR NAME	REMARKS
BEKO FILTER	
ULTRA FILTER	
FILTRATION TECHNIQUE	
PARKER	
ITEM CODE / DESCRIPTION	VIBRATION SWITCH
VENDOR NAME	REMARKS
MURPHY	
METRIX	
ROBERTSHAW CONTROL	
ITEM CODE / DESCRIPTION	CARTRIDGE FILTERS
VENDOR NAME	REMARKS
BEKO FILTER	
ULTRA FILTER	
FILTRATION TECHNIQUES	
ZANDER GMBH (GERMANY)	
GRAND PRIX FAB (PVT.) LTD., NEW DELHI	
MULTITEX FILTRATION ENERGY PVT. LTD.,	
ITEM CODE / DESCRIPTION	AIR COMPRESSOR
VENDOR NAME	REMARKS

INGERSOL RAND (IR)	
ELGI	
ANESTA IWATA MOTHERSON	
CHICAGO PNEUMATICS	
ITEM CODE / DESCRIPTION	SELF ACTUATED PR. CONTROL VALVE
VENDOR NAME	REMARK
DANIEL INDUSTRIES INC	
DRESSER PRODUITS INDUSTRIES	
ASPRO	
ESME VALVES LTD.	
FISHER ROSEMOUNT SINGAPORE PTE LTD.	
FISHER EXMOX SANMAR LIMITED	
GORTER CONTROLS B.V.	
INSTROMET INTERNATIONAL NV	
KEYE & MACDONALD INC	
NUOVO PIGNONE SPA (ITALY)	
PIETRO FIORENTINI SPA	
RICHARDS INDUSTRIES (FORMERLY TRELOAR)	
RMG REGEL + MESSTECHNIK GMBH	
VANAZ	
NIRMAL INDUSTRIES LIMITED	
COMPAC INDUSTRIES LTD., NZL.	
ITEM CODE / DESCRIPTION	SOLENOID VALVES/ACTUATOR
VENDOR NAME	REMARK
ALCON ALEXANDER CONTROLS LIMITED	
ASCO (INDIA) LIMITED	
JEFFERSONS	
ASCO JOUCOMATIC LTD.	
ASCO JOUCOMATIC SA	
AVCON CONTROLS PVT. LTD.	
BARKSDALE INC.	
BLUE STAR LTD.	
HERION WERKE	
SCHRADER SCOVILL DUNCAN LIMITED	
SEITZ AG	
ROTEX AUTOMATION LIMITED	
PARKER HANIFEN	
HABONIM VASS	
FESTO	
ITEM CODE /DESCRIPTION	SPECIAL CONTROL VALVES
VENDOR NAME	REMARK
FISHER ROSEMOUNT SIGAPORE PTE. LTD.	
FLOWERVE PTE. LTD. (FORMERLY DURIRON)	
HOPKINSONS LIMITED	
METSO AUTOMATION PTE LTD. (FORMERLY NELES)	
NUOVO PIGNONE SPA (ITALY)	
SPX VALVES & CONTROLS (FORMERLY DEXURIK)	

ITEM CODE /DESCRIPTION	TWO WAY / THREE WAY VALVES/ 2-WAY DRAIN VALVES
VENDOR NAME	REMARK
SWAGELOK	
PARKER	
HAMLET	
HYLOCK	
OASIS	
STAUFF	
SSP	
FLUID CONTROL	
ITEM CODE /DESCRIPTION	FLAME DETECTOR/ SURGE PROTECTORS
VENDOR NAME	REMARK
MEGGITT AVIONICS	
GENERAL MONITORS/ MSA	
SPECTREX	
DETRONICS	
HONEYWELL	
NET SAFETY	
<u>CROW ON</u>	
SIEGER	
ISOLATORS	
OLDHAM	
ESP SAFETY	
PHOENIX	
P&F	
MTL	
AMBERTRONICS	
ITEM CODE /DESCRIPTION	GAS DETECTOR (IR TYPE)
VENDOR NAME	REMARK
DETRONICS	
HONEYWELL	
NET SAFETY	
GENERAL MONITORS/ MSA	
<u>CROW ON</u>	
SIEGER	
OLDHAM	
ESP	
AMBERTRONICS	
ITEM CODE /DESCRIPTION	PLC
VENDOR NAME	REMARK
SIEMENS	
SCHNEIDER	
ALLAN BRADLEY, ROCKWELL	
ROCKWELL AUTOMATION	
LHP	
ABB	
PHOENIX	
ITEM CODE /DESCRIPTION	COMPRESSOR MAIN MOTOR
MAKE	REMARK

CROMPTON GREAVES	
SIEMENS	
WEG	
ABB	
LHP	
KIRLOSKAR	
BHARAT BIJLEE	
ITEM CODE /DESCRIPTION	MAIN MOTOR VFD STARTER
MAKE	REMARK
SIEMENS	
SCHNIEIDER	
FUJI	
ABB	
ITEM CODE /DESCRIPTION	SOFT STARTER
MAKE	REMARK
SIEMENS	
SCHNEIDER	
ABB	
FUJI	
ITEM CODE /DESCRIPTION	CO2 CYLINDER VALVE WITH ACTUATOR FOR CO2 FLOODING SYSTEM
VENDOR NAME	REMARK
GINGEKERR	
CEODUEX (ROTAREX)	
KIDDE	
FIKE	
ROTEX	
KEW	
ITEM CODE / DESCRIPTION	SS TUBING
VENDOR NAME	REMARK
SANDVIK	
FAE	
TUBACEX (SCHOELLER-BLECKMNN)	
PARKER	
RATNAMANI	
JINDAL SAW LTD	
ITEM CODE / DESCRIPTION	SS FITTINGS/ VALVES
VENDOR NAME	REMARK
SWAGELOK	
PARKER	
HAMLET	
HYLOCK	
OASIS	
STAUFF	
SSP	
FLUID CONTROL	
ITEM CODE / DESCRIPTION	MASS FLOW METERS
VENDOR NAME	REMARK
EMERSON PROCESS MANAGEMENT	CORIOLIS TYPE
ENDRESS & HAUSER CMBH & COMPANY	CORIOLIS TYPE & THERMAL MASS TYPE
MAGNETROL	THERMAL MASS TYPE
ITEM CODE / DESCRIPTION	FLP SWITCH
VENDOR NAME	VENDOR NAME
BALIGA	

FCG	
FPE	
FLEXPRO	
ITEM CODE / DESCRIPTION	SWITCHES/FUSES/CONTRACTORS
VENDOR NAME	REMARK
L&T	
GEC	
SIEMENS	
ITEM CODE / DESCRIPTION	CABLES & WIRES
VENDOR NAME	REMARK
CORDS CABLES INDUSTRIES	
ASSOCIATED CABLES	
INCAB	
UNIVERSAL CABLES LTS/OEM Cables	
ASEAN	
CCI	
FORT GLOSTER	
FINOLEX	
KEI	
POLYCAB	
HAVELLS	
ITEM CODE / DESCRIPTION	PRESSURE TRANSMITTERS
VENDOR NAME	REMARK
DRUCK	
WIKA	
HONEY WELL	
ABB	
ROSMOUNT	
WAREE	
EMERSON	
ITEM CODE / DESCRIPTION	RTDs
VENDOR NAME	REMARK
GENERAL INSTRUMENTS PVT LTD	
NAGMAN SENSORS PVT LTD	
PYRO ELECTRIC	
WIKA	
SIEMENS	
BAUMER	
WAREE	
ALTOP	
ITEM CODE / DESCRIPTION	PLUG VALVE
VENDOR NAME	REMARK
AIR & NORDSTROM VALVES INC	
XOMOX	
SANMAR INDIA LTD, NEW DELHI	
AIR & NORDSTROM VALVES INC	
SERCK AUDCO VALVES	
SUMITOMO CORPORATION	
FISHER XOMOX SANMAR	
L&T (AUDCO INDIA LTD, CHENNAI)	
PARKER	
STAUFF	

ITEM CODE / DESCRIPTION	ON OFF BALL/NEEDLE VALVE
VENDOR NAME	REMARK
PARKER	
SWAGELOK	
ABAC	
SPIRAX SARCO	
WORCESTER	
WAREE	
BAUMER	
STAUFF	
SSP	
L&T	
ROTEX	
AUDCO	
ITEM CODE / DESCRIPTION	PRESSURE & TEMPERATURE SWITCH
VENDOR NAME	REMARK
INFOS	
SWITZER	
CCS	
ITEM CODE / DESCRIPTION	REGULATORS
VENDOR NAME	REMARK
FISHER ROSEMOUNT SINGAPORE PTE. LTD.	
FLOWSERVE PTE. LTD. (FORMERLY DURIRON)	

Notes:

1. Above vendor list is indicative only and any other vendor(s) apart from as mentioned above may be accepted subject to approval by Owner/Owners representative based on their past track record / credentials. However no relaxation or advantage in delivery period will be given to the successful bidder on account of this approval.
2. For the vendors of items not covered in above vendor list, but required for completion of project successfully, supplier shall take approval from Owner/Owners representative for the same during project execution. Bidder shall submit the required certifications, documents, PTR and Performance letters from clients for the same.

ANNEXURE – VII: VENDOR DATA REQUIRED

S. NO	DESCRIPTION	PRINTS WITH BID	CERTIFIED INFORMATION REQUIRED AFTER PURCHASE ORDER	
			FOR REVIEW	FOR RECORDS
A	GENERAL			
1	PROJECT SCHEDULE			
2	DULY FILLED-IN "CHECKLIST FOR COMPLETENESS OF BID"	YES		

3	DULY FILLED-IN "CHECKLIST FOR SCOPE OF SUPPLY"	YES		
4	DEVIATION LIST (IF ANY) TO THE APPLICABLE SPEC., DATASHEETS	YES		
5	UTILITIES REQUIREMENT SUMMARY	YES		YES
6	FLANGE DETAILS OF PIPING CONNECTION WITH CONNECTION AT BATTERY LIMIT		YES	
7	DULY FILLED IN EXPERIENCE RECORD PROFORMA	YES		
8	GUARANTEE PARAMETERS AS SPECIFIED	YES		YES
9	TENTATIVE LOAD DATA FOR FOUNDATION DESIGN			YES
10	LIST OF SUB-VENDORS FOR ALL BOUGHT OUT ITEMS INCLUDING ELECTRICAL & INSTRUMENTATION ITEMS		YES	
11	LEAFLET, CATALOGUES FOR ALL ITEMS		YES	
12	O & M MANUAL		YES	
B	COMPRESSOR			
1	DATASHEETS FOR THE FOLLOWING	YES		YES
A	- COMPRESSOR	YES		YES
B	- HEAT EXCHANGERS	YES		YES
C	- PRESSURE VESSELS	YES		YES
D	- ELECTRIC MOTOR	YES		YES
2	CATALOGUE FOR COMPRESSOR			YES
3	TYPICAL CROSS SECTIONAL DRAWING AND LITERATURE TO FULLY DESCRIBE THE DETAILS OF OFFERING			YES
A	- COMPRESSOR			YES

S. NO	DESCRIPTION	PRINTS WITH BID	CERTIFIED INFORMATION REQUIRED AFTER PURCHASE ORDER	
			FOR REVIEW	FOR RECORDS
B	- SUCTION VALVE			YES
C	- DISCHARGE VALVE			YES
D	- PISTON ROD GLAND PACKING & PISTON RINGS			YES
E	- LUBE OIL PUMP			YES
4	V-BELT & PULLEY WITH SELECTION CHART & CALCULATION			YES

5	COOLER DATA / DRG WITH THERMAL & MECH DESIGN CALCULATION		YES	
6	DESIGN CALCULATION, GA DRGS FOR PULSATION DAMPNER		YES	
7	PIPING & INSTRUMENTATION DIAGRAMS FOR THE FOLLOWING		YES	
A	- PROCESS GAS		YES	
B	- LUBE OIL		YES	
C	- COOLING WATER		YES	
8	TORQUE ANGLE DIAGRAM, PISTON ROD LOAD VS CRANK ANGLE		YES	
9	TORQUE SPEED CHARACTERISTICS		YES	
10	ACOUSTIC / MECHANICAL EVALUATION REPORT		YES	
11	ITEMIZED PRICE LIST OF ESSENTIAL SPARES		YES	YES
12	ITEM LIST OF SPARES WITH PRICE FOR 10 YEARS		YES	YES
13	DRG. FOR TESTING ARRANGEMENT & TEST PROCEDURE TO BE ADOPTED		YES	
14	CERTIFICATE FOR FOLLOWING:		YES	
A	HYDRAULIC TESTING		YES	
B	NON DESTRUCTIVE TESTING		YES	
C	MATERIAL COMPOSITION & PHYSICAL PROPERTIES		YES	
D	LEAK PROOFNESS TEST OF FRAME		YES	
E	LUBE PUMP, FRAME OIL PUMP, HYD OIL PUMP		YES	
15	DESIGN / ACTUAL ASSEMBLY CLEARANCE CHART		YES	
16	TEST RECORDS OF FOLLOWING			

S. NO	DESCRIPTION	PRINTS WITH BID	CERTIFIED INFORMATION REQUIRED AFTER PURCHASE ORDER	
			FOR REVIEW	FOR RECORDS
A	MECHANICAL RUNNING S		YES	
B	PERFORMANCE TEST / PACKAGE TEST		YES	

C	NOISE LEVEL TEST YES		YES	
1 7	LIST OF SPECIAL TOOLS & TACKLES FOR INSTALLATION & MAINTENANCE	YES		YES
C	ELECTRIC MOTOR			
1	MOTOR DATA SHEET	YES	YES	
2	TECHNICAL LITERATURE / CATALOGUE, SELECTION CHARTS, NOMOGRAPHS ETC.		YES	YES
3	GA DRAWING		YES	
4	TERMINAL BOX ARRANGEMENT DRAWING		YES	
5	MOTOR CHARACTERISTIC CURVES		YES	
6	TORQUE SPEED CURVES		YES	
7	CURRENT TIME CURVES		YES	
8	P.F AND EFFICIENCY		YES	
9	TYPE TEST CERTIFICATES		YES	
1 0	CERTIFICATE FROM THE RELEVANT STATUTORY AUTHORITY (BASED ON THE COUNTRY OF MANUFACTURE) FOR SUITABILITY OF THE OFFERED MOTOR FOR INSTALLATION IN THE SPECIFIED AREA CLASSIFICATION		YES	
1 1	PRE-COMMISSIONING AND COMMISSIONING PROCEDURE		YES	
D	INSTRUMENTATION			
1	G.A. OF INSTRUMENT PANEL WITH BILL OF MATERIAL & WIRING DIG. FOR LCP		YES	
2	INSTRUMENT DATASHEET		YES	
3	LOGIC DIAGRAM / LADDER DIAGRAM / FUNCTIONAL DIAGRAM		YES	
4	LOOP SCHEMATIC		YES	
5	INTER CONNECTING DIAGRAM		YES	
6	OPERATING / CONTROL WRITE UP		YES	
7	ALARM / SHUT DOWN LIST		YES	
8	WIRING DIAGRAM / INTER		YES	
S. NO	DESCRIPTION	PRINTS WITH BID	CERTIFIED INFORMATION REQUIRED AFTER PURCHASE ORDER	
			FOR REVIEW	FOR RECORDS
	CONNECTING PIPING			
9	START UP AND SHUT DOWN WRITE UP		YES	
1 0	START UP AND SHUT DOWN INLET LOCK DIAGRAM		YES	

1 1	ALARM AND SHUTDOWN LIST WITH SET POINT		YES	
1 2	LOAD CONTROL PANEL LAYOUT		YES	
1 3	TERMINATION DIAGRAM, PANEL WIRING DETAIL		YES	
1 4	LOOP SCHEMATIC		YES	
1 5	INTER CONNECTING DIAGRAM		YES	
1 6	CABLE SCHEMATIC		YES	
1 7	BILL OF MATERIAL		YES	
1 8	TEST / INSPECTION CERTIFICATE		YES	
1 9	LIST OF RELIEF VALVES WITH SETTINGS		YES	
2 0	CERTIFICATE FROM THE RELEVANT STATUTORY AUTHORITY (BASED ON THE COUNTRY OF MANUFACTURE) FOR SUITABILITY OF THE OFFERED INSTRUMENTS FOR INSTALLATION IN THE SPECIFIED AREA CLASSIFICATION		YES	

ANNEXURE – VIII: DEVIATION SCHEDULE FOR CNG ON-LINE COMPRESSOR PACKAGE

Vendor:		
S.No	Vendor to specify Specification number and clause number against which Deviation is sought	Description of Deviation and give reasons in support of Deviation
	-----NO DEVIATION-----	-----NO DEVIATION-----

ANNEXURE – IX : M.R. COMPLIANCE SCHEDULE

Item: CNG ON-LINE COMPRESSOR PACKAGE		
Vendor:		
S. No.	Requirements	Compliance By Vendor (To Be Answered By Vendor)
1.0	Confirm compliance individually to following clauses of Job Specification.	
	Clause no 1.0	
	Clause no 2.0	
	Clause no 3.0	
	Clause no 4.0	
	Clause no 5.0	
	Clause no 6.0	
	Clause no 7.0	
	Clause no 8.0	
	Clause no 9.0	
	Clause no 10.0	
	Clause no 11.0	
	Clause no 12.0	
	Clause no 13.0	
	Clause no 14.0	
2.0	Confirm that you have filled-up the following Schedules/ Annexures and enclosed these with the Bid	
	Guarantee Parameters	
	Gas Composition	
	Mandatory Spares	
	Vendor List	
	Vendor Data Required	
	Experience Record Schedule for CNG Compressors Package	
	Deviation Schedule	
	Material Requisition Compliance Schedule	
	SCADA requirements	
3.0	Confirm that you have filled-up the Data Sheet	

	and enclosed with the Bid.	
	Compressor Data Sheet	
	Inter cooler Data Sheet	
	Control Valves	
	Solenoid Valves	
	Self-Actuated Pressure Control Valves	
	Pressure Relief Valve	
	Pressure Instruments	
	Pressure Gauges	
4.0	Confirm that following Documents have been enclosed with Bid.	
	List of components of CNG Compressor with Make & Specification of components alongwith Technical Catalogues of components.	
	Battery Limit (Interface) drawing/ information.	
	Process flow diagrams (PFDs) and Piping & Instrumentation diagrams (P & Ids) of sub systems and complete system with write-up on operation	
	Utility requirement	
	Detail of control wiring diagram, interlock/shutdown/ control scheme with write up on operation. Sizing calculation for instrument items.	

ANNEXURE –X: EXPERIENCE PROFORMA RECORD

A) EXPERIENCE RECORD PROFORMA OF ON-LINE COMPRESSOR PACKAGE				
SR. NO	DESCRIPTION	INFORMATION OFFERED COMPRESSOR		INFORMATION OF EXISTING COMPRESSOR
	REQUIREMENT AS PER TENDER	Min.: 1200 sm³/h		
1	Status of bidder			
	a) Compressor manufacturer			
	b) Electric Motor manufacturer			
	c) Packager			
2	COMPRESSOR			
	Name of compressor manufacturer			
	Place of compressor manufacturer			
	Compressor model			
	Anticipated Life in running hours			
	Compressor max frame BkW			
	Comp Manufacturing code			
	Lubricated or non-lubricated			
	Nos of stages			
	Max stage temperature °C (150°C)			
	Compressor max RPM			
	Compressor operating RPM			
	Piston speed m/s			
	Vibrations at comp cylinders <10 mm / sec. Unfiltered peak velocity Vibration comp frame : Unfiltered peak velocity of 5 mm/sec or as per IEC code unfiltered peak to peak vibration whichever is less			
	Material for all stages			
	Cylinder (C.S)			
	Piston Rings (PTFE)			
	Rider Rings (PTFE)			
	Piston Rod (Forged steel)			
	Valve (Rings / plates / spring) : (SS/SS/SS)			
3	PERFORMANCE OF COMPRESSOR			
	GUARANTEED POINT:			
A	Average Flow capacity (overfull range of suction pressure from 14 barg to 19 barg varying on continuous basis)			

A) EXPERIENCE RECORD PROFORMA OF ON-LINE COMPRESSOR PACKAGE				
SR. NO	DESCRIPTION	INFORMATION OFFERED COMPRESSOR		INFORMATION OF EXISTING COMPRESSOR
	REQUIREMENT AS PER TENDER	Min.: 1200 sm3/h		
B	Minimum Flow capacity corresponding to suction pressure of 14 barg.			
C	BKW required by compressor including compressor's lube oil pump BKW			
D	Power required for all fans including radiator fan in Kw			
E	Ventilation fans for enclosure No of fans Type of fans (included or forced draft)			
F	Site Capacity of Motor (max of "B+D" above) * 1.1			
	Piston rod and cross head pin loading at any specified operating condition including the relief valve set condition shall not exceed 80% of the maximum design rod load of the offered compressor			
	---- Piston rod : max design			
	--- Piston rod: calculated at safety set pr condition			
	--- Max cross head pin loading: Design ‘			
	--- Cross head pin loading: calculated at safety set pr condition			
	Guaranteed gas loss through rod deals; sm3/h			
	Other information of compressor			
	a) Year of manufacturing of the compressor			
	b) Name and address of user with FAX no, phone no, E-mail address			
	c) Nos of hours the compressor have clocked on bid due date (Enclose certificate from user)			
4	ELECTRIC MOTOR			
	Make			
	Model			
	Rating			
	Speed			

A) EXPERIENCE RECORD PROFORMA OF ON-LINE COMPRESSOR PACKAGE				
SR. NO	DESCRIPTION	INFORMATION OFFERED COMPRESSOR		INFORMATION OF EXISTING COMPRESSOR
	REQUIREMENT AS PER TENDER	Min.: 1200 sm3/h		
5	PACKAGE			
	Name of Packager			
	Place of Packaging			
	Name of Enclosure Manufacturer			
	Palace of enclosure manufacturer			
	Sound level at 1 m distance from package in db (A) 75+3			
	Skid size (LxBxH)			
	Skid Gross Weight (Comp. + Motor + Aux.) Kg			
	Make and model LEL detector – 2 no. each comp			
	Make and model fire detector – 2 no. each comp			
	2 nos. min C02 cylinder with online weight monitoring.			
	Volume of enclosure in m3			
	Nos. of explosion proof tube light in each enclosure			
	Coupling Direct / V – belt			
	Other information of complete package			
	a) Year and place of manufacturing of the package			
	b) Name and address of user with FAX no, phone no, E-mail address			
	c) Nos of hours the complete package have clocked on bid date (enclose certificate from user)			
7	Gas recovery system			
	Gas recovery system with pr relief valve, pr regulator, pr gauge, manual & automatic drainage system			
8	Gas Delivery system			
	High pr piping with SS 316, tubing, compression fittings, NRV			

A) EXPERIENCE RECORD PROFORMA OF ON-LINE COMPRESSOR PACKAGE				
SR. NO	DESCRIPTION	INFORMATION OFFERED COMPRESSOR		INFORMATION OF EXISTING COMPRESSOR
	REQUIREMENT AS PER TENDER	Min.: 1200 sm3/h		
	KOD			
	Coalescent filter			
	PLC based Priority panel with full bore ball valve			
	Final gas outlet connection from priority panel 3/4" SS valves and 1" OD SS compression fittings			
9	ESD system			
10	Volume bottles / dampers at each compressor stage of compressor			
	Vessels			
	Drainage system			
11	Manual double isolation valve			
12	Automatic valves			
13	Heat exchanger			
14	Code of construction API 661			
15	Gas sections of coolers shall be as per API – 11P requirements			
16	Tube material			
17	Piping between stages shall be continuous with flange connection			
18	Other tubing shall be SS 304/ 316 as per TS.			
19	Gas recovery vessel provided			
20	Area classification; " class 1, group D, division 1 as per NEC " OR " Zone 1, group IIA / IIB as per IS/IEC"			
21	The size of the complete package			
25	Instrumentation as indicated in TS			
30	Cabling – Double compression type cable glands and copper lugs			
31	Junction box with metallic enclosure			

ANNEXURE – XI: PARAMETERS FOR SCADA

Parameters required for SCADA

We want to monitor / control all parameters available on the PLC through SCADA system.

Hardware Details: Connector Type, Communication Standard, Communication port Pin details,

Communication Port Configuration: Baud Rate, data bits, stop bit, parity

Polling Constraints: Minimum time period between two consecutive poll cycles.

Protocol Details: Protocol name and message structure for different read / write functions.

Function codes for reading digital and Analog inputs

Function code for writing analog values in the IED registers

List of parameters available in the IED which can be accessed from the IED through serial port.

Register address of each parameter in the IED.

A Sample of the details is given below for understanding:

PROTOCOL DETAILS:

Sr. No.	Description	Content/Details
1	Protocol	MODBUS RTU
2	Connection Type	FCC –68 RJ45
3	Communication standard	RS232D
4	Signals supplied	Tx, Rx, GND
5	Baud Rate(Speed)	300, 600,1200,4800,9600,19200
6	Format	Software configurable
7	Port Configuration	Speed : 19,200 bps Data Bits : 8 Bits Stop Bit: 1 Bit Parity : None
8	Min. Time period between consecutive Query	2 Sec.

Memory Mapping, Data Type & Parameter Information:

A. Digital Parameters:

Sr. No.	Description	Address
1	Flow computer malfunction Alarm	
2	Mass Flow Low alarm	
3	Mass Flow High alarm	

B. Analog Parameters:

Parameter	Register details			
	Engineering Range and Unit	GC Register	Register Format	
Density	Kg/m3			
Pressure				
Temperature				
Mass Flow Rate				
Totalized mass flow				

Yesterday's Total Mass flow				
Today's Total Mass Flow				
Corrected volumetric Flow rate				
Yesterday's Total corrected Volumetric Flow				
Totalized Mass Flow at 6 AM (Snapshot of cumulative)				

ANNEXURE – XII

QUALITY ASSURANCE PLAN

Sr. No	Description	Quantum of Check	Reference Document	Acceptance Norms	Format Of Records	Inspection By			Remarks
						Vendor	TPIA	Owner/ Owner's Representative	
1.1	Hydrotest of Cylinder, Press. Vessels, Heat Exchangers		Technical Specification	Technical Specification	Test Report	W	W	R	
1.2	Hydrotest of Cylinder Heads		Technical Specification	Technical Specification	Test Report	W	R	R	
1.3	Leak Proof Test of Crank Case (4 Hours . with Kerosene) Refer Note :4		Technical Specification	Technical Specification	Test Report	W	W	R	
1.4	Ultrasonic Test of - Crank Shaft, Connecting Rod, Piston Rod Etc. Refer Note: 1		Technical Specification	Technical Specification	Test Report	R	R	R	
1.5	Magnetic Particle Test of - Crank Shaft, connecting Rod., Piston Rod Refer Note: 1		Technical Specification	Technical Specification	Test Report	R	R	R	
1.6	Radiography as Applicable - Pressure Vessels, Heat Exchanger. Gas Piping (Only 10% Joints To Be Witnessed)	10% Witness	Technical Specification	Technical Specification	Test Report	R	W	W	
1.7	Barring Over to check Cylinder End Clearance And Piston Rod Runout		Technical Specification	Technical Specification	Test Report	W	W	W	
1.8	No Load Mechanical Run Test Of the Compr. with Rated (Or More) Speed And Shop Driver. (4 Hrs. Min.)		Technical Specification	Technical Specification	Test Report	W	W	W	

1.9	Strip Check And Internal Inspection After "NLMRT" Of All Compressors Refer Note: 2		Technical Specification	Technical Specification	Test Report	W	W	W	
1.10	Electric Motor Performance Test- at Sub-Vendor's Works as per ISO Std. Refer Note: 3		Technical Specification	Technical Specification	Performance Test Report	R	R	R	
1.11	Material Test Certificates for: Crank Shaft, Connecting Rods, Cylinder Liner, Piston (Compliance Cert.), Pressure Vessels, Heat Exchanger		Technical Specification	Technical Specification	MTC	R	R	R	
1.12	Canopy Structure Painting Inspection At Works. Surface Preparation to be Inspected after cleaning and before application of First Coat of Primer.		Technical Specification	Technical Specification	Inspection Report	W	W	W	
1.13	Functional / HV / Continuity Test for Control Panel (at Sub Vendor's Works)		Technical Specification	Technical Specification	Test Report	W	W	W	
1.14	Mechanical String Test for 4 Hours, 10% of Package Lot for CNG Compressor	10% of Each Package Lot	Technical Specification	Technical Specification	Test Report	W	W	W	
1.15	Test Certificates For - Safety Switches, Safety Relief Valves, Solenoid Valves		Technical Specification	Technical Specification	Test Certificate	R	R	R	
1.16	Final Mock-Up Assembly of the Package - As Per GAFD, P& I Drawings. Wiring Diagram		Technical Specification	Technical Specification	P&ID, Wiring Diagram	W	R	R	
1.17	Performance Test at site at Guaranteed Parameters.		Technical Specification	Technical Specification	Performance Test Report	W	W	W	
1.18	Field Trial Run for 72 Hrs.		Technical Specification	Technical Specification	Field Trial run report	W	W	W	
LEGENDS:		W = WITNESS, R = REVIEW OF DOCUMENTS, Y = DOC. SUBMISSION BY VENDOR / SUB-VENDOR							
NOTES:									

1	Crank Shaft, Connecting Rod: UT / MPT shall be conducted in either in forging-OR-in finish condition
2	Strip test is limited to open Crank Case cover, Crosshead guide & Distance piece. Cover and opening of bore & other (sails. Piston one valve per cylinder).
3	Review of manufacturer's test reports/certificates of all compressor package.
4	Witness of tests by TPIA or owner/owner's representative.
5	Inspection of the components / assembly, shall be conducted as per standard Test Procedures.
6	All reference codes/ Standards, documents, P.O. copies shall be arranged by vendor/ supplier for reference of Owner / Owner's representative / TPIA at the time of inspection.
7	The owner shall submit their own detailed QAP prepared on the basis of above technical specification for approval of Owner/ Owner's representative.
NOTE:	TPIA (THIRD PARTY INSPECTION AGENCY WILL BE APPOINTED BY SUPPLIER AFTER DUE APPROVAL FROM OWNER.

ANNEXURE - XIII DATA SHEET

DATA SHEET: MEDIUM VOLTAGE SQUIRREL CAGE INDUCTION MOTOR ELECTRICAL DESIGN DATA

1.	Motor tag no.			
2.	Voltage (V)	415V $\pm$ 10%	Phase 3	Frequency (Hz.) 50 Hz+3%
3.	Fault level (KA)	NOT APPLICABLE		
4.	Method of starting	VFD		
5.	Phase	THREE	Connection – VFD Starter	No. of terminal – 6
6.	Design Ambient temp (⁰ c)	50 ⁰C (IN ACCOUSTIC ENCLOSURE)		Temp. rise (⁰ c) 70 ⁰C (Maximum)
7.	Cable size (mm ²)	AS PER SPEC ATTACHED		Type CU. COND. PVC INS.
8.	Enclosure type	IP 55, Ex-d, IIA, IIB,T3		Cooling TEFC
9.	Insulation class	CLASS-F with temperature rise of CLASS B		
10.	Haz. Area classification/ Gas Group	ZONE-1, GROUP-IIA, IIB, Temp Class T3 as per IS/IEC		
11.	Type of explosion protection: Ex (d)		Applicable standards: IS/IEC	
Technical particulars from Driven equipment manufacturer				
12.	Suggested Motor Rating in KW/ Manufacturer	# / #		
13.	Shaft kw/kw at end of curve	# / #		
14.	Speed/ rotation of equipment from Coupling End	# / #		
15.	Starting/ max. Torque required (mkg)	# / #		
16.	WK ² of equipment including/ excluding lywheel	# / #		

	(kgm ²)			
17.	Thrust up/ down (kg)		# / #	
18.	Equipment/ coupling type		# / #	
19.	Starting Condition-On no load/ Under loaded condition		#	
Technical particulars from motor manufacturer				
20.	Manufacturer	*		
21.	KW Rating	*	No. of poles	*
22.	Frame designation	*	Mounting (Horizontal)	*
23.	Full load speed (Max. 1500 rpm)	*	Full load Torque (mkg)	*
24.	Starting torque as % of full load torque	*		
25.	Full load current (A)	*		
26.	Starting current at 100% Voltage (A)	*		
27.	Breakdown or pull out torque %	*		
28.	Rotation viewed from coupling end	*		
29.	Starting time at 75%V	* (sec.)	Starting time at 100%V	* (sec)
30.	Time (Te) for increased safety motors at 100% Voltage (secs.)		NOT APPLICABLE	
31.	Locked rotor with stand time cold/ hot at 75% V(sec)	*	At 100% V(sec)	*
32.	WK ² of motor (kg m ²)	*		
33.	Power factor at 100% load	*	Power Factor at 75% load	*
34.	Efficiency at 100% load	*	Efficiency at 75% load	*
35.	Space heater watts/ volts	*/ 240V AC		
36.	Bearing type/ no. DE	*/*	Bearing type/ no. NDE	*/*
37.	Type of Lubrication	*		
38.	Weight of motor (kg)	*		
39.	Canopy required/ Not required	NOT REQUIRED		

TO BE FILLED BY BIDDER BASED ON THE PACKAGE DESIGN

* TO BE FILLED BY MOTOR MANUFACTURER

Bidder must quote for only one make of motor. Bidder shall submit filled up data sheet for the selected

make of motor only.

Motor Terminal Box must be suitable for the cable size indicated on data sheet.

POWER CABLE SIZES FOR 415V MOTORS

S.No.	Motor Rating KW	CABLE SIZE mm ²	No. of Cores	CABLE DIAMETER – mm (APPROX)		
				Overall	Under Armour	Over Armours
		CU				
	Below 3.7 KW	4	3			
	3.7	6	3			
	5.5	10	3			
	7.5	10	3			
	11.0	16	3			
	15.0	16	3			
	18.5	16	3			
	22.0	16	3			
	30.0	25	3			
	37.0	25	3			
	45.0	35	3			
	55.0	50	3			
	75.0	95	3			
	90.0	120	3			
	110.0	2x95	3			
	125.0	2x120	3			
	132.0	2x120	3			

- NOTES:
1. Above table is valid for 2/4/6 pole motors. For low speed motors cable sizes shall be defined at the time of detail engineering.
 2. Cable size for motor space heater shall be 3x2.5 mm² with Cu Conductor.
 3. Cables will be 650/1100V, copper conductor, FRLS-PVC insulated, FRLS-PVC extruded inner sheath armoured with overall FRLS-PVC sheath.

DATA SHEET: PRESSURE, VESSEL

(To be filled in by the Vendor)

PROJECT UNIT

ITEM NO.

EQUIPMENT

CLIENT

JOB NO. PACKAGE MR. NO.

CODE FOR DESIGN AND CONSTRUCTION ASME SEC-VIII DIV1

DESIGN CONDITION

PRESSURE (kg./ cm²g)

TEMPERATURE (0C) OPERATING

CONDITIONS

PRESSURE (kg./ cm²g)

TEMPERATURE (0C)

CORROSION ALLOWANCE 3 MM

SERVICE CNG LETHAL [X] OTHERS CO₂

LIQUID LEVEL (mm)

SPECIAL SURFACE FINISH INSIDE VESSEL REQD. [] NOT REQD. []

TYPE OF VESSEL HORIZONTAL [] VERTICAL []

DIAMETER (mm)

HEIGHT TL TL (mm)

SKIRT/ LEG HEIGHT

JOINT EFFICIENCY SHELL 1.0 HEAD 1.0

RADIOGRAPHY SHELL 100% HEAD 100%

POST WELD HEAT TREATMENT

MATERIALS OF CONSTRUCTION SA 516 GR 60/70

SHELL, REINFORCEMENT PADS

HEADS/ CONES

SHELL FLANGES

NOZZLE FLANGES

NOZZLE NECK MAN-

WAY NECK PIPE

FITTINGS

GASKETS (EXTERNAL)

GASKET (INTERNAL) SKIRT/

LEG SUPPORT INTERNAL

PARTS EXTERNAL PARTS

INTERNAL BOLTS/ NUTS

CLIP ATTACHMENTS (EXTERNAL) ANY

OTHER GENERAL REQUIREMENT

NOTE: VENDOR SHALL SUBMIT COMPLETED DATA SHEET ALONG WITH OFFER WHEREVER ENGG. DRAWING IS NOT ATTACHED FOR THE VESSEL.

1. DOCUMENT DISTRIBUTION SCHEDULE

- 1.1. Documents and drawings under column no. 3 shall be submitted with each copy of the bid.
- 1.2. Documents listed under column 4 are to be submitted in 4 copies
- 1.3. Documents listed in column 5 are to be submitted as hard bound indexed book containing the following details in Two (2) copies and to be submitted within 4 weeks of release note/dispatch of materials/ equipment from vendor's works.

2. DETAILS TO BE INCLUDED IN FINAL DOCUMENTS BOOKS

- 2.1. Copy of P.O. and all amendments.
- 2.2. Copy of Purchase Requisition and all amendments.
- 2.3. Manufacturing Data Book containing all test certificates of components, raw materials, stage manufacturing tests and inspections, final tests & inspection documents including welders' qualification & welding procedure qualification, repairs & reworking carried out in shops. All raw material test certificates must be correlated to the P.O. Item No. & component to which they relate by clear noting on the certificates.
- 2.4. Spares details including assembly drawings, part numbers, delivery, prices and ordering information.
- 2.5. All design calculations carried out by the vendor.
- 2.6. Final Drawing Index and all as-built drawings reduced to A3/ A4 size and wherever reduction is not possible, full size copies duly folded and placed in plastic pockets.
- 2.7. Catalogues/leaflets of sub-vendors/suppliers of various bought out components highlighting the components actually supplied correlated to P.O. Item Numbers.
- 2.8. Operating and maintenance instructions including lubrication schedules with details of suppliers for procurement by OWNER for subsequent needs.
- 2.9. Release Note and Packing List.
- 2.10. Any other documents asked for in the Purchase Requisition.
- 2.11. All final drawings shall also be given to purchaser in digitized form on CD-ROM compatible to AUTOCAD software.
- 2.12. Final documents including operation and maintenance manual should be submitted, one copy per package plus one original.
- 2.13. Operation and maintenance manual shall include assembly and disassembly, specification (torque chart), parts manual, complete list of bill of material, bought out spares and accessories. One original plus individual copies for the no. of compressor packages supplied.

3. SPECIAL INSTRUCTIONS FOR SUBMISSION OF DWGS./DOCUMENTS:

- 3.1. Fold all prints to 216 MM x 279 MM size & roll transparencies.
- 3.2. Contractor to forward the drawings and documentation to OWNER (Attention vendor prints control department) clearly specifying purchasers Job no. & Req. No.
- 3.3. The drawing/Document no. with Rev. No. is essential. The number may be upto a maximum of 28 characters in length.
- 3.4. Each Drawing/Document submitted to OWNER must be checked and signed/stamped by contractor before it is submitted to OWNER.
- 3.5. Revision number must change during subsequent submission of vendor document.
- 3.6. Multi-sheet documents other than drawings must be submitted in their entirety in the event of a re-submission even if only a few sheets are revised.
- 3.7. Final submission in bound volumes shall necessarily have a cover page giving project title, Item name, P.O. No. particulars of owner, consultant & vendor and an index giving list of drawings & documents included (with revision no.).
- 3.8. All vendor drawings to be provided with a blank space measuring 75 mm W x 38 mm H for marking of review codes etc. by OWNER.
- 3.9. The review of the vendor drawings shall be done by OWNER, as applicable, under the following review codes:

Review Code 1	No comments.
Review Code 2	Proceed with manufacture/fabrication as per commented drawings. Revise drawings required
Review Code 3	Document does not conform to basic requirements.

- 3.10. Review of vendor drawings by OWNER would be only to check compatibility with basic designs & concepts & would in no way absolve the contractor/vendor of his responsibility to meet applicable codes, specifications & statutory rules/regulations.

Vendor shall submit within 10 days after placement of FOI, the complete list of drawings/ documents with submission dates against each. Critical drawings, only, the list of which will be agreed during kick-off meeting shall be reviewed jointly at OWNER's office.

**TECHNICAL SPECIFICATION
FOR
1200 SCMH GAS ENGINE DRIVEN CNG RECIPROCATING COMPRESSOR**

CONTENTS

SL NO:	DESCRIPTION
1.	GENERAL
2.	UTILITIES & BATTERY LIMITS
3.	EQUIPMENT QUALIFICATION CRITERIA
4.	BASIC DESIGN
5.	ELECTRICS AND INSTRUMENTATION CONTROL
6.	INSPECTION AND TESTING
7.	PRICE LOADING AND COMPENSATION FOR UNDER PERFORMANCE
8.	PAINTING AND PROTECTION
9.	ERECTION, TESTING AND COMMISSIONING AT SITE
10.	FIELD TRIAL RUN
11.	SPARE PARTS, SPECIAL TOOLS AND TACKLES
12.	DATA AND DRAWING
13.	OPERATION & MAINTENANCE SERVICES
14.	GUARANTEED PARAMETERS OF COMPRESSOR
15.	GAS COMPOSITION.
16.	CLIMATE
17.	DATA SHEET OF COMPRESSOR
18.	DATA SHEET OF GAS ENGINE
19.	DATA SHEET OF DETECTORS
20.	OPERATING CONDITIONS & EXPERIENCE RECORD OF GAS ENGINE DRIVEN COMPRESSOR
21.	EXPERIENCE RECORD PROGRAMME OF GAS ENGINE DRIVEN COMPRESSOR
22.	LIST OF INSTRUMENTATION & CONTROLS
23.	QUALITY ASSURANCE PLAN
24.	PREFERRED MAKES
25.	CHECKLIST
26.	DRAWINGS ENCLOSED
27.	FORMAT OF DEVIATION TO THE TECHNICAL SPECIFICATION.

1.0 Scope

1.0.1 This specification along with applicable codes as referred, describe the minimum requirements for design, engineering, manufacturing, assembly, string testing, packaging, supply including forwarding, insurance, custom clearance, handling and unloading at port and delivery & unloading at Client's store /site. Further, re-transportation of the package from the store to the actual site/ station as applicable to the foreign and Indian bidders as per price schedule and special conditions of contract. Erection, testing, commissioning, Field performance test of Compressor Package including air compressor and auxiliaries at site, comprehensive O&M service (During warranty period and post warrantee period, as per SOR / MR) of 1200 SCMH capacity "GAS ENGINE DRIVEN RECIPROCATING GAS COMPRESSOR PACKAGES" at a suction pressure of 17.5 kg/cm² (g), inlet line pressure range of 16 – 49 kg/cm²(g) (performance range 16 to 19 kg/cm²(g)) with discharge pressure 255 kg/cm² (g) as required for dispensing CNG to vehicles at various locations as defined in the MR / SOR. Various parts of this specification along with applicable codes and standards as referred shall be read in conjunction with each other and further in case of any ambiguity / confliction the more stringent requirement shall govern.

Any additional work / equipment or technical requirement not mentioned in the specification but required to make the offered system complete in accordance with the specification and for safe and proper operation, shall be deemed to be included in the scope of work by the Bidder.

1.1 Codes & Standards

The design, construction, manufacture, supply, testing and other general requirements of the compressor package equipment shall be strictly in accordance with the data sheets, applicable API codes, and shall comply fully with relevant National/ International standards, Indian Electricity Act, Indian Electricity Rules, regulations of Insurance Association of India and Factories Act while carrying out work as per this specification.

Any modification suggested by the statutory bodies either during drawing approval or during inspection, if any, shall be carried out by the Bidder without any additional cost and delivery implications.

The following codes and standards (versions/ revisions valid on the date of order) are referenced to & made part of specification:

API-11P, Second edition, API 618

ISO 13631-2002: Petroleum and natural gas industries packaged reciprocating gas compressors

PNGRB regulations

OISD 179-2016: Safety requirements on compression, storage, handling, refuelling natural gas (CNG) for use in automotive sector.

ASME B 31.3 -2016 – Process piping

NFPA-37-2015: Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines

NFPA-52: 2016- Vehicular natural gas fuel systems code

NFPA-496-2017: Standard for purged and pressurized enclosures for electrical equipment.

NFPA-68 -2013: Standard on explosion protection by deflagration

venting. NFPA-70 -2017: National electrical code

NFPA 12-2015: Standard on Carbon dioxide extinguishing system

ASME Sec IX: Qualification Standard for Welding and Brazing Procedures, Welders, Brazers, and Welding and Brazing Operators

Gas Cylinder rules-2016

ANSI, ASTM, NEC, NEMA, Indian Electricity Rules, Indian Explosives Act.

1.2 **Precedence**

In case of any conflict among the various documents of this requisition the following preferential order shall govern:

1. Data sheets/drawings
2. This Technical Specification
3. International standards/codes as applicable
4. Indian Standards / codes applicable

Compliance with this specification shall not relieve the Bidder of the responsibility of furnishing equipment and accessories of proper design, material and workmanship to meet the specified operating conditions.

No deviations to the technical requirements and to the scope of supply specified in this enquiry document shall normally be accepted and offers not in compliance to the same shall be rejected summarily. In case a deviation is required due to inherent design of the equipment offered, the Bidder shall list all such deviations at one place giving reasons thereon.

1.3 **DOCUMENTS/DATA REQUIRED ALONG WITH BID**

Bidder shall necessarily furnish the following along with the bid:

1. Proven Track Record Formats duly filled in
2. Checklist duly filled in with regards to scope of supply
3. Completely filled in Data Sheets of compressor, gas engine and electric motors.
4. Deviations, if any, to this Technical Specification
5. Tentative Lay out / key plan/ General Arrangement indicating size of skids, center distance between skids and space required along with maintenance requirements.
(a) Utilities requirements (b) Electrical Load summary
6. Catalogues of compressor, gas engine and instrumentation items.

1.4 **SCOPE OF SERVICES**

1. Engineering, design and manufacturing.
2. Procurement of raw materials etc., from sub-vendors.
3. Preparation of documentation for design, approval by Purchaser/consultant.
4. Inspection and testing as per Technical specification / Quality assurance plan.
5. Surface preparation, protective coating and painting as per Technical specification.
6. Packaging for transportation to site and supply.
7. Erection, testing & commissioning as per Technical specification.
8. Field trial run and performance test at site.
9. Post commissioning annual maintenance with all spares and consumables.

1.5 **SCOPE OF SUPPLY FOR EACH COMPRESSOR PACKAGE**

Each compressor Package shall be complete with:

- ▶ Lubricated or non-lubricated two throw balanced opposed reciprocating compressor / trunk piston design compressor block with lube oil system and cooling system (console type) as required.
- ▶ Gas engine as compressor driver.
- ▶ Gas meter (3 nos.): Endress & Hauser make or Mass flow meter (Model Emerson CNG 50 with integral local display) based on Coriolis principle of Micro motion, USA with F- series 2700 transmitter at compressor discharge, F-series with 1700 transmitter at compressor suction and gas engine fuel consumption. Installation and manufacturing of mass flow meter shall be as per as per

AGA-11. While installing special care shall be taken to isolate the mass flow meter from piping vibration. Mass flow meter (Model CNG mass DCI with integral local display) based on Coriolis principle shall be considered. The mass flow meter shall be W&M approved only.

- ▶ Instrumentation and control system as specified on data sheets, P&ID including Local panel, Console/Local gauge boards, PLC
- ▶ Laptop, if specified in MR/SOR, along with cable to connect to PLC to view the data online/offline, analyse the data online/offline, change the programming if desired. Laptop is to be supplied along with the compressor (s)
- ▶ Electrical equipment / Instruments indicated in the technical specification.
- ▶ 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 upto PLC panel.
- ▶ All cables and accessories shall be as specified in this specification.
- ▶ Common structural steel skid for the compressor- gas engine and for all auxiliary systems.
- ▶ Structural supports within the compressor package for all piping, electrical and instruments etc
- ▶ Inlet twin suction gas filter of filtration level upto 5 micron with oil drain valve & differential pressure gauge and suction line strainer at 1st stage and at other stage, if required. A basket strainer of filtration level upto 5 micron with oil drain valve & DP gauge shall also be installed in the inlet pipe after the isolation valve to be installed by the contractor at the battery limit.
- ▶ Inter-stage and discharge gas, air cooled heat exchanger.
- ▶ Exhaust fan in the enclosure, if required, in addition to the cooling fan of the heat exchanger.(see 4.12.1)
- ▶ Separator/ Knockout drums/volume bottles with drains operated by solenoid valves, as required. Bypass valves for automatic drain system shall be as per manufacturer's recommendation.
- ▶ Priority Panel at Package discharge as per Priority fill system.
- ▶ All interconnecting oil, gas, water, air piping within the compressor package.
- ▶ Impulse and pneumatic piping/Tubing for all valves, fittings as specified & required for mounting the instruments.
- ▶ NRV at gas suction, final discharge point, LCV and priority panel as required.
- ▶ Over ride facility in LCP to fill LCV in priority panel of compressors shall be provided.
- ▶ Y- type strainers, valves, sight flow indicators, check valves, 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.
- ▶ Coupling/V-belt/pulleys.
- ▶ Copper jumpers for all the flange joints of piping outside the compressor package.
- ▶ Single Acoustic enclosure for both Compressor and gas engine, with two number Lower explosive limit (L.E.L) detectors and two Ultraviolet (UV) /IR (infra-red) detectors in enclosure.
- ▶ CO₂ extinguishing system consisting of two cylinders, piping and valves. Inlet and outlet manual & automatic isolating valves.
- ▶ Piping from air compressor and CO₂ cylinders up to enclosures at a max. distance of 30m each is in the scope of bidder and shall be treated as part of supply & erection
- ▶ Each stage outlet temperature before cooler & after cooler to be displayed on PLC.
- ▶ For each compressor, 5 no. ESDs (One on compressor, One on LCP of compressor, One in control room, One in process area, One near dispenser).
- ▶ CCOE/BIS approvals of cylinders used in CO₂ flooding system to be submitted.
- ▶ Priority Panel shall be fully operated through PLC (Pneumatic Actuated Valves).
- ▶ Gas flow directions to be marked "Gas In/ Gas out" with cylinder stage No. on all the inlet outlet tubes inside compressor package.
- ▶ Priority panel outlet connection shall be terminated through ¾" OD full flow ball valves with ¾" Tube OD end connections except Bus cascade and bus dispenser lines. Bus cascade and Bus dispenser lines shall be terminated through ¾" OD full flow ball valves with ¾" x 1" expander to connect 1 " tube.

- ▶ Bidder shall furnish a basket strainer fitted with adequate size mesh at the gas inlet. The free area of the strainer element shall be at least four (4) times the internal area of the connecting pipe lines. Flow area in any portion of Basket strainer assembly shall not be less than the pipe cross sectional area. The strainer element shall be with the mesh of 5 micron. Pressure drop in clean condition shall not be more than 4.0 MWC. Wire mesh of the strainers shall be suitably reinforced, to avoid buckling under operation. Strainer shall have screwed blow off connection fitted with a removable plug. The strainer will have a permanent stainless steel tag fixed on the strainer body indicating the strainer tag number and service and other salient data. The size of the strainer and the flow direction will be indicated on the strainer body casting. Thickness of the strainer element should be designed to withstand the pressure developed within the strainer due to 100% clogged condition exerting shut-off pressure on the element.
- ▶ Vendor to provide 1 set of NO/NC contact (NO/NC Rating: 230 V AC, 5A). This contact shall changeover whenever ESD switch is activated
- ▶ All gas piping downstream of coalescent filter in compressor discharge shall be of SS 316 only.
- ▶ The pressure in each bank shall be monitored through priority panel with the help of PLC by providing PT in each bank in priority panel.
- ▶ Pre alarm to be incorporated in the software before machine trips in predefined values of Pressure & temperatures
- ▶ Complete Erection, Testing & Commissioning of compressor packages.
- ▶ Structural supports required for fixing of piping, ESDs & PVC clamps for SS tubes are also included and to be erected, as required, at site of the package. Anchor fasteners for air receiver, air compressor, air dryer, CO2 flooding system, ESDs are also included and to be erected at site during installation of the package
 - ▶ To cater to the normal power supply requirement :-
 - a) One number of 415 Volt ($\pm 10\%$) 3-phases 4 Wire, 50 Hz ($\pm 5\%$) shall be provided by client in PDB feeder for Air compressor.
 - b) One number of 240 V ($\pm 10\%$), 1 Phase, and 50 Hz ($\pm 5\%$) shall be provided by client in PDB feeder for Air Dryer.

Bidder shall indicate power/ Feeder (KW/Amp) requirement in the offer. Supply, Laying & termination of the cable from the outgoing terminal of PDB/LDB and further distribution is in the scope of bidder.

- ▶ To cater to the UPS power requirement of the compressor for PLC based control panel, one UPS (240 $\pm 1\%$ V, 50 $\pm 1\%$ Hz) (feeder in UPS ACDB) shall be provided by Owner. Supply, Laying & termination of incoming cable from ACDB to Compressor and further downward distribution is in the scope of the Bidder. Bidder shall indicate power/ feeder (KW/Amp) requirement in the offer. Surge protection devices of approved make shall be provided in the control panel.
- i. Supply, Laying and Termination of following cables including all erection accessories like Lugs, Glands etc is included in the scope of bidder:
 - a. Cables from PDB to compressor skid (Length shall be considered as 75 meter).
 - b. Cables from compressor to hooter and up to ESD push button in control room (Length shall be considered as 75 meter).
 - c. Cables from compressor to ESD push button near dispenser (Length shall be considered as 200 meter).
 - d. Cables from compressor to ESD push button in field (Length shall be considered as 150 meter).
 - e. Cables from PDB to Air compressor (Length shall be considered as 50 meter).
 - f. Cables from LDB to Air Dryer (Length shall be considered as 50 meter).
 - g. Cables from CO2 flooding system to Compressor (Length shall be considered as 30 meter).
 - h. Cables from ACDB to compressor skid for PLC based control panel (Length shall be considered as 100 meter).
 - i. Cables from manual switch/call point of CO2 flooding system (located in control room) to compressor skid. (Length shall be considered as 75 meter).

- j. Suitable arrangement like cable trays, conduits etc shall be used for laying the cable.
- ▶ One number of dedicated Electronic earth pit shall be provided for the PLC based control panel of compressor at a distance of 5 meter from the compressor by Owner. However cabling from the pit to the PLC based control panel and further distribution is in the scope of bidder. For earthing of the body of the Gas compressor, Air Compressor, Dryer and other components, an earth grid will be provided at a distance of 5 meter from the compressor package. Cabling from the grid to the Gas Compressor, Air Compressor & Air Dryer shall be done through GI strip of 25X3 mm/cable of 1C X 10 sq.mm, Copper conductor whereas for panel it shall be done using Cu Strip of 25x3 mm/ cable of 1Cx10 sq.mm, Copper conductor including all accessories like lugs, glands etc is included in the scope of Bidder.
 - ▶ Comprehensive Annual O&M, as indicated in the MR / SOR with spares, consumables, man power and lubricants
 - ▶ During AMC, Vendor has to provide dedicated mobile phone & number for each site/compressor. Client shall not pay any extra charges towards phone & monthly bills.
 - ▶ Foundation bolts and aligning & leveling material
 - ▶ All spares, consumables, man power and lubricants during O & M warranty period
 - ▶ O&M charges (post warranty) with spares, consumables, man power and lubricants including complete overhauling of compressor & engine, as required.
 - ▶ CR corrugated sheets with minimum thickness of 16g for door & louvers and 18g for side walls shall be used. However in case SS sheets it shall be as per manufacturer's standard design.
 - ▶ Following documents shall be submitted by the successful bidder:
 - Pressure vessel thickness calculations to be submitted.
 - Preventive maintenances schedule.
 - Fan motor flame proof certificate to be submitted.
 - Spares parts manual (along with cross-sectional details) for the package required.
 - All documents/certificates shall be in English Language Only. No other language is permitted.

Any conflict between the above scope / specification / requirements, most stringent will be followed as per the instruction of EIC.

c) **Exclusions**

The following are excluded from the scope of the Bidder:

- a. All civil works and foundation design. However the Bidder shall furnish all the relevant data for design of pedestal/ foundation. Grouting of equipment on the foundation including supply of material with foundation bolts (if required for bidder's design) is a part of erection and is included in the scope of bidder's work.
- b. CNG storage cascade.
- c. Piping between priority panel to cascade/dispenser.

d) **Safety**

- All controls shall operate in a fail-safe mode i.e. failure of any control shall not lead to running of equipment in unsafe mode. Fail safe control shall be available through both software and hardware for all trips.
- Area Classification: The hazardous area classification Class-I, Division I, Group D as per NEC or Zone I, Group II A/ II B as per IS/ IEC. Certificate from recognized agency to the effect that equipment supplied and/or installed conform to above area classification. All Devices shall meet the requirement for the specified area classification in which they are installed, including instrumentation leads.
- All exposed rotating parts shall be provided with adequate guards of non-sparking type.

- Drive belt, if used shall be of fire retardant and anti-static type.
- Piping shall be arranged in a manner so as to provide clear headroom and accessibility within the package. Adequate clearances shall be provided for all the engineered components from O&M point of view.
- Package enclosures shall have two IR type L.E.L detectors and two Ultra Violet (UV)/IR fire detectors in each enclosure to cover the enclosures effectively.
- All material used in the package shall be flame retardant.
- The Compressor Package shall trip, if any of the enclosure is opened while the machine is running. However, the bidder shall provide enclosure door by - pass selector switch to facilitate routine checking while compressor is running.
- 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.

1.8.1 CO2 flooding system:

The package shall be protected by automatically operated CO2 flooding system designed as per NFPA-12 which should have minimum following features: -

1. Gas Detection by installation of hydrocarbon gas detector (IR type) with self check function (have self diagnostic LED to show the "HEALTHY" and "FAULTY" status) and transmitter with adjustable alarm levels (0-100%) with preset of 10%, 20% and 50%. Package should have at least 2 no. of gas detectors.
2. Installation of flame detector (UV-IR type) and transmitter, alarm on detection of flame. Package should have at least 2 no. of flame detectors.
3. CO2 flooding system shall consist of 2 no. of 45 kg min CO2 cylinders. However actual size of the cylinder shall be as per compressor enclosure size. Necessary calculation shall be submitted by the bidder during detailed engineering. One cylinder will act as main cylinder & other as stand by, which shall have identical arrangement and connected to the system.

The cylinders shall be protected from weather and direct sunrays as per Gas Cylinder Rules, 2016. Cylinders shall be fitted with actuated Valves, Solenoid valves etc. for automatic actuation.

Philosophy control shall be such that –

- I. Compressor shall trip on detection of gas at preset level.
 - II. Compressor shall at preset level and automatic discharge of CO2 gas shall take place simultaneously.
 - III. On detection of flame by any of the flame detector, the solenoid valve of selected cylinder will open and CO2 will be flooded into the package.
 - IV. At that time, pressure switch will open (NO) because of pressure in CO2 header. If the selected cylinder is empty, then pressure switch will operate (NC) and PLC will give signal to open solenoid valve of other cylinder, if flame is detected by flame detector
 - V. Even after discharge of selected cylinder, if flame remains detected by flame detector, can also be operated (Settable from display) from the time of selected cylinder valve energized irrespective of pressure switch signal.
 - VI. The limit switch provided on the weighing machine will be connected to PLC to indicate that the CO2 cylinders are full. Both are start permissive for compressor, i.e. if any of the cylinders is empty as sensed by limit switch, compressor will not start. If the operator wants to run the package even if one of the cylinders is empty, the compressor can be run by putting Limit Switch in By-Pass mode for obtaining start permissive.
 - VII. When maintenance override switch put in By-Pass mode to keep the system off during maintenance, CO2 Solenoid valve shouldn't operate, even on detection of flame by any of the flame detector.
4. Facility shall be made to operate the system manually from remote with the help of a switch/ call point and with help of pull down lever on cylinders. In this regard, manual switch / call point shall be provided to operate the desired (Main / Standby) CO2

cylinder remotely from control room and Pull down lever shall be provided on each cylinder valve for manual operation.

5. Following Selector switches shall be provided:
 - One Selector switch shall be provided in LCP to put Main/Stand by Cylinder in line at the turn of a switch as per requirement.
 - One maintenance override switch shall be provided in LCP to keep the system off during maintenance.
 - One switch shall be provided in LCP to bypass desired limit switch,
 - One switch in control room to operate CO2 remotely.
6. The System shall be designed to operate on 24 V DC supply. FRLS (Fire resistant low smoke) cables shall be used for the wiring of the system.
7. CO2 Cylinders shall be provided with explosion-proof fittings
8. Online weight (CO2) loss indication device to be provided to ascertain the health of the CO2 flooding system.
9. All installation and instruments shall be compatible for hazardous area Class 1, Division 1, Group-D for Methane Gas.
10. Technical specifications, Operation and Maintenance Manual, CCOE Certificate i.e. Approval/ Manufacturing certificates for cylinders and cylinder valves, gas detectors, flame detectors, solenoid valves etc. shall be furnished by the supplier along with system. Software and hardware, calibration procedure shall be provided by the supplier along with the supply sufficient enough to handle the system independently.
11. System shall be tested by the supplier after commissioning at site by creating fire signal and actual discharge of CO2 Gas from the Cylinders. The cylinders have to be refilled by the vendor at no extra cost to purchaser after testing. If the system fails during testing, subsequent testing and refilling would be at vendor's cost.
12. Warning and Operating instructions to be displayed at equipment as per the statutory/ safety regulations. .
13. Health status of CO2 system shall be monitored & controlled through PLC.

2.0 UTILITIES & BATTERY LIMITS

2.1 Utilities

- 2.1.1 Bidder shall make his own provision for Instrument air with the flame proof electric motor driven air compressor, receiver and air dryer system.
- 2.1.2 Air compressor of capacity approx 7.5 KW preferably of IR/KPCL/Elgi/CP make of approx
- 2.1.3 16 kg/cm (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.
- 2.1.4 Tapping in the 1000WL air receiver vessel shall be provided with NRV, PRV (set at 7 kg/cm2 (g)) 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.
- 2.1.5 Tapping from air receiver/dryer shall be provided as follows;
 - For dispenser: One ½" tapping with isolation valve from air receiver after PRV.
- 2.1.6 Cooling water is not available as utility and the package shall be provided with self sufficient cooling water system for Compressor, as required, with make up tank. However cooling water for make up tank is available.
- 2.1.7 All electrical and instrumentation terminals shall be as specified.
- 2.1.8 Electric power shall be made available by Owner.
- 2.1.9 For running the Air compressor, Exhaust fan and illumination, 415 Volt (±10 %) 3-phases 4 Wire, 50 Hz (±5%) shall be provided by Owner at a single point (feeder in PDB) inside the electrical room. Bidder shall indicate power/Feeder(KW/Amp) requirement in the offer.

2.1.10 Purchaser shall provide UPS (240 $\pm$ 1 % V, 50 $\pm$ 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.

2.2 Battery limits

- 2.2.1 All customer interface connections, gas Inlet shall be brought out to a distance of 10m from the package edge and terminated in nozzles with isolation valves having flange connection. The piping along with structural supports, copper jumpers for all the flange joints from battery limit to Compressor package shall be in bidder's scope. Piping from air compressor to air receiver and CO2 cylinders up to enclosures at a max. distance of 30m each is in the scope of bidder and shall be treated as part of supply & erection.
- 2.2.2 All the SS tubing shall be supported properly with **PVC clamps** only. All the drain pipes of air compressor, air receiver, air dryer shall be terminated to the nearest drain properly.
- 2.2.3 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 3M height.
- 2.2.4 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.
- 2.2.5 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 **25 m from electrical room**.
- 2.2.6 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.
- 2.2.7 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.

3.0 EQUIPMENT QUALIFICATION CRITERIA

3.1 As per Bidders eligibility criteria (BEC), refer Volume I of II.

4.0 BASIC DESIGN

4.1 General

- 4.1.1 The Compressor shall meet all the technical requirements as specified in:
 - 1. Data Sheets: As enclosed
 - 2. Technical Specification:
 - 3. Codes and standards as indicated in clause 1.2
 - 4. Compressor and its auxiliary's design shall be in conformity with API 11P, second edition, API 618.
- 4.1.2 Gas composition as indicated in this technical specifications shall be used for Compressor selection, sizing and performance guarantee estimates. However compressor shall be suitable for continuous operation with the indicated gas composition range and operating parameters given in this tender.
- 4.1.3 The gas pressure in the inlet pipe at the battery limit varies from 16 kg/cm²(g) to 49 kg/cm²(g). Bidder to provide PRV with slam shut off valve of 300# rating at gas inlet of compressor to protect the downstream distribution piping and fixtures from experiencing excess unsafe pressures in the event that outlet pressure of the high flow PRV rises above an acceptable level. Outlet pressure of PRV should be in the range of 16 to 19 Kg/cm²(g) and it may have multiple springs to regulate the pressure. Duplex filter shall be installed before PRV. However, sizing of the compressor for 1200 SCMH capacity at discharge pressure of 255 kg/cm²(g) shall be carried out at 17.5 kg/cm²(g) suction pressure. Suction pressure transmitters shall be provided to protect the compressor from very high and low pressure.
- 4.1.4 Bidder's offer shall be based on firm and final compressor / gas engine make and models on which basis the offer shall be evaluated and no alternate compressor / gas engine make and models or change of make and models to lower frame shall be entertained.

- 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, inter-stage and discharge at the specified capacity (with no -ve tolerance) for compressor and indicate the same on the data sheets.

4.2 Allowable speeds, temperature and vibration levels

- 4.2.1 The linear piston speed shall be limited to 4 m/sec for non-lubricated and 4.5 m/sec for lubricated compressors.
- 4.2.2 The maximum discharge gas temperature for each stage shall be limited to 150°C.
- 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.

4.3 Piston Rod, Bearings and Cross Heads

- 4.3.1 The surface hardness of Rockwell C 50 minimum is required on piston rods in the areas that pass through the packing. Rolled threads shall be provided on the rods with thread relief area as polished.
- 4.3.2 Crosshead shall be manufacturer standard material and designs. Adequate openings for removal of the crossheads shall be provided.
- 4.3.3 Piston rod and cross head pin loading at any specified operating condition at the relief valve set pressure shall not exceed 80% of the maximum design rod load of the offered compressor. Rod loads shall have sufficient reversals in direction for all specified operating conditions including RV Settings and part load operation.
- 4.3.4 Frame rating as published in catalogues of the offered compressor model shall be min 1.1 times the required rating corresponding to max severe operating conditions taking into account temperature correction factor.

4.4 Packing Cases and Pressure Packing

All oil wiper, intermediate seal and gas cylinder pressure packing shall be segmental rings with corrosion resistant garter springs. The pressure packing case shall be provided with a common vent and drain below the piston rod piped to the outside of the distance piece. However if pressurized crankcase type design is used, packing vent and drain shall not be applicable.

- 4.4.1 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.
- 4.4.2 Packing vent piping inside of the distance piece shall be designed for the maximum allowable working pressure of the cylinder.

4.5 Compressor Frame Lubrication

- 4.5.1 Compressor frame lubrication shall be pressurized system, with a main oil pump driven directly by the compressor shaft.
- 4.5.2 If required the Bidder shall provide manually operated/ air/electric motor driven pre lubrication pump. Crankcase shall be fitted with lube oil temp & oil level sight glass. The maximum and minimum operating levels shall be permanently indicated.
- 4.5.3 All lube oil piping after oil filter shall be 300 series stainless steel conforming to ASTM A269.
- 4.5.4 Heating shall be provided for reservoir if applicable for the bidder's design of compressor when the minimum ambient temperature is less than the Bidder's required minimum start up temperature.
- 4.5.5 Heater besides meeting the area classification requirements specified in the Tender shall be star connected if designed for operation on 3-phase (4 wire), 440V, 50 Hz supply.

4.6 Distance Pieces

- 4.6.1 Distance piece as per ISO 13631-2002 with cylinder side compartment vented to safe location is specified. Distance piece as per manufacturer's standard design which is used in the earlier supplied successfully running packages is also accepted.
- 4.6.2 Distance pieces shall be provided with gasket, solid covers and shall be suitable for a minimum differential compartment pressure of 1.75 kg/cm²g.
- 4.6.3 Distance piece as per API-11P with cylinder side compartment vented to safe location is specified.

4.7 Cylinder and Packing Lubrication

- 4.7.1 Divider block or single point type lubrication system/Single plunger per point force feed mechanical lubricator shall be provided for lubrication to compressor cylinders. Block- distribution lubrication systems shall be complete with no-flow shutdown, rupture relief discs, check valves, filter, common sight glass and carbon steel or austenitic stainless steel tubing. For pump-to-point lubrication systems, a sight indicator for each point, check valves and carbon steel or austenitic stainless steel tubing shall be furnished.
- 4.7.2 Lubricators shall be driven by crankshaft and bidder shall highlight any pre lubrication requirements of the cylinders and the method of achieving the same.
- 4.7.3 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.
- 4.7.4 Digital no flow timer shall be provided to stop the compressor in case of loss of cylinder lubrication.
- 4.7.5 Lubricator reservoir capacity shall be adequate for 100 Hrs of normal flow, and shall be equipped with low level alarm.
- 4.7.6 Bidder along with the proposal shall furnish the recommended lubricating oil type, International Grades & Specification along with their quantity and frequency of change. The recommended oil shall be compatible with gaskets, O-rings, seals, packing, lubricator parts and other parts coming into contact.
- 4.7.7 In case divider block Common indicator shall be provided. Brass NRV shall also be acceptable

4.8 Cooling System

4.8.1 Compressor Cylinder

Compressor cylinders may be air-cooled or water-cooled. The CW shall be cooled by an air-cooled heat exchanger.

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 42°C and 80% RH shall be considered. Cooler design shall be on the basis of 10% excess capacity than required corresponding to suction pressure of 19 kg/cm². Gas sections of coolers shall be designed as per API-661 with manufacturer standard deviations. The Gas and water sections shall not be "U" code stamped but TPI inspected. Vibration switch shall be provided on their heat exchanger to trip the compressor on high vibration limit. Bidder shall indicate vibration level in the offer. For cooling of the Heat Exchangers a cooling fan 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.

4.9 Separators & Oil Removal System

- 4.9.1 Carbon Steel separators / KOD volume bottles with auto and manual drain system shall be provided for the capacity as required.
- 4.9.2 All pressure vessels shall be designed as per ASME VIII Div 1 or equivalent.
- 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)
- The offered scrubber and mist removal shall restrict the oil level to < 5 ppm in the discharge gas of compressor. SS mesh pad shall be used in the scrubbers.
 - All vessels including pulsation dampers shall be fully (100 %) radiographed as per ASME VIII UW (a) or equivalent.
 - NRV shall be provided on suction of scrubber drains.
- 4.9.4 Minimum design temperature for separators/KOD/volume bottle shall be 71°C and minimum design pressure shall be maximum operating pressure plus 15% for inter- stages and plus 10% for final stage.
- 4.9.5 NRV shall be provided on suction, 1st stage, 2nd stage, 3rd stage separators/KOD /volume bottle drains
- 4.9.6 Gas recovery system: Bidder shall provide blow-down tank to act as:

- A buffer tank during start-up.
 - Gas flow dampener during compressor operation
 - Surge tank for depressurization of each of the compressor stage piston cylinders during shutdown.
 - Blow-down tank size should be to manufacturer's design standards. The gas recovery vessel shall be provided with pressure relief valve and necessary instrumentation to avoid cold flaring of gas.
 - Capacity shall be suitable to prevent any venting.
 - Suction damper and gas recovery vessel shall preferably not be combined and one pressure regulator with isolation valve shall be provided to connect gas recovery vessel with compressor suction. If suction damper and gas recovery vessel are combined pressure regulator after gas recovery vessel will not be allowed due to high pressure drop during compressor operation.
 - In case pressure regulator valve (PRV) is to be installed in main suction line up to 1st stage compressor cylinder from gas recovery vessel, an SOV operated auto shut off valve bypassing PRV shall be provided. If pressure at 1st stage of compressor cylinder inlet is more than 19 kg/cm², the auto shut off valve should be closed to prevent the compressor from overloading and gas should go to cylinder through PRV. However, if gas pressure is :519 kg/cm² shut off valve should be in open condition to prevent pressure loss through PRV so that the compressor can be operated at maximum capacity corresponding to suction pressure. The pressure drop in PRV shall be as minimum as possible and should not be more than 0.6 kg/cm².
 - One vent line from gas recovery vessel with double isolation valves shall be provided.
- 4.9.7 All separators / KOD's/volume bottles shall be provided with 3 mm corrosion allowance.
- 4.9.8 Oil from all drains shall be collected into the oil recovery pot. Oil recovery pot of suitable capacity shall be provided with double isolation manual valve and level gauge.
- 4.9.9 Coalescent super fine filters (preferably two stage) Third Party approved, for removal of liquid (e.g. water & oil) and solid particles down to 0.1 microns out of compressed natural gas shall be provided. Residual Oil Contents shall be less than 1 PPM. Automatic drains with On-off valve connected to Gas recovery vessel shall be provided. The filters shall be sized to flow min. 200% of the flow at suction pressure of 19 kg/cm²(g) and discharge pressure of 255 Kg/cm² (g). However mechanical design shall be based on safety set pressure.

4.10 Pulsation, Vibration Control and Analog Study

- 4.10.1 Suitable arrangement for inter stage pulsation damping shall be provided in confirmation to API 618 and API 11P. The bidder has to give compliance report that they have already conducted such type of Pulsation, Vibration Control and Analog Study and offered compressor is safe.
- 4.10.2 If felt necessary by bidder, the acoustic and mechanical evaluation study shall be carried out for compressor package (from inlet flange to discharge on skid edge as per API-618 approach-3) by an agency or in house experts. The compressor Bidder shall be totally responsible for all the coordination with the agency carrying out the study. If acoustic and mechanical evaluation study is carried out, the same shall be submitted to purchaser /CONSULTANT for review.

4.11 Gas Engine

- 4.11.1 The gas engine offered shall be gas fired 4-stroke, spark ignited type. The integral gas engine & compressor type design is not acceptable.
- 4.11.2 The site rating of engine shall be max of the following two conditions;
- a. 110% of greatest BkW required by compressor including cooling fan, other auxiliaries and the losses at any of the compressor operating conditions corresponding to suction pr of 16, 17.5 or 19 kg/cm²(g) with suction valve fully opened and discharge pressure 255 kg/cm²(g).
 - b. 105% of greatest BkW required by 1200 SCMH compressor including cooling fan , other auxiliaries and the losses at any of the compressor operating conditions corresponding to suction pr of 16,17.5 or 19 kg/cm²(g) with suction valve fully opened and discharge pressure at relief valve (RV) set pressure.

The site rating of engine shall be worked out considering the derating specified under the latest edition of British Standard 5514/ISO 3046 and deducting the power absorbed by all the engine driven auxiliaries, as conceived by the Packager. The site rating of engine shall be based on 42°C ambient temperature, RH 80% and an altitude as per site location and taking design case gas composition as specified, the site rating so arrived shall be suitable for the maximum Compressor BKW as arrived at and which can be applied 24 Hrs a day seven days a week with a overrating capability of up to 10%. Bidder is requested to submit site-rating calculation along with de-rating calculation in their bid. Note that the Design Gas specified for the compressor shall be used as engine fuel.

- 4.11.3 All the auxiliary equipment including the cooling fans shall be engine driven.
- 4.11.4 The engine shall be provided with the shielded ignition system of breaker less type, low- tension solid state having vapour proof enclosure with a high-tension coil at each power cylinder. The spark plug shall be shielded and all low-tension wiring shall be enclosed in grounded steel conduits. But the spark plug connecting cables shall be enclosed in grounded, metal shielded flexible conduits.
- 4.11.5 Constant speed hydraulic/electronic governor preferably of WOOD WORD make adjustable for speed setting over the operating range.
- 4.11.6 The engine silencer shall be residential type mounted on the roof of the engine enclosure.
- 4.11.7 Bidder shall supply fuel gas conditioning system to condition the fuel gas so as to make it suitable for use in offered gas engine. The fuel gas-conditioning skid shall mainly consist of fuel gas filter, interconnecting piping, fittings, valves, pressure regulator, safety valve, mass flow meter and necessary instrumentation etc as required shall be incorporated by the bidder.

4.12 Enclosure of CNG Compressor Package

- 4.12.1 The maximum allowed temperature within the enclosure shall be 5°C above ambient temperature. Adequate ventilation fans shall be provided to meet the above and also to account for heat dissipation of the coolers. Interlock shall be provided to start the exhaust fan to vent out any entrapped gases in the enclosure before starting the main compressor.
- 4.12.2 The compressor package shall consist of single enclosure for Compressor and gas engine. The equipment shall be mounted on one common skid. The Enclosure to restrict maximum noise level to 80 dB (A) at 1 meter from the enclosure.
- 4.12.3 Compressor canopy shall be weather proof and designed such that water cannot enter in the canopy and material used inside canopy shall be fire retardant
- 4.12.4 The enclosures shall have doors for normal access and removable wall panels for ease of maintenance of all the components.
- 4.12.5 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 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.
- 4.12.6 Enclosures shall have internal flame proof lighting arrangement. The local control panel should also have flame proof lighting.
- 4.12.7 For handling of all heavy parts for maintenance purpose lifting arrangement i.e. beam fitted with chain hoist shall be provided in enclosure.
- 4.12.8 The Compressor shall be located inside an acoustic enclosure. All Coolers, Knock out Drums, Scrubbers, Cooling System, lubrication system along with interconnecting piping shall be inside an enclosure. Enough headroom shall be made available for easy access and maintenance of all equipment.
 - Components such as pressure gauges, temperature , pressure switches, filter automatic ball valves, safety valves etc., which require in-situ adjustment, maintenance and reading, shall be easily accessible..
 - Tray/Conduits and tubing shall be arranged in orderly and systematic manner and shall be routed neatly to enter the back of display or monitoring panels.
 - Routine service item such as, but not limited to, crank case oil filters, inter stage gas filters, inlet and outlets gas filters and drive belt (if applicable) shall be located to facilitate easy one-man servicing.

- One person should be able to access crank case oil inlet and drains to allow addition or drainage of oil without removing panels or adjacent components and without the need of the pump.
- Items which must be operated & monitored during operation shall be readily accessible without opening the door.
- Suitable gradients shall be provided on the enclosure roof for rain drainage and to avoid water pockets.
- One vent line with double isolation valve shall be provided to emptying the package at 3rd stage separator.
- Communication/Control cables shall be routed through Cable Trays/conduits

4.13 Piping

- 4.13.1 All gas piping shall be designed, fabricated & tested in accordance with ANSI B 31.3.
- 4.13.2 Low pressure Gas piping shall be seamless carbon steel manufacturing in accordance with ASTM A - 106 Grade B. All Gas piping shall be flanged connections. Pipe wall minimum thickness shall be in accordance with Table 4 of ISO 13631:2002.
- 4.13.3 All rigid piping, tubing & other components of compressor package shall be designed for full range of pressure & temp and loading to which they may be subjected with a factor of safety of at least 4 based on minimum specified tensile strength at specified ambient temperature.
- 4.12.4 All rigid piping shall be continuous between their respective components & free of connections except welded joints. All high pressure joints shall be welded unless otherwise not feasible. The instrument air tubing material shall be SS316 as per ASTM A269.
- 4.12.5 All high-pressure double ferrule fitting and 2/3 way valves shall be of S.S. material only. Material of tube shall also be SS316 as per ASTM A269.
- 4.12.6 Bidder shall furnish a temporary start up conical strainer fitted with adequate size mesh.
- 4.12.7 Bidder shall furnish a basket strainer fitted with adequate size mesh at the gas inlet. The free area of the strainer element shall be at least four (4) times the internal area of the connecting pipe lines. Flow area in any portion of Basket strainer assembly shall not be less than the pipe cross sectional area. The strainer element shall be with the mesh of 5 micron. Pressure drop in clean condition shall not be more than 4.0 MWC. Wire mesh of the strainers shall be suitably reinforced, to avoid buckling under operation. Strainer shall have screwed blow off connection fitted with a removable plug. The strainer will have a permanent stainless steel tag fixed on the strainer body indicating the strainer tag number and service and other salient data. The size of the strainer and the flow direction will be indicated on the strainer body casting. Thickness of the strainer element should be designed to withstand the pressure developed within the strainer due to 100% clogged condition exerting shut-off pressure on the element.
- 4.12.8 All lube oil piping downstream of filter shall be series 300 Stainless Steel. Pressurized lubricating oil lines downstream of the filter (with the exception of cast-in-frame lines or passages) shall be made of austenitic stainless steel. For either tubing or piping, bends shall be used to minimize the number of fittings wherever possible. Steel fittings shall be furnished with stainless steel tubing. Pressure piping downstream of oil filters shall be free of internal obstructions or pockets (such as those created by socket weld fittings) that could accumulate dirt at pipe joints. Non-consumable back-up rings and sleeve-type joints shall not be used. Other piping fittings shall be of the socket-weld or butt-weld type. When butt welds are necessary, such precautions as internal grinding of joints and use of gas tungsten-arc welding for the first weld pass shall be taken to prevent weld splatter inside the lines. After fabrication, oil lines shall be thoroughly cleaned and preserved. In addition, carbon steel piping shall be pickled and passivated.
- 4.12.9 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.
- 4.12.10 Mercaptan/ THT dosing is envisaged hence all materials coming in contact with gas shall be compatible to such gas with Mercaptan/ THT dosing and be of compressor manufacturer's standard. The use of SA 515 material is prohibited.
- 4.12.11 All piping after coalescent filter at compressor discharge shall be of SS 316.
- 4.12.12 The instrument air header upto compressor enclosure and CO2 piping shall be seamless CS.
- 4.12.13 All low pressure and high pressure gas piping joints fabricated at site / shop shall be 100% radiographed after welding.
- 4.12.14 Design of piping systems shall achieve the following:

- Proper support and protection to prevent damage from vibration or from shipment, operation and maintenance;
- Minimize loads on the nozzles of cylinders and pulsation suppression devices;
- Avoidance of pipe work bending forces and/or introduction of adequate flexibility to minimize stress;
- Good accessibility for operation, maintenance and cleaning;
- Installation in a neat and orderly arrangement adapted to the contour of the machine and not obstructing access openings;
- Elimination of air pockets;
- Complete drainage through low points without piping disassembly;
- Elimination of low points in the inlet process piping including recycle/by-pass piping that could trap liquid;
- Use of pipe clamps on all gas piping and on all piping DN 50 (2 in) and larger;
- Supports shall not be welded directly to gas piping.
- Following certificates have to be submitted for piping fabricated at Site & shop

- A- Electrode qualification test procedure
- B- Proposed Welding procedure specification with impact test
- C- Electrode qualification test results.
- D- Procedure qualification test results and final WPS .
- E- Welder's qualification test.

4.14 Coupling

4.14.1 V-Belt drive / Direct drive acceptable.

5.0 ELECTRICS & INSTRUMENTATION CONTROL:

5.1 Starter/Control Panel/ Control philosophy

- 5.1.1 FLP Panel shall be complete with all FLP equipments like start and stop push buttons, power on and fault indication lamps, fault reset button. All necessary timers and intrinsically safe relays to control the system on an automatic starting and stopping basis shall be provided. The compressor package control system shall be designed for unattended operation in automatic mode and in case of any fault it will go in a safe mode.

Doors shall be interlocked isolator. Panel shall be complete with start and stop push buttons, hours run meter, power on and fault indication lamps, fault reset button. All necessary timers and intrinsically safe relays to control the system on an automatic starting and stopping basis shall be provided. The compressor package control system shall be designed for unattended operation in automatic mode and in case of any fault it will go in a safe mode.

- 5.1.2 Compressor Package shall be provided with a PLC based LCP, which shall be mounted on the package enclosure. PLC shall be housed inside flameproof IIA/IIB (Ex'd') enclosure. Local operator panel shall also be provided on the flameproof enclosure. All the interlock, monitoring and controlling of the CNG compressor package shall be done through PLC based control system which will be of proven type and make. PLC hardware shall be in accordance with IEC-61131-2 and PLC programming shall be made only in ladder diagram, however PLC shall be capable to convert programmed in flow chart, functional block diagram, structural text etc in accordance with IEC-61131-3. PLC shall be provided with display & scrolling facilities to view process & machine parameters. All source & object codes including logic flow chart, ladder diagram etc is to be furnished by the Packager during detailed engineering. Provision shall be made so that the same can be viewed on Laptop.
- 5.1.3 PLC shall be suitable for recording of compressor parameters as indicated in instrumentation and all other parameters that are recommended by the compressor manufacturer for recording on hourly basis for the last 24 hours.
- 5.1.4 PLC shall be suitable for interfacing with printer (HP Laser printer) for getting the printout of the parameters recorded (as mentioned above) for the last 24 hours through remote HMI PC
- 5.1.5 The units of measurement for flow shall be Kg/hr, for pressure shall be Kg/cm²(g) and temperature shall

be in degree Centigrade.

5.1.6 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/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 tropicalized, 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.

5.1.7 The PLC System offered shall be supplied with monitor and shall be capable of:

- a) Compressor Control & Emergency Shut down
- b) Fire and gas detection and monitoring
- c) Graphics, Data acquisition, monitoring & logging, viewing, modifying set point and range of all process parameters for which transmitters are provided.
- d) Record the last 20 Alarms of abnormal operations on separate page.
- e) Viewing process diagram with on line data on line.
- f) Viewing trend of min 10 critical parameters.
- g) Shall have historical as well as event recording system for atleast last 200 events
- h) PLC shall be capable for display of flow meter data for flow rate and flow totalizer (i.e. Gas Suction, Gas Discharge, Gas consumed by the engine), compressor running hour etc. in following manner:
 - Shift wise (for 3 shift operation i.e. 06:00-14:00, 14:00-22:00 & 22:00-06:00)- shall be available for at least last 96 hours with date stamping
 - Daily basis- shall be available for at least last 31 days with date stamping.

The above data will be viewed / analyzed offline (during shutdown of compressor) or online through dedicated SCADA port (Ethernet / RS 485) on laptop / Local PC. Necessary software for downloading data and processing as define above shall be provided. 10 Meter cable with suitable adaptor (if required) shall be provided.

5.1.8 The compressor package control system shall be so designed that the first item to go into alarm condition shall lock out to indicate the cause of the trip though the cause of the trip may have disappeared. The lock out condition shall be manually reset. A change over set of contacts shall be provided for Owner's use to give a remote indication of alarm and trip. Where three bank cascade has been envisaged; in auto mode, compressor shall start automatically in case high bank storage pressure falls below 220 kg/cm²(g) and stop as soon as pressure in all three banks of stationery cascade and mobile cascade reaches 255 kg/cm²(g). Where only one bank cascade has been envisaged; in auto mode, compressor shall start automatically in case storage pressure falls below 220 kg/cm²(g) and stop as soon as pressure in cascade and mobile cascade reaches 255 kg/cm²(g). In manual mode the compressor shall also stop at 255 kg/cm²(g) pressure. The priority fill system (In Bidder 's scope) shall ensure the filling of vehicle, storage cascade and mobile cascade in correct sequence. Control system shall be designed such that in case of any fault, discrepancy or abnormality, it will go in safe mode. All controls shall be made in fail-safe mode & failure of any control shall not lead to operation of equipment/ system in unsafe condition. In case of fault, a warning hooter shall operate, the sound of which should be audible at distance of at least 15 meter. Further the fault alarm and emergency stop PB shall be duplicated in the CNG station control room. Acknowledgement/resetting of fault shall be possible only from compressor panel. There shall be red and green indication at top of enclosure to indicate code no. of alarm/trip in red color. List of alarm with code no shall be indicated on SS plate and to be fixed at compressor enclosure. Acknowledgement/resetting of fault shall be possible only from compressor panel. Emergency stop PBs shall be mushroom head turn lockable type. Once the fault is acknowledged or compressor is under normal maintenance, the valves of priority panel shall take the position so that gas available in the stationary CNG storage cascade can be dispensed.

The pressure in each bank shall be monitored from down stream of priority panel.

- Pressures in each bank of stationary storage cascades.
- Pressure at outlet for dispenser.
- Pressure at outlet for mobile cascades.
- Control Air Pressure
- Indicators, Alarms and Trips as per Equipment Data Sheets
- Pre alarm to be incorporated in the software before machine trips in predefined values of

Pressure & temperatures.

5.1.9 Calibration certificates of all instruments such as Pressure, Temperature, flow meter, vibration, KWH meter, SRV, GD FD etc shall be valid at the time of string test, compressor commissioning and Performance Guarantee testing.

5.1.10 Vendor shall ensure to calibrate the instruments during O&M period and calibration shall be valid upto three months from expiry of O&M period.

5.1.11 Vendor has to calibrate Pressure & Temperature instruments within 1 month of compressor commissioning or before Performance Guarantee testing.

5.2 The priority fill systems: the priority panel shall ensure the filling of vehicle, storage cascades & LCV in correct sequence. The priority fill system shall ensure 200-kg/cm²g pressure in CNG dispenser outlet port. Design of priority fill system shall be aimed to achieve maximum flow rate through combined flow from compressor and cascade arrangement. All priorities shall be with full bore ball valves having high CV. Bidder shall indicate flow rate achievable through proposed priority fill system design. All tubing and valves shall be ¾" size for 1200 SM³/h and above compressor. One isolation valve at outlet of each line shall be provided. After isolation valve tube dia. for bus dispenser and bus cascades shall be 1" OD. Sheet metal work of priority panel shall be SS construction. All the pneumatic tubing for Solenoid of priority shall be of SS 304 only.

Number of priority panel required shall be as per SOR/ MR.

The details for various configuration of priority panel for different type of CNG stations including priority fill panel design to deliver the CNG shall be as follows

5.2.1 TYPE –1 FOR MOTHER STATION: 9 LINE :

A: When compressor is running

1	Priority no one:	Car dispenser Low bank
2	Priority no two:	Car dispenser Medium bank
3	Priority no three:	Car dispenser High bank
4	Priority no four:	Bus dispenser (Single bank filling)
5	Priority no five:	High bank of storage cascade
6	Priority no six:	Medium bank of storage cascade
7	Priority no seven:	Low bank of storage cascade
8	Priority no. eight :	Bus cascade (Single bank filling)
9	Priority no. Nine :	Mobile cascade mounted on Light commercial vehicle (single bank filling).

B: When compressor is not running:

When the compressor is not running, the valves of priority panel shall take the position so that gas available in the stationary cascades can be dispensed. The priority of dispensing from car cascade shall be as follows;

Priority no One:	Low bank of storage cascade
Priority no Two:	Medium bank of storage cascade
Priority no Three:	High bank of storage cascade

5.2.2 TYPE –2 FOR ON LINE STATION: 8 LINE :

A: When compressor is running

1	Priority no one:	Car dispenser Low bank
2	Priority no two:	Car dispenser Medium bank
3	Priority no three:	Car dispenser High bank
4	Priority no four:	Bus dispenser (Single bank filling)
5	Priority no five:	High bank of storage cascade
6	Priority no six:	Medium bank of storage cascade
7	Priority no seven:	Low bank of storage cascade
8	Priority no eight:	Bus cascade (Single bank filling)

B: When compressor is not running:

When the compressor is not running, the valves of priority panel shall take the position so that gas available in the stationary cascades can be dispensed. The priority of dispensing from car cascade shall be as follows;

Priority no One:	Low bank of storage cascade	Priority
no Two:	Medium bank of storage cascade	
Priority no Three:	High bank of storage cascade	Priority no
Four:	Bus cascade (Single bank filling)	

5.3 Human machine interface (HMI)

HMI shall be provided with touch screen and operating system software **(with minimum all the features of operator panel MP277B/ TP1200Comfort min. 10" graphic display of Siemens/Schneider)**, software's for interlocking, monitoring and control. All operational buttons shall be on touch screen except the Emergency stop button. Touch screen display system shall be weather proof to IP65. This should be provided in the flame proof panel with HMI mounted on the door of the panel. The HMI screen shall be back side of the toughened glass. During running of the compressor the HMI should be assessable through the external push button provided on the panel. The PLC shall be interfaced with SCADA in future. All the parameters on the PLC shall be available on the HMI. Bidder shall provide Application program for PLC, HMI on LCP (licensed one set) along with all interfacing adaptors and cables. Bidder shall also provide one set of source & object codes for PLC, HMI on LCP (in both forms, hard & soft).

► **If Laptop is to be supplied by bidder, (As mentioned in SOR / MR), configuration is as follows:**

Laptop shall have the following minimum design features and shall be identical and interchangeable:

- Core i5 4core Processor or latest configuration (preferred 2.5GHz and above)
- Minimum 4GB RAM and shall be expandable
- Minimum 500GB SATA Hard Disk Drives
- DVD-RW for data backup and installation
- In-built QWERTY Keyboard and touch-pad mouse
- 15.6" High-Definition Resolution LCD monitor with 32-bit color support
- Features: Serial, VGA, HDMI, TCP/IP, WLAN, Bluetooth, USB
- Windows 10 Professional with license, recovery media, drivers, antivirus
- Accessories: Power Adapter, Spike Protector, Carry Case, Optical Scroll Mouse
- Operating condition: Temperature: 10° to 40° C; Relative Humidity: 20% to 80% (non-condensing); Voltage: 110V~230V AC
- Make: IBM, HP, DELL, Lenovo
- Communication cable with adapters to connect Laptop with PLC
- Programming, configuring software of PLC with license

5.4 Emergency Shut Down

- Bidder shall provide emergency shut down (ESD) system in the control room as well as locally mounted near the Compressor. Fail-safe system shall be designed and incorporated to isolate cascade storage from dispenser, stop compressor, and isolate the compressor suction and discharge lines. ESD switch shall have to be manually reset to restart the compressor package again. ESD shall activate either on pressing emergency push button (red button) or on fire detection. Red ESD (4no.) shall be located One no. on compressor, One no. in control room, One no. in process area, One no. near dispenser.

In addition to the above, Separate ESD push button shall be provided in LCP other than the packaged emergency push button. This push button shall be directly wired with fuel shut off valve and engine ignition grounding system by passing PLC /engine governing system. On pressing the button it shall immediately cut off the fuel supply and ground the ignition system for immediate stop of the machine. A spare contact from the emergency push button shall be connected in PLC to initiate other auxiliaries shut down and indicate alarm as “**hard ware emergency push button press**”.

5.5 Electric and control panel :

5.5.1 The electrical panel shall be flameproof construction and located on the compressor package. The electrical power supply distributions panels, switchgear panels and starter panels shall have flame proof construction. There shall be FLP push button panel available at the compressor skid suitable for hazardous area classification. The switchgear shall have one incomer and adequate number of outgoing feeders. The incomers shall be provided with suitably rated fuse switch unit (AC – 23), ammeter, voltmeter with selector switch, energy meter, PF meter, Phase reversal relay, Earth fault relay, indication lamps etc. Adequate number of MCB feeders for control and lighting shall be provided. Bidder shall furnish single line diagram of the panel with the bid.

5.5.2 Push button for fault accept, fault reset, ESD, compressor start, compressor stop, scroll up, scroll down, enter, increment, decrement, back, hooter test, 4 no. spares shall be provided. Switch for main over ride, auto manual selection, CO2 cylinder main /CO2 cylinder standby, 415 VAC supply on/off ,230 VAC supply on/off, tube light on/off, enclosure door by pass and 2 no. spares shall be provided. Lamp for 415 VAC, 230 VAC on, 24 VDC PLC supply on , ready to start , running & trip and 5 nos spares shall be provided.

5.5.3 Electrical Power supply for electrical control panel:
All electrical equipments shall be suitable for the following supply conditions.

- **Power supply for electrical control panel:** Electrical operating voltage: AC, 3 phases, $415 \pm 10\%V$, $50 \pm 5\%Hz$. Bidder to note that all control electronic / electrics shall be capable of with standing voltage fluctuation specified.
- **Power supply for PLC based Control Panel :** Electrical control voltage: $230 \pm 5\% V$, $50 \pm 1\% Hz$. Control supply through UPS shall be provided by the purchaser

All auxiliaries and power contactors in electrical panel etc. shall have operating voltage of 230 volt AC

5.5.4 List of Documents: (To be provided with each package).

- Priority panel and Air Compressor OEM Test Certificates.
- Instrument calibration certificates:GD, FD, TG, TT, PT, PG, PS, VS, MFM, PCV+SSV.
- SRV, Pressure vessel Test certificates.
- PLC Program, PLC Display Program (Password Free)
- Software for communication
- Communication cable and adaptor.
- Logic Diagram /Ladder Diagram (Comments in English).
- Alarm / Shut Down list with set points.
- Operating / control write up.

5.6 FLP Electric Motor for Air compressor

a)	Type of drive	Totally enclosed fan Cooled(TEFC) high efficiency (IE2) as per IS 12615:2011, IS : 2148 , IS 4691 and other relevant standard
b)	Protection	By bidder
c)	Insulation	Class “F” with Class “B” temperature rise
d)	Mounting	Horizontal foot mounting
e)	Specification Standard	IS 12615:2011, IS : 2148 , IS : 4691
f)	Supply Voltage (assumed)	$415 + 10\%$ volt, 3 phases, $50 + 5\%Hz$
g)	Synchronous Speed	By Bidder
h)	Motor rating	By Bidder
i)	Motor efficiency	%
j)	Power factor	By Bidder
k)	Speed of motors	By Bidder

l) Coupling type By Bidder

5.6.1 Motor accessories (if applicable)

- a) Compressor grooved flywheel
- b) Motor grooved drive pulley
- c) Drive vee belts
- d) Flexible coupling for direct drive
- e) Drive guard
- f) Adjustable motor slide rails for vee belt tensioning
- g) Starter

5.6.2 The motor name plate rating (exclusive of service factor) shall be minimum 115% of the greatest HP required under any of the specification operating conditions. All motors shall be tested in accordance with IS/IEC.

5.6.3 Pre-lubricated sealed bearings for all motors may be considered provided a full guarantee is given for 4 to 5 years of trouble – free service without necessity of re- lubrication.

5.7 CABLING (all suitable for hazardous area applications)

5.7.1 Control Cable inside the compressor package shall be of 1.5 Sq. mm and for outside compressor package shall be 2.5mm.

5.7.2 Cables shall be 1100-volt grade, stranded copper conductor, PVC insulated, PVC sheathed, round wire armored, FRLS cables.

5.7.3 Cables shall be terminated using double compression type metallic frame proof glands and copper lugs.

5.7.4 Spare cores to be kept in each control cable.

5.7.5 All JB's shall have flame proof metallic enclosure.

5.7.6 All the signal cables shall be screened armored cables.

5.7.7 All the control and power cables shall be armored cables.

5.7.8 All the communication cables shall be screened and shall be terminated to JB through threaded GI conduits only.

5.7.9 Communication/Control cables shall be routed through Cable Trays/conduits.

5.7.10 Following cables shall be supplied, laid and terminated by bidder:

- Cables inside the compressor package
- Termination of cables in compressor control panel including cable lugs and double compression glands etc. is in the bidder's scope.

5.8 Electrical cables:

5.8.1 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 control room.
- c) From compressor to ESD push button near dispenser.
- a) From PDB to air compressor.

5.8.2 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

5.8.3 Termination of cables in compressor control panel including cable lugs and double compression cable glands etc. is in bidder's scope.

5.8.4 Bidder shall furnish following electrical data along with bid:

S NO.	DESCRIPTION	TO BE FILLED BY BIDDER	REMARKS
1	Cables for procurement and erection by bidder		Note: The same shall be in the scope of bidder
	a) From PDB to compressor control panel (three phase)	3.5X----- SQMM AYFY	
	b) From UPS ACDB to compressor control panel (single phase)	3.5X----- SQMM YFY	
	c) From compressor to hooter and upto ESD push button in control room.	3.5X----- SQMM AYFY	
	d) From compressor to ESD push button near dispenser.	3.5X----- SQMM AYFY	
	e) From PDB to air Compressor.	3.5X----- SQMM AYFY	
2	FEEDER RATING IN PDB PANEL		for providing feeder in PDB by client
	b)FOR AUXILIARY LOAD (lights inside enclosure, exhaust fan etc.)	---- AMP	
	c)FOR AIR COMPRESSOR	---- AMP	
3	UPS LOAD	----- KW	
4	NON UPS LOAD	----- KW	

5.9 INSTRUMENTATION

- 5.9.1 All Instruments shall be suitable for an area classification of "Class 1, Group D, Division 1 as per NEC" OR "Zone 1, Group IIA /IIB as per IS/ IEC".
- 5.9.2 All package mounted transmitters & temperature element shall be intrinsic safe "ib" as per IEC 79-11 and solenoid valves, switches and related junction boxes shall be flame proof "D" as per IEC 79-1. Other special equipment's/instruments, where intrinsic safety is not feasible or available, shall be flame proof as per IEC 79-1.
- 5.9.3 The compressor package instrumentation & control is to be configured for manual as well fully automatic control system including starting, shutdown as applicable for unattended operation. Control system shall be PLC based of a reputed make and proven type.
- 5.9.4 Electrical instrumentation shall be certified by a recognized authority such as BASEEFA, PTB, LCIE, CESI, INIEX, CMRS or any agency approved by Indian Government.
- 5.9.5 All the instrumentation shall be capable of operating for full range of operation.
- 5.9.6 Separate junction boxes shall be provided for each type of signal i.e., analog, digital, solenoids, RTD thermocouple and power supply.
- 5.9.7 RTD shall be 3 wire PT-100 and duplex type, thermocouple shall be K type and solenoid valve shall be 24 V DC operated.
- 5.9.8 Power cable, analog signal cable, digital signal cable shall be separately laid and properly tagged.
- 5.9.9 All pressure gauges and pressure transmitters shall be provided with isolation valves and have accuracy of + or - 1% of FSD and + or - 0.25% of FSD respectively.
- 5.9.10 Pressure transmitters shall be fixed range type with 2 wire 4 to 20 mA transmitter of piezoresistive suitable for CNG applications except at suction and discharge which is 2 wire smart type 4 to 20 mA transmitter with integral display and IP 67 certified & ex-proof.

5.9.11 The temperature gauge shall be generally mercury or Gel filled in steel filled type, weatherproof & with capillary extension. Capillary tubing shall be min Carbon Steel with CS flexible armoring. The gauge shall have accuracy of + or - 1% FSD. The range shall be 1.5 times of operating temperature.

5.9.12 Units of measurement shall be:

GAS FLOW : SM^3/hr & kg/hr

PRESSURE : kg/cm^2 (g)

TEMPERATURE: $^{\circ}\text{C}$

5.9.13 Two no. of RS 485/RS232 Serial Communication Ports shall be provided for Hooking Up the PLC to SCADA & Laptop PC at PLC end in future. Necessary adopter if required shall be under scope of vendor. Also, Vendor shall include one set of all licensed relevant Software (Windows operating system based system configuration software and application program) for accessing the PLC, HMI and mass flow meter through Laptop or PC. All the parameters available on the PLC through SCADA system are required. The detail requirement of SCADA will be communicated to successful vendor during detailed engineering / O&M, as per the requirement by client. For selection of equipment, compatibility of SCADA system vendor shall consider the Modbus RTU protocol, FCC-68 RJ 45 connection type RS 232 communication standard, Baud rate upto 19.2 K with configurable software.

5.9.14 Following points to be noted regarding Mass Flow meter – Coriolis type required at Suction, Discharge and Gas inlet to Engine.

- Each Mass Flow meter shall include a sensor with integral transmitter i.e. meter electronics certified intrinsically safe/explosion proof by statutory authority suitable for the required hazardous area as per IS-2148 /IEC-79. Also the offered sensor and the transmitter shall be weather proof to IP 65 as per IS-2147/IEC-529. Statutory authority for local installation is CCOE/PESO.
- For online Calibration of MFM; Vendor to provide suitable arrangement to connect Master Mass flow meter (Prover) with Compressor Suction & Compressor Discharge flow meter for calibration purpose. Indicate and provide the details in P&ID.
- Offered mass flow meter shall be necessary for Custody Transfer application at compressor suction and discharge and accuracy should be in the range of 0.5% of span. Type of approval certificate from W&M India is required.
- Vendor has to calibrate all instruments including mass flow meter and perform pressure vessel testing within 1 month of compressor commissioning.
- Flying lead type electrical termination is not acceptable. All electrical connections shall be ½" NPTF. Cable glands shall be provided for electrical power, signal and control connections. Cable glands shall be double compression type and certified weatherproof and explosion proof for the required area classification as per IS-2147 and IS-2148.
- Offered Mass flow meter shall be completely free from corrosion of measuring tube due to alternating stresses continuously occurring in the tube. Also measuring tube shall be completely free from erosion, which may result due to fluid velocity.
- The design of meter electronics shall be in compliance with the electromagnetic compatibility requirements as per IEC-801.
- Meter Electronics shall include all the associated pre-amplifiers converters line riser etc and shall have enough diagnostic facility to correct live zero, variation, meter factor etc with help of Laptop. Output of the mass flow meter RS 485 type/ RS 232 to PLC shall be utilized. Mass flow meter shall be powered by 24 V DC only.
- Installation details as per AGA-11 recommendations have to be followed. For Horizontal / Vertical installations support etc. OEM recommendations shall be followed and to be provided.
- Vendor shall calibrate each Mass Flow meter from the statutory authority of country of origin or any recognize test house (for India from FCR) with the fluid for which it is to be used. In case it is not possible to calibrate the Mass Flowmeter with actual fluid. Vendor must indicate origin or any recognized test house

a) Fluid used for calibration

- b) Correction factor/Adjustment required for actual process fluid. In any case, inaccuracy when extended to actual process shall not exceed the specified limits (as per manufacturer's standard).

The calibration certificate should be valid for at the time of supply. The validity of calibration will be considered one year from the date of calibration. If the same is expired then the recalibration has to be done from FCRI as per the latest NABL/IS standards with the fluid.

- Vendor shall submit the following test certificates and test reports for purchaser's review:-

- a) Material test certificate with detailed chemical analysis from foundry (MIL Certificate).
- b) Certificate of radiography / x-ray for any welded joint.
- c) Hydrostatic test report with pressure of 1.5 times the design pressure.
- d) Calibration report including calibration factors for each Mass flow meter certificate from statutory body for offered sensor and transmitter for required area classification.
- e) W&M India certificates.

5.9.15 CERTIFICATION:

The requirement of statutory approvals for usage of equipment/instruments/system in electrically hazardous areas shall be as follows:

- b) The vendor shall be responsible for obtaining all statutory approvals, as applicable for all instruments and control systems.
- c) Equipments/instruments/systems located in electrically hazardous areas shall be certified for use by statutory authorities for their use in the area of their installation. In general, the following verification shall be provided by the vendor.
 - 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 certification/approvals/authentication, for all such intrinsically safe/flameproof equipment/instrument/systems, by the Indian authority- Chief Controller of Explosive (CCOE)/PESO, Nagpur, India.
 - For all flame proof equipments manufactured within India, the testing shall be carried out by any of the approved testing houses- Central Mining Research Institute (CMRI)/ERTL etc. The item shall in addition bear the valid certification from CCOE.
 - For all intrinsically safe equipment manufactured within India the testing shall be carried out by any of the approved testing houses – Central Mining Research Institute (CMRI)/ERTL etc. The item shall in addition bear the valid certification from CCOE.

5.10 Earthing of equipment:

- 5.10.1 Bidders shall make provisions for earthing of the complete package as required as per IS (Earth pits are not in Bidder's scope). All electrics shall comply with latest IS/IEC. Epoxy based paints shall be applied on all electrical equipments. Bidder's scope shall include obtaining statutory approvals for the complete package, wherever necessary.
- 5.10.2 Dedicated Instrumentation earthing has to be provided.
- 5.10.3 Metallic part of all equipment not intended to be alive shall be connected to earth as per provisions of IS: 3043/IEC recommendation. Grounding of all electronics shall be separately connected to earth using insulated copper wire. Grounding of electronic equipment shall not be connected to earthing for electrics or equi-potential bonding

6.0 INSPECTION AND TESTING

6.1 General

- a) Inspection and Test Requirements have been spelled out in respective Equipment Data Sheets and this Technical Specification.

- b) Bidder shall confirm compliance to all inspection and testing requirements stipulated therein and include the inspection charges in the lump sum cost.
- c) Owner/consultant shall witness tests as per data sheet and this specification. The Bidder shall notify the timing of such inspection and testing at least 15 days in advance to PURCHASER/CONSULTANT. PURCHASER/ CONSULTANT shall depute their representative for witnessing the tests.
- d) Bidder shall submit detailed Test Procedure for Approval of the Purchaser two months in advance of the actual date of conducting each test.
- e) Inspection testing for foreign bidder: Cost of third party inspection including fees payable and arranging the same shall be borne by bidder. Approved 3rd party inspection agencies are EIL, BVQ, DNV, MECON and Lloyd's reg. TUV/AB-Vincotee/SGS/American bureau services/ Velosi certification services/International certification services limited/BV/Dr.Amin Controllers Pvt. Ltd.
- f) Inspection testing for Indian bidder: Owner/Consultant shall carry out Inspection and testing as per QAP, inspection charges shall be considered @1.25% of the ex-works price excluding duty and taxes of the equipment for price evaluation purpose only. Domestic bidder shall also arrange 3rd party for inspection as indicated in QAP and expanses on third party inspection including fees payable and arranging the same shall be borne by bidder

6.2 Mechanical running test (MRT)

- 6.2.1 The MRT for the each compressors shall be carried out by bidder 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.

6.3 Mechanical String Test

Mechanical String Test for 4 hrs shall be performed at packager's shop before dispatch in presence of Purchaser/Consultant. This test can be clubbed up with the Mechanical Run Test of compressor as specified above, provided the job driver, lube Oil system is used for the test. Only natural gas shall be used for string test. All parameters including discharge pressure shall be demonstrated. All the interlocking and performance of the instrumentation system will be verified during the MRT. String test at unload condition is not acceptable.

6.3.1 Compressor capacity during string test for 1200 SCMH Gas Driven Compressor

The string test for this compressor shall be performed at suction pressure 16 to 19 kg/cm²(g) for 4 hours continuously and the capacity shall be recorded. In case the capacity is found to be not meeting the requirement, the compressor shall not be accepted.

6.4 Package Performance Test

Bidder shall assemble the complete package including auxiliary systems, instrumentation, safety devices within the enclosure at his shop and dispatch. Duration of PG test shall be 4 hours with compressor running on continuous basis, however if load is not available at site intermittent running for 4 hours shall be permitted with maintaining minimum continuous operation of ½ hours. Bidder to submit PG test procedure for review/ approval. Complete package shall be performance tested as a module along with gas engine & compressor as per Performa (to be decided during engineering). Bidder shall demonstrate all controls, shutdown, trips & alarms, functioning of Instrumentation system, PLC, Motor / Gas engine etc. Pressure and temperature of gas shall be considered at purchaser's boundary limit (or before filter unit of package if provided) and as indicated in the Instrumentation schedule; if provision not available then supplier shall install necessary pressure and temp measuring devices. Discharge PT & TT of compressor will be used for discharge pressure and temperature measurements. All instrument duly calibrated, tools & tackles, any modification required for conducting PT shall be in the scope of supplier.

- 6.4.1 The PT shall be conducted only **after 30 days' running of the machine after successful commissioning or after 30 days from the date of commercial operation, but not later than 90 days from the date of commercial operation of the machine. The delay in conducting PT beyond 90 days shall be liable for PRS unless such delays are solely attributable to the owner (i.e. due to inadequate load, -availability of CNG vehicles for conducting PT).**
- 6.4.2 The test shall be the basis of assigning penalties on the Bidder, acceptance/rejection of the package thereon. Bidder shall submit the detail test procedure for the same, which shall be approved by PURCHASER/CONSULTANT. The test package shall be witnessed by PURCHASER/CONSULTANT.
- 6.4.3 Bidder to note that prime mover speed correction shall not be allowed below guaranteed speed. **Temperature and pressure will be considered at purchaser's boundary limit**, if provision is not available at compressor suction and discharge as explained above.

7.0 PRICE LOADING AND COMPENSATION FOR UNDER PERFORMANCE

- a This section describes the guaranteed parameter, which the CNG compressor package must fulfill and the penalty for shortfall in guaranteed parameters and rejection of compressor package by the Purchaser.
- b The guaranteed parameter shall be adjusted to account for variation in gas composition and prevailing ambient condition during testing.
- c Necessary calculations shall have to be furnished by Bidder, which shall be final and no deviation shall be permitted afterwards.
- d In case of any inconsistency in manufacture and/or operation of supplied compressor package, Bidder shall at his own risk and cost, eliminate the defects to the satisfaction of Owner.

Bidder shall furnish guaranteed values as per cl. 14 of this specification.

7.1 Compressor Capacity

Bidder shall guarantee 1200 SCM^h capacity of compressor with given gas composition, at suction pressure of 17.5 kg/cm² (g) and at suction temperature of 30 °C, discharge pressure of 255 kg/cm² (g) with no negative tolerance for errors in instruments and measurements.

Since the compressor suction pressure varies from 16 kg/cm² (g) to 19 kg/cm² (g) at present, the compressor shall be suitable to deliver flow corresponding to 16 and 19 kg/cm² (g) at present.

In both the above cases the driver shall be selected corresponding to max capacity. Mechanically the compressor shall be suitable to operate from min to max suction pressure without throttle and suction valve full open condition. **Bidder to note that the**

suction pressure and temperature shall be measured at vendor's boundary limit and not at compressor cylinder.

Bidder shall guarantee compressor capacity in SCM^h as per MR item no. for design case gas composition, suction pressure and suction temperature as specified against guaranteed condition with discharge pressure of 255 kg/cm² (g) with no negative tolerance for errors in instruments and

measurements. Mechanically the compressor shall be suitable to operate from min to max suction pressure without throttle and suction valve full open condition.

7.2 Loading & Compensation Criteria

7.2.1 Price loading Criteria on account of Fuel consumption.

Bidder shall indicate the specific fuel consumption kg/hr/BHP and the fuel consumption (above defined compressor capacity) in SCMh as guaranteed value in the offer on the design case gas composition. The guaranteed value of fuel consumption of gas engine in SCMh shall be **between 44 to 46SCMH** corresponding to flow of 1200 SCMh for the given gas. Bidder shall not be given any credit/advantage for quoting fuel consumption below the lower limit. But in case the fuel consumption quoted by the bidder exceeds the upper limit, the bid will be rejected. Therefore bidders are requested to indicate the fuel consumption very carefully.

Fuel consumption of all the techno-commercially qualified bidders shall be compared with respect to the lowest SCMh quoted by any bidder within the range 44 to 46 SCMh. Even if any bidder quotes less than 44 SCMh as fuel consumption by engine for running the package, 44 SCMh will be considered as fuel consumption by packager for price loading purpose. All other bidders shall be loaded as per differential cost evaluated as per following formula over and above the total evaluated price.

Total cost of the package for evaluation purpose (A+B);

Where:

A= Price evolved based on the evaluation methodology indicated in clause no. 31 of ITB B (in Rs) =

$\text{Top} \times (\text{FQ} - \text{FL}) \times \text{Cf} \times \text{Df}$

Where:

Top = Operating Time in hours = 6570 Hrs

FQ = Guaranteed fuel consumption in SCMh quoted by a bidder under evaluation.

FL = Lowest Guaranteed fuel consumption SCMh or 44 SCMh, whichever is higher.

Cf = Cost of fuel as Rs 32/- per SCM

Df = discounting factor to arrive at Net Present Value (NPV) based on 5 years i.e. 3.274

Suitable calculations/ performance curves/any other document, establishing the guaranteed fuel consumption shall be submitted by the engine manufacturer along with the bid.

The financial loading on account of fuel consumption shall be limited to 10 % of the evaluated price of the bidder.

For loading calculations purpose fuel consumption as indicated in the original bid shall be taken. If any bidder fails to indicate the fuel consumption, highest fuel consumption figure from the techno-commercially accepted bidders shall be considered for evaluation purpose and the same shall be considered for demonstration by the supplier at site.

7.2.2 Compensation for fuel consumption of gas engine in excess of guaranteed value.

During compressor package performance test, in case the compressors package fails to meet the guaranteed values, the compensation (calculated as per formula given under here) shall be claimable by the owner and the same shall be recovered by the owner from any payment due to the bidder. In case such claims are not fully recovered, then bidder will pay the balance amount to the owner.

The compensation per package shall be the differential cost calculated as follows:

$\text{PY (in Rs)} = 2 \times \text{Top}(\text{FT} - \text{FQ}) \times \text{CF} \times \text{DF}$

Where,

PY = Differential Cost

Top= Operating Time in hours = 6570 Hrs

FT = Fuel consumption as arrived from PT in SCMH

FQ= Guaranteed fuel consumption in SCMH as quoted by the bidder during bidding. CF = Rs.

32/- per SCM

DF = 3.274 (Discounting factor based on 5 years of operating years)

The total penalty to be charged for non-conformance of guaranteed parameter on account of fuel consumption shall be limited to 10 % of basic compressor supply cost on FOT basis.

No advantage shall be given for higher performance than the guaranteed.

Bidder shall indicate the Guarantee parameter in his offer as per this specification. Fuel

consumption shall be adjusted for actual gas at site for density and C.V.

7.3 Compensation (Penalty) against Package Loss.

Bidders are to ensure that the package loss (excluding Engine consumption) should not exceed 1% of the capacity of the machine. In case the above loss exceeds 0.5% of the capacity of the machine (established in PT), the purchaser shall be compensated

@ Rs 65/-per kg till contract validity for the gas leakage. The amount will be deducted from O&M monthly running bill.

7.4 Compensation (Penalty) due to non performance of compressor

Over and above the penalty due to fuel consumption, if during PG test, the compressor capacity is found to be less than tender requirement **penalty for the reduction in capacity shall be imposed on the Bidder on pro-rata basis based on the FOT/FOB cost of compressor (supply cost only) without any upper limit.** Further the methodology for capacity and fuel consumption (with sample calculation), if suction and discharge pressure and suction and discharge temperature and gas composition are different than indicated in the tender, shall be submitted.

8.0 PAINTING AND PROTECTION

8.1 SURFACE PREPARATION

- (a) Rust, rust scale and foreign matter shall be removed fully to ensure that a clean and dry surface is obtained. The minimum acceptable standard for blast cleaning shall be Sa 2-1/2 or equivalent as per Swedish Standard SIS-055900-1967 or equivalent.
- (b) Blast cleaning shall not be performed where dust can contaminate surfaces undergoing such cleaning or during humid weather conditions having humidity exceeding 85%.
- (c) The first coat of primer must be applied by brush on dry surface. This should be done immediately after cleaning.
- (d) Surface shall be inspected by Purchaser/ third party before application of primer.

8.2 PAINTING (PRIMER & FINISH COAT)

Following primer and finish coats to be applied on the canopy and all structural parts as a minimum:-

a) Primer	Two component epoxy zinc phosphate primer with minimum volume solids of 59%, an initial cure of 75 minutes at 25 deg. C and a weight of around 2.52 kg/litre.
No. of Coats:	1
DFT	75 (micron) μ each
b) Primer	Two component intermediate coat with epoxy high build MIO (micaceous iron oxide) of minimum volume solids of 80%, an initial cure of 60 minutes at 25 deg. C and a weight of around 2.1 kg/ litre.
No. of Coats	1
DFT	100 micron

c) Finish Coat : Acrylic Polyurethane paint

No. of Coats: 2

DFT 50 (micron) each coat

Total DFT 100 μ

Total DFT after application of primer and paint shall be 275 μ (micron) minimum.

8.3 The vendor to ensure that exterior steel surface of equipment and piping painted shall have a fade free life without oxidation of paint surface for at least 5 years in an environment of bright sunlight with an intense UV content.

8.4 The headers of air-cooled exchanger shall be zinc sprayed.

8.5 Packing shall be sufficiently robust to withstand rough handling during ocean shipment & in-land journey. Sling points shall be clearly indicated on crates.

9.0 ERECTION, TESTING AND COMMISSIONING AT SITE

9.1 Bidder shall be responsible for erection commissioning; performance test, field noise level test and field trial run of all compressor packages at site.

9.2 Bidder shall be liable to pay all local taxes, levies applicable and comply with rules, laws prevailing in concerned state.

10.0 FIELD TRIAL RUN (Commissioning and Commercial Operation)

Bidder shall conduct a field trial run of each compressor package for minimum 72 hours cumulative or 6 hours continuous duration near the guaranteed points in which satisfactory operation of complete package together with all accessories/auxiliaries' controls shall be established for specified operating conditions prior to the start of operation and maintenance period as defined in the contract. During the field trial run the bidder will be allowed a maximum of THREE attempts to complete the above-specified test. The Equipment shall be considered commissioned after the successful completion of Field Trial Run. Further Commencement of commercial operation will be intimated by client.

OR

Due to non-availability of the commercial load at CNG station, package will be treated as commissioned after filling of CNG cascades to min 100kg/cm² installed at station.

11.0 SPARE PARTS, SPECIAL TOOLS AND TACKLES

All spare parts as required, special tools & tackles with toolbox for erection and commissioning and during O&M period of compressor package shall be supplied by the packager and shall form his scope of supply.

A brand new separate set of special tools and tackles for each compressor, (such as tool for extraction of fly wheel, key to hold crank shaft for loosening & tightening mech seal/bush ,

special key to install and uninstall bush for mech seal, piston nut wrench, valve installation tool, rod nut wrench, valve adjusting wrench, engine timing light, engine barring tool , spark plug removal tool, etc) as required for Normal maintenance beyond the contractual operation & maintenance period shall be supplied by the packager, which shall form the property of PURCHASER. Special tools & tackles used by bidder in during O&M period shall not be considered as new. Supply shall be one month before the completion of O&M period.

12.0 DATA AND DRAWING

- a. Drawings and Data shall be furnished in conformity with the Bidder Data Requirements Forms attached with Enquiry Specifications.
- b. The data requirement after placement of Fax of intent is indicated in the Bidder Data requirement Forms for the respective equipment, including the number of weeks within which this data is to be provided. Bidder shall confirm that all data as required shall be furnished by him and shall indicate the Bidder's promised data in the columns provided.

- c. After the placement of FOI/FOA, a conference (kick off meeting) will be held at such date and at such place, as may be mutually agreed upon between the Bidder and the Purchaser. The intent of this conference shall be to discuss / clarify various requirements and finalize the modus operandi for execution of the contract within the scheduled delivery period.
- d. Bidder shall furnish the Drawings/Documents for Purchaser's Review / approval as per the Bidder Data Requirement (as specified in the Specifications/ Bidder data requirement forms). The review comments for major and critical drawings (such as system P&ID's, operation philosophy, General Arrangement Drawings, Foundation Drawings, Performance characteristics, Pulsation and Vibration Study Reports, Tensional Analyses etc.) shall be discussed across the table at such date and place as may be mutually agreed between the Purchaser and the Bidder.

DRAWINGS AND DATA REQUIRED FROM BIDDER

(All drawings & Documents shall be in English Language only and shall be submitted in three sets)

DESCRIPTION		Required with bid	Certified Information Required after Purchaser order		
			Prints for review/ Approval	For records & Information	Time from FOI in weeks (To be indicated by vendor)
(1)		(2)	(4)	(5)	(6)
A	GENERAL				
A.1	Schedule for furnishing the vendor data			Yes	

DESCRIPTION		Required with bid	Certified Information Required after Purchaser order		
			Prints for review/ Approval	For records & Information	Time from FOI in weeks (To be indicated by vendor)
(1)		(2)	(4)	(5)	(6)
A.2	A specific statement that CNG compressor package is in strict accordance with data sheet , technical specification & applicable standards, In case of any deviation, specific list with details & reasons for each deviation.	Yes	Yes		
A.3	General arrangement (GA) indicating battery limit for electric and piping connection & schematic diagram. & Flange details of piping connection at battery limit. i. Compressor package ii. Air compressor, dryer & receiver ii. CO2 flooding system. iv. Duplex filter v. PRV+SSV	Yes	Yes		
A.4	A statement on oil consumption and minimum allowable oil temp.	Yes		Yes	
A.5	Flange details of piping connection with connection at battery limit.			Yes	
A.6	Duly filled in experience record program	Yes		Yes	
A.7	Foundation plan drawings along with load details of compressor package, Air compressor, dryer, receiver, Duplex filter, CO2 flooding system & PRV+SSV			Yes	
A.8	Tentative load data for foundation design.	Yes		Yes	
A.9	List of sub-vendors with address / phone/ fax no. For all bought out items including electrical & instrumentation items.		Yes		
A.10	Leaflet, catalogues for all items.	Yes	Yes		
A.11	O & M manual		Yes	Yes	
B	Compressor				
B.1	Data Sheet duly filled in.	Yes		Yes	
B.2	Catalogue of compressor	Yes		Yes	

DESCRIPTION		Required with bid	Certified Information Required after Purchaser order		
			Prints for review/ Approval	For records & Information	Time from FOI in weeks (To be indicated by vendor)
(1)		(2)	(4)	(5)	(6)
B.3	Typical cross sectional drg. and literature to fully describe the details of offering.	Yes		Yes	
	- Compressor	Yes		Yes	
	- Suction	Yes		Yes	
	- Discharge valve	Yes		Yes	
	- Piston rod gland packing & piston rings.	Yes		Yes	
	- Lube oil pump	Yes		Yes	
B.4	V-belt & pulley with selection chart & calculation			Yes	
B.5	Cooler data / drg with thermal & mech. design calculation	Yes	Yes		
B.6	Design calculation, GA drgs for pulsation dampner.	Yes	Yes		
B.7	Gas hydraulic oil, lube oil piping & instrument diagram	Yes	Yes		
B.8	Torque angle diagram, piston rod load VS crank angle.	Yes	Yes		
B.9	Torque speed characteristic. Starting torque of engine and compressor to be superimposed over each other.	Yes	Yes		
B.10	Acoustic / mechanical evaluation report	Yes			
B.11	Itemized price list of spares	Yes	Yes		
B.11	Itemized list with price of spares for erection / commissioning.	Yes	Yes		
B.12	Item list of spares for warrantee period	Yes	Yes		
B.13	Drg. For testing arrangement & test procedure to be adopted.	Yes	Yes		
B.14	Quality Assurance Plan (QAP) and Quality Procedure		Yes		
B.15	Certificate for following		Yes		
	a) Hydraulic testing		Yes		
	b) Non destructive testing		Yes		
	c) Material composition & physical properties.		Yes		
	d) Leak proofness list of frame		Yes		

DESCRIPTION		Required with bid	Certified Information Required after Purchaser order		
			Prints for review/ Approval	For records & Information	Time from FOI in weeks (To be indicated by vendor)
(1)		(2)	(4)	(5)	(6)
	e) Lube pump, frame oil pump, hyd. Oil pump		Yes		
B.16	Design / Actual assembly clearance chart	Yes	Yes		
B.17	Test records of following		Yes		
	a) Mechanical running		Yes		
	b) Performance test		Yes		
	c) Noise level test		Yes		
B.18	List of special tools & tackles for installation & maintenance	Yes	Yes		
B.19	Filled in air cooler data sheet	Yes	Yes		
C	Electric equipment and motors	Yes	Yes		
C.1	Performance curves of motor	Yes	Yes		
C.2	Technical literature/catalogue, selection charts, nomographs etc. for motors	Yes		Yes	
C.3	Filled in data sheet of motor and Gas engine and UV detection system	Yes	Yes		
C.4	Control schematics of motors	Yes	Yes		
C.5	Performance curves for auxiliaries like fan, pump along with motor	Yes	Yes		
C.6	Typical component cross sectional drawing and literature to fully describe the details of offering.	Yes	Yes		
C.7	Test procedure of motor		Yes		
C.8	Mill test report of motors		Yes		
C.9	Manufacturer's test report of motors		Yes		
C.10	Stage inspection and test report		Yes		
C.11	Final acceptance testing and performance tested records.		Yes		
C.12	Schematic diagram with start up & shut down procedure & logic		Yes		
C.13	Inter connection & wiring diagram		Yes		
D	INSTRUMENTATION AND ELECTRICS				
D.1	Drawing & document index		Yes		

DESCRIPTION		Required with bid	Certified Information Required after Purchaser order		
			Prints for review/ Approval	For records & Information	Time from FOI in weeks (To be indicated by vendor)
(1)		(2)	(4)	(5)	(6)
D.2	Instruments and electric motor data sheets	Yes	Yes		
D.3	Start up and shut down write up	Yes	Yes		
D.4	Start up& shut down interlock diagram	Yes	Yes		
D.5	Alarm & shut down list with set point	Yes	Yes		
D.6	Control panel layout		Yes		
D.7	Termination diagram, panel writing detail		Yes		
D.8	Loop schematic		Yes		
D.9	Inter connecting diagram		Yes		
D.10	Cable schematic		Yes		
D.11	Bill of material		Yes		
D.12	Inspection & test procedure		Yes		
D.13	Test / Inspection certificate		Yes		
D.14	List of relief valves with settings		Yes		
D.15 D-17	P & ID of priority panel.	Yes	Yes		
D-16	Electrical Load summary	Yes			
	Power required from UPS Supply (230 V AC Single Phase)	Yes			
D-18	Power required from Non UPS Supply (415V TPN)	Yes			
D-19	Combined Speed-Torque Characteristic curve of engine and Compressor starting at rated inlet pressure.	Yes			

Note:

- 1) Drawings/ document as indicated above and which are required to be submitted after placement of order for approval shall be submitted in following sets:

Soft copy of all documents/drawing (As built drawings only);

2 sets of **prints**;

d) One no. licensed software for compressor PLC

On successful award of work, the drawings/documents shall be submitted for approval as per the scope of work.

The drawing submitted with bid will not be considered as final. Successful Bidders shall submit final drawing as per scope defined in tender for approval.

13.0 **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.

13.1 **Accommodation/transportation/medical**

The bidder shall make his own arrangement for the accommodation of his personnel at respective locations and subsequent transportation arrangement for them from their place of residence to work place or any other place as required and company shall have no

obligation in this respect. The company shall not be responsible for providing any medical assistance to the bidder personnel.

13.2 Discipline:

The bidder shall be responsible for the discipline and good behavior of all his personnel deployed in the services contracted out and should any complaint be received against any of his employee, he shall arrange to replace such persons within 24 hours of notice issued by the Engineer-in-Charge. The decision of the Engineer –in-Charge in this matter shall be final and binding on the Bidder.

13.3 Gate pass/identity card

Supplier shall arrange to supply / renew identity cards to his workforce at his own cost, if so required by the Purchaser for security or for any other reasons. Those Bidder's personnel shall be required to carry their respective identity cards while on duty and produce on demand.

13.4 Right to get services carried out through other agencies.

Nothing contained herein shall restrict Purchaser from accepting similar service from other agencies, at its discretion and at the risk and cost of the Bidder, if the bidder fails to provide the said services any time.

13.5 Sub-letting of contract

Sub-letting of contract: The bidder may sub let/ assign the installation and O&M services to an agency having experience of CNG compressor installation and O&M for min two years. However, complete responsibility including composite bank guarantee shall be furnished by the bidder. **Bank guarantee for O&M shall start from the date of commercial operation by the purchaser which will be 10% of total cost of O&M services.**

13.6 Compliance of laws

The bidder deploying 20(twenty) or more workmen as contract labour shall have to obtain license from appropriate licensing authority, if required. The bidder (which shall

include the Contracting firm / company) shall be solely liable to obtain and to abide by all necessary licenses from the concerned authorities as provided under the various labour laws legislation's including labour license from the competent authority under the Contract Labour ("Regulation & Abolition") Act or similar act applicable to land of law.

The Bidder shall be responsible for necessary contributions towards PF, Family Pension, ESIC or any other statutory payments to Government Agencies if applicable under the laws in respect of the contract and personnel deployed by the bidder for rendering services to PURCHASER and shall deposit the required amount with the concerned statutory authorities on or before due dates.

The bidder shall not engage /deploy any person of less than 18 years under this contract and the persons to be deployed should be physically and mentally fit.

The installations where job is to be carried out are live and have hydrocarbon environment. Bidder shall comply with all safety and security rules and regulations and other rules laid down by PURCHASER for its operation. It shall be the duty/responsibility of the bidder to ensure the compliance of fire, safety, security and other operational rules and regulations by his personnel. Disregard to these rules by the Bidder's personnel will lead to the termination of the contract in all respects and shall face penal/legal consequences.

The bidder shall arrange for insurance of all this workers engaged on the job as per the relevant Acts, rules and regulations, etc. In case by virtue of provisions of worker's compensation act, or any other law in force. PURCHASER has to pay compensation for a workman employed by the bidder due to any cause whatsoever the amount so paid shall be recovered from the dues payable to the bidder and /or security deposit.

13.7 The officer in charge shall have power to

- i) Issue the bidder from time to time during the running of the contract such further instructions as shall be necessary for the purpose of proper and adequate execution of the contract and the bidder shall carry out and bound by the same.
- ii) During the currency of this contract, PURCHASER can increase and/or decrease the number of the services / technicians to meet contractual requirements.
- iii) Order the bidder to remove or replace any workman whom the company considers incompetent or unsuitable and opinion of the company representative as to the competence of any workman engaged by the bidder shall be final and binding on the Bidder.

13.8 Repatriation and termination

Purchaser shall reserve the right at any time during the currency of the contract, to terminate it by giving 30 days notice to Bidder, and upon expiry of such notice period the bidder shall vacate the site/office occupied by him immediately.

13.9 Indemnity agreement

Bidder shall exclusively be liable for non-compliance of the provision of any act, laws, rules and regulations having bearing over engagement of workers directly or indirectly for execution of work and the bidder hereby undertake to indemnify the company against all actions, suits, proceedings, claims, damages demands, losses, etc. which may arise under minimum wages act, payment of wages act, workman compensation act, personnel injury (compensation insurance) act ESI Act, Fatal Accident Act, Industrial Dispute Act, Shops and Establishment Act, Employees Provident Fund Act, Family Pension and deposit Linked Insurance Scheme or any other act or statutes not herein specifically mentioned but having direct or indirect application for the persons engaged under this contract. (A certificate to this effect shall be submitted by the bidder immediately on receipt of LOA).

13.10 Compensation for non-fulfillment of obligation under Annual Maintenance Contract (AMC)

During the AMC period, the bidder must ensure that the compressor is available for a minimum of 18 hours a day and 365 days a year for performing the required services as defined in the tender document. The timing of 18 hours will be decided by client. If the bidder fails to provide the required services for any day, the bidder shall compensate the owner @ Rs 3000/- per hr. for the default period. For calculation of default period will be recorded jointly by the bidder and owner on daily basis. However, compensation will be on monthly cumulative basis rounded to nearest hour. During 6 hours bidder can carry out cleaning and preventive maintenance. Bidder in consultation with owner can club these 6 hours for two consecutive days for 2 times a month only without any penalty. In case bidder has utilized less down time of the compressor package than that allowed, the bidder can carry forward only max unutilized 9 hours downtime to immediate next month.

In any case, the maximum penalty imposed in a month for non-performance of the equipment would be limited to 50% of the amount of O&M charges to be paid to the bidder per month per compressor.

13.11 Bidder's responsibility

The bidder shall depute his Supervisor for supervision of the services to receive instructions from Engineer-in-Charge or his representative.

13.12 Employment liability of Bidder

The bidder shall ensure and will be solely responsible for payment of wages and other dues latest by 7th of the following month to the personnel deployed by him in the presence of the Company's representative.

The bidder shall be directly responsible and indemnify the company against all charges, claims, dues etc. arising out of disputes relating to the dues and employment of personnel deployed by him.

The bidder shall indemnify the company against all losses or damages caused to it on account of acts of the personnel deployed by the Bidder. The bidder shall ensure regular and effective supervision of the personnel deployed by him.

The bidder shall be liable for making good all damages/losses arising out of loss or theft of each handled, leakage, pilferage of any office, furniture equipment fitting and fixtures what-so-ever as may be caused directly or indirectly by the engaged persons through him/work carried out by them.

13.13 General

The operation and maintenance services shall be provided in terms of shift pattern on the round the clock basis as mentioned in the tender document.

- i) The bidder shall deploy adequate number of technicians / supervisors / Engineers / helpers as well as tools & equipment for smooth and proper operation & maintenance of the compressors supplied in terms of the contract. In case required to meet operational requirements, the bidder shall augment the same as per direction of Engineer –in-Charge.
- ii) The bidder is required to carry out all services as mentioned in the Scope of Services and Schedule of Rates on all the 365 days including Sunday and all Holiday & around the clock.
- iii) The bidder shall allow weekly rest and daily working hours to his workmen as per the relevant Act/Law/and Rule made thereunder. However, no work shall be left incomplete/unattended on any holiday/weekly rest. Technician/operators provided shall have minimum qualification of ITI. Contract in person or his authorized representative shall provide the services on daily basis to interact with Engineer-in-charge and deployed workman
- iv) The work force deployed by the bidder for O&M services at CNG installation shall be of sound relevant technical professional expertise which is otherwise also essential from the safety point of view of the personnel of the bidder as well as for the installation.
- v) Bidder has to ensure the safety of man and machine all the times. Damages of equipment due to negligence will be recovered as per the decision of Engineer-in-Charge, which will be final.
- vi) Regarding work completion, the decision of the Engineer-in-Charge will be final and binding.
- vii) The bidder shall make his own arrangements to provide all facilities like boarding and transport etc. to his workmen.
- viii) All personnel of the bidder entering on work premises shall be properly and neatly dressed and shall wear uniform, badges while working on premises of the company including work sites.
- ix) Bidder shall maintain proper record of his working employee's attendance and payment made to them.
- x) The Bidder's representative/supervisor shall report daily to the Shift-in-Charge for day to day working.

- xi) All the safety rules and regulations prevailing and applicable from time to time at the installations as directed by PURCHASER will be strictly adhered to by the Bidder.
- xii) The rates quoted by the Bidder must be inclusive of all the taxes, duties, services tax, work contract tax and any other levies, Bidder's share of P.F. and insurance charges, Bidder's profit and any other expenditure etc.
- xiii) It will be the responsibility of the bidder to pay as per the minimum wages of the appropriate government applicable under the Minimum Wage Act.
- xiv) The services shall be provided in terms of shift pattern on the round the clock basis. The bidder is responsible to provide effective and efficient services in all shifts and assure that there is no disruption in the services for want of any resources.
- xv) The bidder shall establish a central control room to operate 24 hours, seven days a week where complaint regarding non-performance of the compressors in terms of the contract can be lodged. Further, the bidder shall deploy adequate number of technicians/ supervisors / engineers at various site offices in consultation with Engineer-in-Charge to provide trouble free operation & maintenance of the compressors.
- xvi) All arrangements for communication from control room to the contract person working on job under the services shall be the responsibility of the Bidder, viz pagers / walky-talky.
- xvii) All the jobs mentioned under scope of services shall be carried out as per sound engineering practices, work procedure documentation, recommendation of the manufacturer and as per the guidelines/direction of engineer-in-charge of authorized representative.

13.14 Operation and Maintenance of compressor packages as per Schedule of Rates

13.14.1 Scope of supply during warranty period:

All spares, consumables, lubricants, lubricating oil, coolant, sealant etc. required for carrying out the Operation and maintenance of the complete compressor package during the warranty period, including periodic, breakdown maintenance for continuous and uninterrupted operation of the compressor packages shall be in scope of the Bidder and shall be kept in stock. If any equipment got fire or broken due to accident the same shall be replaced or rectified by the bidder. Electricity shall be supplied free of cost to the Bidder.

13.14.2 Scope of supply during post warranty period:

All spares, consumables, lubricants, lubricating oil, coolant, sealant etc. required for carrying out the Operation and maintenance of the complete compressor package including major overhauling of compressor & engine during the post warranty period till contract validity, including periodic, breakdown maintenance for continuous and uninterrupted operation of the compressor packages shall be in scope of the Bidder and shall be kept in stock. If any equipment got fire or broken due to accident the same shall be replaced or rectified by the bidder. Electricity shall be supplied free of cost to the Bidder.

13.14.3 Scope of services:

- 13.14.3.1 The Bidder shall have to keep all the spares, consumables, lubricants, coolant, etc required for carrying out periodic, breakdown, emergency maintenance etc of the package so as to minimise the down time of the compressor. Non-availability of compressor package for non-availability of spares shall be liable for compensation.

13.14.3.2 All tools, tackles and fixtures required for carrying out the above maintenance of the compressor shall be in scope of the Bidder. The scope will also include handling equipment like crane, forklift, chain pulley block, etc required during the any maintenance activity.

13.14.3.3 Any expert services required from principal company or OEM shall be arranged by the bidder or his agent at his own cost. All arrangements like phone, fax, computer, Internet etc required for correspondences with above personnel shall be arranged by the Bidder.

13.14.3.4 The periodic maintenance required to be done as per OEM recommendation shall be taken up promptly. The Bidder shall provide the detailed preventative maintenance schedule along with

- a) Estimated down time required for each type of maintenance schedule.
- b) List of spares and their quantities required for each type of maintenance schedule per compressor.
- c) Type and number of man days required for each type of maintenance schedule per compressor.

The bidder shall plan such maintenance during non-peak hours and in consultation with the Engineer In Charge (EIC) of Purchaser. Any maintenance that needs to be taken up, shall be well planned in advance with due approval of the EIC.

13.14.3.5 The Bidder shall use only OEM's certified spares during maintenance. In case, the schedule maintenance of the OEM manual recommends checking and replacing parts like valve spring, valve plates, piston rings etc. after certain time interval, same shall be replaced or used further only on approval from the Purchaser representative. However any untoward consequences for non-replacement of such parts shall be the responsibility of the Bidder.

13.14.3.6 All routine and periodic checks / inspections required to be done as per OEM recommendation shall be done by the Bidder. Instruments required for above inspection like venire caliper, micrometer screw gauge, fill gauges, bore gauge etc shall be in scope of the Bidder and these instruments shall be calibrated every year.

13.14.3.7 All parts replaced by the Bidder during the above contract period shall be properly packed and handed over to Purchaser, on replacement.

13.14.3.8 The bidder shall submit a copy of the daily / weekly / fortnightly / monthly / bimonthly / quarterly and yearly performance report to the EIC in both soft and hard form. All stationery including the printed material shall be in scope of the Bidder.

13.14.3.9 All the maintenance / inspection job carried out by the Bidder shall be recorded and the report of the same shall be jointly signed by Purchaser representative.

13.14.3.10 The EIC will be final authority to take decision with regards to maintenance or replacement of parts or any disagreement between the Bidder and Purchaser, during the execution of the contract.

13.14.3.11 The Bidder shall carryout calibration of gas detectors and flame detectors every six months or earlier as per requirement or instruction of EIC of Purchaser. Also yearly calibration of all instruments such as pressure gauges, transmitters, switches, mass flow meters etc shall be in the scope of the Bidder. In addition to the above all safety relief valves shall also be tested and calibrated every year.

13.14.3.12 Calibration shall be done from government-approved laboratories and shall be carried out at least 15 days prior to the calibration due date.

13.14.3.13 The Bidder shall keep 1 set of safety relief valves in spare for the purpose of calibration. For total PR quantity of compressor packages.

13.14.3.14 The Bidder shall carry out retesting of pressure vessels periodically as per Gas Cylinder rules 2016 or Static & Mobile Pressure Vessels Rules.

The periodic maintenance required to be done as per OEM recommendation shall be

taken up promptly. The Bidder shall plan such maintenances during non peak hours and in consultancy with the Engineer In Charge (EIC) of Purchaser. Any maintenance that needs to be taken up shall be well planned in advance with due approval of the EIC. The

scope shall include preparation of maintenance schedule for carrying out the maintenance during the contract period.

- 13.14.3.15 In case, the schedule maintenance of the OEM manual recommends checking and replacing parts like valve spring, valve plates, piston rings etc. after certain time interval, same shall be replaced in the presence of Purchaser representative. If top overhauling and major overhauling of the compressor and prime mover is required as per compressor and prime mover manufacturer's O&M manual recommendation, the same shall be in bidder's scope.
- 13.14.3.16 Insurance of free issue items upto 15 days beyond commercial operation by purchaser or two months from the date of supply of equipment at site whichever comes earlier will be in the scope of bidder. The risks that are to be covered under the insurance shall include, but not be limited to the loss or damage in handling, transit, theft, pilferage, riot, civil commotion, weather conditions, accidents of all kinds, fire, war risk etc. After that the purchaser will arrange insurance for fire, war, earthquake, civil commotion, riots and flood. Any other risk over and above will be in the scope of supplier.

14.0 GUARANTEED PARAMETERS :

14.1 Parameters at Suction pressure of 16Kg/ Cm² (g); Compressor Capacity by Bidder:

SL NO	DESCRIPTION	By bidder
1	Compressor capacity in SCM ³ /H at suction pressure of 16kg/cm ² (g), discharge pressure of 255 kg/cm ² (g) and gas inlet temp 300 C (No -ve tolerance):	
2	Compressor BkW excluding (engine cooling fan , after cooler and inter cooler fan, lube oil pump, water pump etc. if applicable) at guaranteed condition in Kw (No +ve tolerance)	
3	Auxiliaries load (engine cooling fan , after cooler and inter cooler fan, lube oil pump, water pump etc. if applicable) in Kw (No +ve tolerance)	
4	Gas engine heat rate in Kcal/ KW hr (No +ve tolerance)	
SL NO	DESCRIPTION	By bidder
5	Site rated BkW of gas engine at operating RPM (No – ve tolerance)	
6	Over all transmission efficiency %	
7	Kcal required by gas engine to drive compressor package per hour sl no {(2+3)*4/6}	
8	Net CV of gas considered in Kcal/Sm ³ : 8300	
9	Fuel gas consumed by gas engine in SCM ³ /H (basis of Loading and Penalty) : (No +ve tolerance)	
10	Noise level at 1 meter from enclosure (required 80dBA max)	

**14.2Guaranteed parameters at Suction pressure of 17.5 KG/CM2(g); Compressor
Capacity required = 1200SCMH**

SL NO	DESCRIPTION	By bidder
1	Compressor capacity in SCMH at suction pressure of 17.5 kg/cm ² (g) discharge pressure of 255 kg/cm ² (g) and gas inlet temp 30° C (No -ve tolerance):	
2	Compressor BkW excluding (engine cooling fan , after cooler and inter cooler fan, lube oil pump, water pump etc. if applicable) at guaranteed condition in Kw (No +ve tolerance	
3	Auxiliaries load (engine cooling fan , after cooler and inter cooler fan, lube oil pump, water pump etc. if applicable) in Kw (No +ve tolerance)	
4	Gas engine heat rate in Kcal/ kW hr (No +ve tolerance)	
5	Site rated BkW of gas engine at operating RPM (No – ve tolerance)	
6	Over all transmission efficiency %	
7	Kcal required by gas engine to drive compressor package per hour sl no {(2+3)*4/6}	
8	Net CV of gas considered in Kcal/Sm ³ : 8300	
9	Fuel gas consumed by gas engine in SCMH (basis of Loading and Penalty) : (No +ve tolerance)	
10	Noise level at 1 meter from enclosure (required 80dBA max)	

14.3 Parameters at Suction pressure of 19 Kg / Cm² (g); Compressor capacity by Bidder:

SL NO	DESCRIPTION	By bidder
1	Compressor capacity in SCM ³ /H at suction pressure 19kg/cm ² (g) discharge pressure 255 kg/cm ² (g) and gas inlet temp 30° C (No -ve tolerance):	
2	Compressor BkW excluding (engine cooling fan , after cooler and inter cooler fan, lube oil pump, water pump etc. if applicable) at guaranteed condition in Kw (No +ve tolerance)	
3	Auxiliaries load (engine cooling fan , after cooler and inter cooler fan, lube oil pump, water pump etc. if applicable) in Kw (No +ve tolerance)	
4	Gas engine heat rate in Kcal/ kW hr (No +ve tolerance)	
5	Site rated BkW of gas engine at operating RPM (No – ve tolerance)	
6	Over all transmission efficiency %	
7	Kcal required by gas engine to drive compressor package per hour sl no {(2+3)*4/6}	
8	Net CV of gas considered in Kcal/Sm ³ : 8300	
9	Fuel gas consumed by gas engine in SCM ³ /H (basis of Loading and Penalty) : (No +ve tolerance)	
10	Noise level at 1 meter from enclosure (required 80dBA max)	

Note:

- Bidder shall indicate the specific fuel consumption kg/hr/BHP and the fuel consumption (above defined compressor capacity) in SCM³/H as guaranteed value in the offer on the design case gas composition. **The guaranteed value of fuel consumption of gas engine in SCM³/H shall be SCM³/H for the given gas.** Bidder shall not be given any credit/advantage for quoting fuel

requested to indicate the fuel consumption very carefully.

Fuel consumption of all the techno-commercially qualified Bidders shall be compared with respect to the lowest SCM³/H quoted by any Bidder within the range 44 to 46 SCM³/H. Even if any bidder quotes less than 44 SCM³/H as fuel consumption by engine for running the package, 44 SCM³/H will be considered as fuel consumption by packager for price load in purpose. All other bidders shall be loaded as per differential cost evaluated as per following formula over and above the total evaluated price.

- For loading as well as penalty purpose, fuel consumption corresponding to guaranteed parameters of 1200 SCMH at 17.5 kg/cm²(g) suction pressure shall be considered.

15.0 GAS COMPOSITION:

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

Oxygen: Not more than 0.5 mole%

Total Non Hydrocarbon: Not more than 2.0 mole%

Total Sulphur including H₂S: about 24 ppm by weight,

Water Content : <dry

Mass density (kg/m³) = 0.69

Molar mass (kg/kmol) = 17.1262

NCV (Kcal/Sm³) = 8374.00

Above composition shall be taken for guarantee purpose.

*** The composition, however, may vary between:**

Component	Range
Methane	Not less than 80%

Ethane	1% - 8%
Propane	< 3.3%
iC4	< 2%
iC5 + nC5	< 0.25%

16.0 Climate

- Height above Mean sea level: As per Site
- Max. site temp.: As per Site
- Minimum site temp.: As per Site
- Max. RH: As per Site
- Min. RH : As per Site

17.0 DATA SHEET OF COMPRESSOR

17.1 Data Sheet of Main Compressor:

1	General: ☒ Means required ☐ Means bidder shall indicate; if not indicated shall be in bidders scope		
2	Project:		
3	Owner:		
4	Service: Procurement of CNG Compressor		
	Site:	As per MR	
	No. required :		
5	Compressor SCMH	Capacity :1200	Driver: Gas engine
6	Note: ☒ Scope Option / Information Specified by Purchaser ☐ Information required from Vendor.		
7	☐ Manufacturer:		☐ ModelNo.:

8	☐ Place of manufacture:			
9	☐ No. of stages: by Bidder		☐ Cylinder Arrangement:	
10	Cylinder Lubrication: ☐ Lubricated ☐ Minimum Lubricated ☐ Non-Lubricated			
11	☒ Driver Type: Gas Engine			
12	☐ DRIVE: ☐ V – BELTS (ANTI-STATIC TYPE) ☐ DIRECT WITH COUPLING			
13	☐ Direction of rotation (facing driven end): ☐ Clockwise ☐ Counter clockwise			
14	■ SITE / INSTALLATION DATA			
15	SITE DATA:			
16	AMBIENT TEMP. (P ^{OP} C):	MAX:	42	
		MIN:	14	
17	RELATIVE HUMIDITY (%):	MAX:	90	
	ALTITUDE (M):		25	
18	Earth Quake Zone :As per site WIND VELOCITY : As per site			
19	INSTALLATION: ☒ OUTDOOR			
20	☒ Mounted on a common skid along with driver, enclosed inside a acoustic enclosure			
21	■ Electrical Area Hazard:			
22	CLASS/ZONE: CLASS I ZONE I DIVISION: I GAS GROUP: D, GROUP IIA, IIB			
23	Applicable Codes and Standards			
24	COMPRESSOR: Preferably API 618 API 11P2nd ed		PIPING: ASME/ANSI B 31.3	
25	PRESSURE VESSELS: ASME SEC-VIII, DIV-1.		GAS COOLER: Preferable API 661	
26	OIL COOLER: Oil cooler will be as per manufacturer standard		SOUND: 80dBA @ 1M FROM ENCLOSURE	
27	☐ AUX. ELECT. MOTORS:			
28	Control panel & instrumentation refer: technical specification			
29	UTILITIES DATA			
30	☐ Cooling Water (Not Available)			
31	☐ Type: ☐ Supply temperature (P ^{OP} C): ☐ Max return temperature (P ^{OP} C):			
32	☐ Fouling Factor: ☐ Supply pressure (kg/cm2G): ☐			

	Min. return pressure(kg/cm ² G):						
33	☐ Design pressure (kg/cm A): ☐ Design temperature (P ^{OP} C):						
34	☐ Water Flow Rates (m3/hr)						
35	☐ Electricity						
36	Auxiliary Motors:	V	Ph	Hz			
37	Oil Heaters:	V	Ph	Hz			
38	Solenoid Valves:	V	Ph	Hz			
39	Instruments:	V	Ph	Hz			
40	Local Panel INDI./Alarm/Ann :	V	Ph	Hz			
41	Local Panel Trip Circuit:	V	Ph	Hz			
42	UPS:	V	Ph	Hz			
43	☐ Total Utility Consumption						
44	☐ Cooling Water (Make UP) (mP ^{3P} /hr)						
45	☐ Power (Auxiliaries) (kW)						
46	☐ Power (Heaters) (kW)						
47	REMARKS:						
48	Vendor/ Bidder should estimate the requirement for all the Utilities and indicate the same in tabular form.						
49	☐ CONSTRUCTION / DESIGN FEATURES						
50	Nomenclature	Unit	Stage#1	Stage# 2	Stage # 3		
51	Cylinders						
52	No of Cylinders -						
53	Single Acting (SA) / Double Acting (DA)						
54	Cylinder Bore / Stroke	mm / mm					
55	Rotational Speed	RPM					
56	Linear Average Piston Speed	M/sec					
57	Piston Displacement	MP ^{3P} / hr					
58	Cylinder Liner (Yes / No)						
59	Type of Cylinder Liner : Dry/Wet -						
60	Clearance Pockets Yes / No						

61	Max. Allow. Working Pressure, Cylinder	kg/cm ² a					
62	Max./Min Allow. Working Temp., Cylinder	P0P°C					
63	M.A.W.P, Cylinder @ Amb. Temp.	kg/cm ² a					
64	Safety Valve Set Pressure, Cylinder	kg/cm ² a					
65	G Helium Test Pressure, Cylinder	kg/cm ² a					
66	Hydrostatic Test Pressure, Cylinder	kg/cm ² a					
67	Cylinder Jacket Cooling Type As reqd.						
68	Cooling Media, Cylinder Jackets Water /AIR						
69	Max. Allow. Working Pressure, Cylinder. Jacket	kg/cm ² a					
70	Hydrostatic Test Pressure, Cylinder. Jacket	kg/cm ² a					
71	Suction Nozzle Size/Rating/Position						
72	Discharge Nozzle Size/Rating/Position						
73	Suction Valve Number						
74	Average gas Velocity	M/sec					
75	Discharge Valve Number						
76	Average gas Velocity	M/sec					
77	Type of Suction valve -						
78	Type of Discharge valve -						
79	Suction Valve Unloaders Yes / No						
80	Clearance Pockets Unloaders Type						
81	Piston Rod Diameter	Mm					

107	Type of lube system	Piping material
108		Carbon Steel
109	Main Oil Pump Driven By :	Stainless Steel (all piping & valves Trims)
110	Standby Oil Pump, Driven By :	Auxiliary oil tank
111	Hand Operated Prelube /Priming Pump:	Oil Grade :
112	Suction Strainer :	Lube Oil Consumption :
113	Pressure Control Valve	Main Pump - Make : Model :
114	Level Sight Glass on the Crankcase	Type : Material :
115	Type of Oil Cooler :	Standby Pump-Make : Model :
116	Size of Filter:	Type : Material :
117	Oil Heater (if required).	
118	Electric Heater with thermostat (Kw)	
119	Thermostatic Valve	
120	Type of Cylinder Lubrication	Lubricator Equipped With :
121	Lubricator Type: Manzel or Equivalent.	Level sight glass
122	Single plunger per feed	Oil heater electric with thermostat
123	Divider blocks type.	Electric Heater (Kw) (if required)
124	Lubricator Driven By :	Auxiliary Oil Tank (if required)
125	Compressor Shaft	Oil Grade :
126	Lube oil Electric Motor KW	Oil System Capacity: (min 30 Hrs.)
127	All tubing and valves in SS	Oil Consumption. Rate
128	Double Ball Check valve on each lubrication point	
129	☐ Cooling System	
130	☐ Static filled coolant system for	
131	All Stage Cylinders	
132	Including expansion chamber, Vents, Drains, Level Gauge, Piping, etc.	
133	All Piping prefabricated ☐ Material	
134	☐ Atmospheric thermosyphon cooling system for	
135	All Stage Cylinders ☐	
136	Including expansion tank, Vents, Drains, Coolers, and Level & Temp. indicators, Piping, etc.	
137	All Piping prefabricated. ☐ Material	
138	☐ Forced Cooling Water System	
139	All Stage Cylinders	
140	☐ Packings ☐ Oil Coolers ☐ Gas Coolers	
141	☐ Including drains, Vents, flow & temp. Indicators, Temp. regulating & Isolation valves, complete piping to provide one	
142	☐ Common inlet and one common outlet connections for Purchaser's interface terminated by a flanged block valve	
143	☐ Block valve.	

144	☐ Each isolatable circuit to be provided with thermal relief valve.					
145	All Piping prefabricated. ☐ Material					
146	☐ Self contained, forced circulation, closed circuit Cooling Water System (if reqd.)					
147	All Stage Cylinders ☐					
148	☐ Packing ☐ Oil Coolers ☐ Gas Coolers					
149	☐ Including drains, Vents, flow & temp. Indicators, Temp. Control Valve, Regulating & Isolation valves, complete piping					
150	☐ Main circulating pumps with drivers & suction strainers ☐ Single Coolers					
151	☐ Reservoir (Make Up) ☐ Heater (if required)					
152	☐ Pumps, Reservoirs, Coolers etc. to be mounted on a common skid as to make a separate console.					
153	☐ Material of piping:					
154	☐ Type of coolant:					
155	☐ Jacket cooling					
156	☐ Gas Piping System					
157	☐ Vendor's Supply Includes:					
	■ Separator					
158	■ Pulsation suppression equipment as per 'next' page					
159	■ Suction Filter:					
160	■ Temporary Strainer on Compressor Suction					
161	■ Type of Strainer:					
162	■ Relief Valves: on compressor ■ suction ■ Inter-stage ☐ on compressor discharge					
163	■ Check Valve on Discharge Line (compressor valve design, and suction line)					
164	■ Process Gas Coolers Complete With Manual Drain Valve					
165	■ Separators Complete With Manual/ Automatic Drain Values					
166	■ Process Gas Piping					
167	■ Supply starts at inlet flange of CNG PACKAGE					
168	■ Terminates after priority panel with isolation valve					
169	☐ Materials:					
170	☐ By-Pass Line Piping					
171	☐ Between					
172	☐ Gas cooler					
173	☐ Interconnecting Piping Between Packing Vents, PSV Relief terminating to Vent Recovery System.					
174	☐ Interconnecting piping between distance piece terminating to Vent Recovery System upto package B/L					
175	☐ Interconnecting piping between Drains terminating as a single point					
176	☐ Interconnecting piping between Instrument Air terminating					
177	☐ Pulsation Suppression Equipment					
178	Stage #:	Stage#1	Stage#2	Stage#3		
179	Suction					

180	Puls. Equipment Required Yes/No	YES	yes			
181	Inlet Pressure					
182	Residual Peak to Peak Pulsation % As per API 618 (APPROACH –3), CI 3.9.2.7					
183	Inlet Nozzle Size / Rating/Position					
184	Discharge Nozzle Size / Rating/Position					
185	Design Pressure Kg/cm ² a					
186	Design Temperature °C					
187	Volume					
188	Material : vessels	SA 516 Gr.70	SA 516 Gr.70			
189	Internals					
190	Corrosion Allowance mm	3	3			
191	Hydrostatic test Pressure kg/cm ² ,g	1.3XMAWP	1.3XMAWP			
192	Discharge					
193	Puls. Equipment Supplied Yes/No	YES	YES			
194	Inlet Pressure					
195	Residual Peak to Peak Pulsation %	As per API 618, CI 3.9.2.7				

196	Inlet Nozzle Size / Rating/Position					
197	Discharge Nozzle Size / Rating/Position					
198	Design Pressure Kg/cm ² a					
199	Design Temperature P _{OPC}					
200	Volume					
201	Material : vessels	SA 516 Gr.60	SA 516 Gr.60			
202	Internals					
203	Corrosion Allowance mm	3	3			
204	Hydrostatic test Pressure kg/cm ² ,g	1.3XMAWP	1.3XMAWP			
205	Design Code:. ASME SEC. VIII DIV. 1					
206	Analog Piping Study / Acoustic Simulation, As per Approach 3, Cl. 3.9.2.6 API618, 4P th P edition					
207	Upstream / downstream Inter-stage					
208	Performed By: ☐ Vendor ☐ Any other agency having similar experience					
209	Piping Mechanical Analysis					
210	Performed By: ☐ Vendor ☐ Any other agency having similar experience					
211	☒ Automatic Drain Valves For Each Stage suction KOD					
212	☐ Capacity Control					
213	☒ Start / Stop, based on discharge receiver pressure: Fully Automatic					
214	Unloading for Startup/Shut down :Automatic Through ☐ Valve Unloader ☐ Recycle Valve					
215	☒ Interlock against loaded start					
216	☒ Automatic Control based on					
217	☐ Suction Pressure ☒ Discharge Pressure ☐ Flow Manual Signal					
218	☐ Type of Actuator unload ☐ Actuation fluid to load ☐ Actuation fluid to					

219	■ On Power / Actuation fluid failure : Compressor to □ Load Unload ■				
220	■ Continuously □ Maximum Hrs.				
221	□ Continuously □ Maximum Hrs.				
222	■ At All other capacity, Compressor should run continuously				
223	Vendor's scope Should Include :				
224	■ Pilot Devices (pressure / temperature / Flow devices ,Controllers & Switches)				
225	□ Intermediate Devices (Solenoid Valves I Pneumatic Relay / Valves)				
226	■ Actuators				
227	□ Recycle valves				
228	□ Control Logic and System for Complete Capacity Control				
229	■ Inter Connecting Tubing, Piping, Cabling & Wiring				
230	■ Protection against extended unloaded operation (Trip)				
231	□ Valve unloaders are required as such Compressor should start / stop at specified receiver pressures.				
232	□ Purchaser's Interface				
233	Type of Interface (Single Point)	Size	Rating	Face	Position/Location
234	Main Gas Piping Inlet				
235	Main Gas Piping Outlet				
236	Relief Valves discharge				
237	Distance Piece Vent				
238	Packing Vent				
239	C.W. Inlet				
240	C.W. Outlet				
241	NB _{2B} Inlet Supply				
242	NB _{2B} Vent (Safe location)				
243	Drains				
244	■ MATERIALS				
245	Cylinder Materials				
246	Stage	1 Stage	2 Stage	3 Stage	
247	Cylinder				
248	□ Liner				
249	□ Piston				
250	Piston Rings	PTFE	PTFE	PTFE.	
251	Rider Rings	PTFE	PTFE	PTFE	
252	Piston Rod				
253	□ Packings Rings				
254	□ Valve Seats				
255	□ Valve Stops				

256	Valve Rings / Plates					
257	Valve Springs					
258	☐ Cylinder Head					
259	Motion Work Materials :					
260	Item	Material / ASTM Grades				
261	Top Cover					
262	Crankcase					
263	Crankshaft					
264	Connecting Rods					
265	Cross heads					
266	Cross Head Shoes					
267	Cross Head Guide					
268	Main Bearings Type					
269	Cross Head Pin Bearings Type					
270	Connecting Rod Bearings Type					
271	Cross Head Pin Type					
272	Notes : Bidder to indicate the material					
273	Each package should be provided with two number drain lines, one from Suction KOD and second drain as common drain line from intermediate and discharge KOD routed to drain vessels through gas recovery vessels					
274	☐ CONTROLS & INSTRUMENTATION					
275	■ AC Power On/Off Switch With Indication Lamp					
276	■ Control Power On/Off Switch With Indication Lamp YES					
277	■ Selector Switch A/M Station For L/O Pump Motor					
278	■ Selector Switch A/M Station For CW Pump Motor					
279	■ Emergency Stop Push Button					
280	■ Start Push Button For Air Compressor Motor					
281	■ Emergency Stop Push Button for Gas Engine					
282	■ Lamp Test Push Button					
283	■ Alarm / Trip Acknowledge / Reset Push Button					
284	■ Frame Oil Heater ON (Indicating lamp)					
285	■ Lubricator Oil Heater ON (Indicating lamp)					
286	■ Interlock Against Loaded Start					
287	■ Interlock Against Start Without Pre-lubrication					
288	Notes :					
289	Minimum required indications, alarms & trips are shown herewith. Bidder should provide any additional instrumentation for safe operation.					
290	Compressor should start/stop at pre determined receiver pressure as specified. Bidder should include in his					
291	Scope includes the necessary hardware for the same.					
292	INSPECTION AND TESTS					
293	Material Composition and Physical Properties Certificates Required For:					

294	■ Cylinder and Liner	■ Piston		
295	■ Crankshaft	■ Connecting Rod		
296	■ Pressure Vessels	■ Heat Exchangers		
297	■ X-Ray Examination for components: Pressure Vessels (certificates to be furnished).			
298			By bidder	Witnessed
299	■ Mech. Running Test with shop Driver (4 Hours min.)		■	■
300	■ Performance Test at site as per IS 5456/PTC9/BS 726 (*).		■	■
301	■ Partial Stripping and internal inspection		■	■
302	■ Functional/Continuity Tests - Control Panel.		■	☐
303	■ Field Trial Run ,under Vendor's Supervision (Package)		■	■
304	■ Valve Leak Test		■	☐
305	■ Lube Oil Console Run test		■	☐
306	■ Closed Circuit C.W. System test		■	☐
307	☐ During package performance test			
308	☐ Test Certificates Required For:			
309	■ Auxiliary Motor & Pumps	■ Safety Relief Valves		
310	■ Safety Switches	■ Solenoid Valves		
311	☐ WEIGHTS			
312	Overall supply (excluding driver and gear box, if any) Kg. approx.			
313	Maximum erection weight Kg. approx.			
314	Maximum maintenance weight Kg. approx.			
315	Gear Box Kg. approx.			
316	Driver Kg. approx.			
317	SCOPE OF SUPPLY			
318	■ Compressor Assembly complete with frame, cylinders, cross head etc.			
319	■ Motion work lubrication system			
320	■ Cylinder and packing lubrication system			
321	■ Cooling system			
322	■ Process Gas system			
323	■ Local instrumentation			
323	■ Local Gauge Board			
325	■ Local Control Panel located on skid	■ PLC Panel	■ Human Machine Interface	
326	■ Main driver			
327	■ Barring Device:	■ Manual	■ Electric.	Pneumatic
328	■ Flywheel			
329	■ V-Belts with Pulley			

330	■ Couplings
331	■ Driver Compressor
332	■ Guards for moving parts ■
333	■ Base plate Common for Compressor and Driver
334	■ Fabricated Steel skid Common for compressor, driver and accessories
335	■ Ladders and platforms
336	■ Special Tools - One Set for each package
337	■ Anchor Bolts for Complete Package
338	■ Piping supports and brackets : ■ prefabricated for piping in Vendor's Scope
339	■ Supports For Cylinders & Auxiliaries, Prefabricated & fitted in the Package
340	■ Commissioning Spares, erection and commissioning spares
341	■ Spares as specified in the Job Specification
342	■ Vendor Data as specified
343	NOTE : Refer checklist for scope of supply

17.2 Data sheet- heat exchangers to be submitted for compressor.

1	GENERAL		
2	PROJECT:		
3	OWNER :	SITE :	
4	Service : Intercooler / After cooler for Compressor Package		
5	No. Reqd.:		
6	NOTE: ■ SCOPE OPTION / INFORMATION SPECIFIED BY PURCHASER □ INFORMATION REQUIRED FROM VENDOR.		
7	□ Manufacturer :	Type : □ Forced Draft □ Induced Draft	
8	□ Bundle Size : m x m x m	□ Bundles/Section	□ Number of Units :
9	□ Bundles/Unit :	□ In Parallel / Series	□ Section Size :
10	□ Surface/Bundle : m ²	□ Bare Tube : m ²	□ Section/Unit :
11	□ Surface/Unit : m ²	□ Bare Tube : m ²	□ Plot Area/Unit :
12	PERFORMANCE (Of One Unit)		
13	□ Heat Exchanged : kcal/hr	□ MTD (Corrected) : °C	
14	□ Transfer Rate : kcal/hr m ² °C	□ (Finned Surface)	□ (Bare Surface)
15	■ TUBE SIDE		
16	■ Fluid Circulated: GAS	Gravity : Liquid API SG @ 15.4EC	
17	■ Total Entering Gas kg/hr	Enthalpy /	
	Latent Heat kcal/kg		
18	□ Operating Temperature	In :	Out : Fouling
	Resistance hr m ² °C/kcal		
19	□ Operating Pressure Passes / Bundle kg/cm ²		
20	AIR SIDE		
21	■ Temperature	■ In: Out :	■ Altitude
	m:115,168.3,172 respectively		
22	□ Total Flow/Unit kg/hr	Static	
	Pressure kg/cm ²		
23	□ Quantity/Fan kg/hr	Power/Fan kW	
24	□ Face Velocity m/sec	Power/Unit	
	kW		
25	CONSTRUCTION (Each Bundle)		
26	□ Design Pressure : kg/cm ² g	□ Test Pressure : kg/cm ² g	□
	Design Temperature : °C		
27	□ Code Requirements :		
28	■ Type of Tubing :	■ Tube Material :	■ Fin Material : Al
29	■ Tube Bare Tubes (no's):	□ No. of rows: O.D.	□ BWG/Thk
	□ Length		
30	□ Fins: Spacing /inch. O.D.	□ Root Dia	□ Thickness :
31	■ Header Type: Plug / Cover	□ No. of Splits:	
	Material :		
32	□ Plugs/Gaskets	■ Side Frame : C.S. Inside Zinc Protected	
33	□ Nozzles	In :	Out :
34	□ Couplings	□ Vent:	□ Drain :

35	CONSTRUCTION (Each section)				
36	■ Structure Wind Load : kgf/m	CS	☐ Sec. /Gr. No.	☐ Design	
37	■ Plenum Chamber	CS inside Zinc Protected			Type :
38	☐ Fans	No.	Dia.	RPM	Mfr.
39	☐ Blades Angle(Design) :	Material :	No./Fan	Pitch	
40	☐ Hubs (No.)	Material:	Pitch: Auto variable / Adjustable		
41	☐ Louvers	Material :	Type :	Mfr.	
42	☐ Weights kg Each Section(Dry) :	Full of Water:			
43	☐ Each Bundle (Dry) :	Full of Water:			
44	■ APPLICABLE SPECIFICATIONS API Standard 661				
45	■ REMARKS 1. Air coolers should be designed for 10% excess capacity than required normally.				
46	■ Exchanger should be designed with air side temperature of 44 °C.				
47	■ Separate data sheet should be filled by the bidder for each service i.e. Inter cooler and After cooler				

18.0 Data Sheet of Gas Engine: to be submitted for compressor.

1	GENERAL		
2	PROJECT: PROCUREMENT OF CNG COMPRESSORS		
3	OWNER:		
4	SERVICE: DRIVER FOR CNG COMPRESSOR		
5	NO. REQD.:	ONE FOR EACH UNIT.	
6	NOTE: ■ SCOPE OPTION / INFORMATION SPECIFIED BY PURCHASER □ INFORMATION REQUIRED FROM VENDOR.		
7	SITE / INSTALLATION DATA		
8	SITE CONDITIONS:		
9	LOCATION: ■ OUTDOOR ■ CLOSED ROOM WITH FORCED AIR VENTILATION SYSTEM.		
10	SITE AMBIENT TEMP. (°C):	DATA: TEMP.	As per site
11	RELATIVE HUMIDITY (%):	MAX : As per site	
12	ALTITUDE (M):		
13	EARTH QUAKE ZONE As per site WIND VELOCITY (KM/HR): As per Site		
13	ELECTRICAL AREA CLASSIFICATION		
14	CLASS 1 GROUP D DIVISION I OR 2		
15	CLASS 1 GROUP IIA, IIB ZONE I		
16	□ UTILITY DATA		
17	COOLING WATER		
18	COOLING WATER TEMP. (°C)	SUPPLY (DESIGN/MAX/NOR/MIN):	
	RETURN (MAX):		
19	COOLING WATER PR. (KG/CM²G)	SUPPLY (DESIGN/MAX/NOR/MIN):	
	RETURN (MIN):		
20	COOLING WATER CHARACTERISTICS:		
21	□ INSTRUMENT AIR:		
22	SUPPLY PRESSURE (DESIGN/MAX/NOR/MIN)(KG/CM² G):		
23	□ ELECTRIC POWER		
24	ELECTRIC SUPPLY:	VOLTS:	Ph: HZ:
25	□ APPLICABLE CODES & STANDARDS		
26	■ NOISE SPECIFICATION: ■ APPLICABLE TO M/C MAX. 80 DBA @ 1.0 M OUTSIDE THE ACOUSTIC ENCLOSURE		
27	EXHAUST GAS EMISSION: - Statutory requirements as per state and central pollution control board. Provide catalytic convertor in the exhaust of gas engine		
28	■LISTING/APPROVAL OF ENGINE REQUIRED FROM: ■ UL/FM □ TAC		
29	■ AIR RECEIVER FOR STARTING AIR SYSTEM ASME SEC-VIII DIV 1 □ AIR COMPRESSOR FOR STARTING AIR SYSTEM MANUFACTURER'S STD.AIR		

	STARTER WITH SILENCER.
30	☐ SHELL AND TUBE TYPE EXCHANGERS MANUFACTURER'S STD. ☐ AUXILIARY PUMPS MANUFACTURER'S STD.
31	☐ AIR COOLED HEAT EXCHANGERS/RADIATOR MANUFACTURER'S STD. ☐ OTHER TANKS AND VESSELS MANUFACTURER'S STD.
32	DRIVEN EQUIPMENT
33	☒ RECIPROCATING GAS COMPRESSOR
34	☒ DUTY: INTERMITTENT
35	PROBABLE PERIOD FOR CONTINUOUS RUNNING: 20 HOURS WITH FREQUENT STARTS AND STOPS
36	☒ DURATION OF MAX. LOAD: 20 HOURS
37	☐ MINIMUM BKW OF THE DRIVEN EQPT. KW: @ RPM:
38	☐ RATED BKW OF THE DRIVEN EQPT. KW: @ RPM:
39	☐ MAXIMUM BKW OF THE DRIVEN EQPT. KW: @ RPM: (@ R.V. SET PRESSURE)
40	☐ FOR MECH. DRIVE APPLICATIONS: MINIMUM SITE RATING OF THE ENGINE REQUIRED KW @ RPM
41	
42	☐ ACCOUNTING FOR ENGINE DERATION FOR SITE CONDITIONS & ALTERNATOR EFFICIENCY WITH ENGINE DRIVING ITS ALL AUXILIARIES.
43	☐ DIRECTION OF ROTATION OF DRIVEN EQUIPMENT VIEWED FROM COUPLING END :
44	☐ METHOD OF DRIVE: DIRECT THRU FLEXIBLE COUPLING OR V-BELTS
45	CONSTRUCTION FEATURES
46	☐ MANUFACTURER: ☐ ENGINE MODEL:
47	☒ TYPE OF ENGINE: FOUR-STROKE ENGINE COOLING : ☒ WATER COOLED
48	☐ TURBO-CHARGED WITH CHARGE AIR COOLER ☐ NORMALLY ASPIRATED
49	☐ NO. OF CYLINDERS: ☐ CYLINDER ARRANGEMENT:
50	☐ BORE/STROKE (MM/MM): ☐ COMPRESSION RATIO:
51	☐ SPEED (RPM): ☐ MEAN PISTON SPEED (M/SEC.):
52	☐ PERFORMANCE
53	RATED ENGINE POWER AT STANDARD OPERATING CONDITIONS AS PER ISO 3046/ BS 5514 (ISO STD. POWER): KW @ RPM
54	(USING ONLY THE ESSENTIAL DEPENDENT AUXILIARIES AND WITH 10 % OVERLOAD PROVISION
55	RATED ENGINE POWER AT SITE CONDITIONS GUARANTEED, NO NEGATIVE TOLERANCE): KW @ RPM
56	(USING THE ESSENTIAL DEPENDENT AUXILIARIES AND WITH 10 % OVERLOAD PROVISION

57	MIN. ENGINE SITE POWER AT, WHICH ENGINE CAN BE OPERATED CONTINUOUSLY. KW @ RPM				
58	MIN. ENGINE SPEED & CORRESPONDING SITE POWER AT WHICH ENGINE CAN BE OPERATED CONTINUOUSLY. RPM @ KW				
59	STARTING TIME REQUIRED FOR FULL LOAD OPERATION (SECONDS):				
60	AIR FLOW REQUIRED FOR OPERATION OF THE ENGINE FOR: ☐ COMBUSTION & SCAVENGING ☐ COOLING & VENTILATION OF ENCLOSURE ☐ AIR COOLERS				
61	ESSENTIAL DEPENDENT AUXILIARIES ARE:				
62	ENGINE SHAFT DRIVEN RADIATOR FAN: KW				
63	ENGINE SHAFT DRIVEN CW PUMP: KW				
64	ENGINE SHAFT MAIN LO PUM: KW				
65	☐ SPECIFIC FUEL CONSUMPTION:				
66	DESCRIPTION FUEL CONSUMPTION, GM/KW-HR @ REFERENCE CONDITIONS *				
67		ISO 3046*	MANUFR'S. STD.*	SITE *	MANFR' S. SHOP *
68	(A) GUARANTEED ENGINE RATED POWER (100 % CONTINUOUS RATING)				
69	(B) 75 % OF (A)				
70	(C) 50 % OF (A)				
71	(D) 110 % OF (A)				
72	*STANDARD REFERENCE CONDITIONS:				
73	TOTAL BAROMETRIC PRESSURE, P, KG/CM ² A				
74	ATMOSPHERIC TEMP. °C				
75	RELATIVE HUMIDITY %				
76	CHARGE AIR & COOLANT TEMP °C				
77	☐ SPEED GOVERNING SYSTEM				
78	TYPE: ☐ SINGLE SPEED ☐ MULTIPLE SPEED ☐ ALL SPEED (VARIABLE SPEED)				
79	GOVERNOR TYPE: ☐ ELECTRONIC ☐ ELECTRO HYDRAULIC ☐ MECHANICAL				
80	■ MAKE: WOODWARD ☐ MODEL:				

81	GOVERNOR ONTROL MECHANISM: ☐ MANUAL ☐
82	☐ STARTING SYSTEM
83	■ METHOD OF STARTING: AUTOMATIC
84	■ METHOD OF STOPPING: AUTOMATIC
85	☐ TYPE OF COLD STARTING: (CONSIDERING MIN. AMBIENT TEMP
86	■ TYPE OF STARTING SYSTEM: AIR STARTING THROUGH ENGINE MOUNTED PNEUMATIC
87	REMARKS:
88	1. BIDDER SHOULD ENGINEER AND SUPPLY THE COMPLETE AIR STARTING MECHANISM INCLUDING AIR COMPRESSOR, AIR RECEIVER.
89	THE PURCHASER SHALL PROVIDE ELECTRICITY FOR AIR COMPRESSOR MOTOR.
90	■ STARTING AIR SYSTEM: (TO BE PLACED OUTSIDE THE ENCLOSURES)
91	■ AIR COMPRESSOR TYPE: RECIPROCATING
92	☐ RATED CAPACITY (M ³ /HR AT INLET CONDITIONS):
93	☐ DISCHARGE PRESSURE (KG/CM2G):
94	☐ BKW: ☐ RPM:
95	■ AIR COMPRESSOR DRIVEN BY: ELECTRIC MOTOR
96	☐ DRIVER RATING ☐ KW: ☐ RPM: ■ ☐
	VOLTS/N/HZ.: 230/ SINGLE/ 50
97	■ AIR RECEIVER WITH PRESSURE GAUGE, RELIEF VALVE & MANUAL DRAIN VALVE:
98	■ START-STOP SWITCH FOR COMPRESSOR: AUTOMATIC
99	☐ NO. OF AIR RECEIVER: ONE /TWO CAPACITY OF EACH AIR RECEIVER (M ³):
100	
101	■ COOLING SYSTEM
102	TYPE: CLOSED CIRCUIT COOLING
103	WATER PUMP DRIVEN BY: ENGINE
104	COOLANT CIRCUIT PIPING WITH TEMP. CONTROL & MAKE-UP TANK.
105	HEAT EXCHANGER WITH ANCHOR/FOUNDATION BOLTS: AIR COOLED EXCHANGER
106	BY-PASS VALVE: CHECK VALVE:
107	HEAT EXCHANGER TEMP (°C) INLET: OUTLET:
108	■ FAN DRIVEN BY: DRIVER ☐ RATING/SPEED (KW/RPM):
109	☐ ENGINE WATER TEMP (°C): INLET: OUTLET:
110	PACKAGER MAY CLUB THE ENGINE JACKET AND COMPRESSOR CYLINDER COOLING WATER SYSTEM WITH ENGINE SHAFT OR COMPRESSOR SHAFT DRIVEN PUMP
111	■ FRAME LUBRICATION SYSTEM
112	■ TYPE: FORCE FEED LUBRICATION INCLUDING VALVES, OIL PUMP &

	PIPING
113	☐ OIL COOLER TYPE: ☐ AIR COOLED ☐ WATER COOLED
114	☐ OIL FILTERS ☐ SELF CLEANING ☐ DUPLEX ☐ PAPER CARTRIDGE
115	☐ PRELUBE OIL PUMP DRIVEN BY (IF REQUIRED):
116	☐ PRELUBRICATION ☐ MANUAL ☐ AUTOMATIC
117	☐ TYPE/GRADE OF LUB. OIL:
118	☐ OIL CONSUMPTION (LPH):
119	☐ OIL SUMP CAPACITY (LITRES):
120	☐ OIL COOLER TESTING PRESSURE (KG/CM2G):
121	☐ EXPLOSION RELIEF VALVE FOR CRANKCASE
122	■ AIR INLET SYSTEM
123	■ SUCTION AIR FILTER ■ AIR INLET DUCTING / PIPING / MANIFOLDS ☐ ☐ INLET SILENCER
124	EXPANSION BELLOWS (IF REQUIRED) & ALL SUPPORTS / HANGERS
125	■ ENGINE EXHAUST SYSTEM
126	■ EXHAUST MANIFOLDS / DUCTING / PIPING TERMINATED AT SAFE HEIGHT OUTSIDE ENGINE ENCLOSURE EXHAUST SILENCER (RESIDENTIAL TYPE)
127	■ EXPANSION BELLOWS ■ EXHAUST STACK / CHIMNEY ■ ALL SUPPORTS / HANGERS ■ PROTECTION INSULATION FOR COMPLETE EXHAUST PIPING
128	☐ PROVIDED AS ABOVE ☐ YES ☐ NO
129	☐ CONTROLS & INSTRUMENTATION
130	ELECTRIC SUPPLY:
131	LAMPS: ± V: AC/DC: N: ± HZ:
132	ALARM CIRCUIT: ± V: AC/DC: N: ± HZ:
133	TRIP CIRCUIT: ± V: AC/DC: N: ± HZ:
134	CONTROL CIRCUIT: ± V: AC/DC: N: ± HZ:
135	SOLENOID VALVES: ± V: AC/DC: N: ± HZ:
136	CONTROL SWITCHES:
137	■ AC POWER ON/OFF SWITCH WITH INDICATION LAMP
138	■ CONTROL POWER ON/OFF SWITCH WITH INDICATION LAMP
139	■ START SWITCH WITH INDICATION YES
140	■ START/STOP PUSH BUTTON FOR AUX. DRIVE MOTOR
141	■ EMERGENCY STOP PUSH BUTTON
142	■ LAMP TEST PUSH BUTTON
143	■ ALARM/TRIP ACKNOWLEDGE /RESET PUSH BOTTON YES

144	■ LUBRICATING OIL HEATER 'ON' INDICATING LAMP (IF PROVIDED)
145	■ INTERLOCK AGAINST START WITHOUT PRELUBRICATION
146	
147	NOTE: VENDOR TO PROVIDE CONTACT/SIGNAL FOR EXECUTION IN DCS.
148	☐ MATERIAL
149	CHARGE AIR COOLER SHELL: TUBES:
150	WATER COOLER SHELL: TUBES:
151	AIR COOLER SHELL: TUBES:
152	AIR RECEIVER
153	
154	INSPECTION AND TESTING
155	WITNESS ■ OBSERVE BY SUPPLIER ☐
156	☐ STAGE INSPECTION DURING MANUFACTURE
157	☐ FULL LOAD TEST AT ENGINE MANUFACTURER'S SHOP AS PER ISO (PERFORMANCE TEST)
158	☐ FUEL CONSUMPTION & GOVERNING TEST AT ENGINE MANUFACTURER'S SHOP AS PER ISO
159	☐ FULL LOAD TEST FOR 4 HRS FOR GAS ENGINE WITH ALL AUXILIARIES & 1 HR @ 110 % LOAD AT SITE.
160	■ NO LOAD MECHANICAL RUN TEST AT PACKAGER'S / DRIVEN EQUIPMENT MFR. SHOP
161	■ VENDOR'S STANDARD MECHANICAL RUN TEST (FOR ALL ENGINE)
162	INSPECTION/TESTING WITNESSED BY: ☐ OTHERS ■ Client OR THEIR REPRESENTATIVE
163	☐ WEIGHTS
164	NET WEIGHT OF ENGINE WITH MOUNTED ANCILLARIES (KG):
165	HEAVIEST PART TO BE HANDLED DURING ERECTION AND ITS WEIGHT (KG):
166	HEAVIEST PART TO BE HANDLED DURING NORMAL MAINTENANCE AND ITS WEIGHT (KG):
167	RECOMMENDED CRANE CAPACITY (TONS): CRANE HOOK HEIGHT (M):
168	☐ MAINTENANCE DATA
169	EXPECTED PERIOD OF RUNNING BETWEEN TOP OVERHAULS: HOURS
170	EXPECTED PERIOD OF RUNNING BETWEEN MAIN OVERHAULS: HOURS
171	THE TYPE AND GRADE OF LUBRICATING OIL RECOMMENDED:
172	LUBE OIL CONSUMPTION (KG/HR)/ (LITRES/HR)
173	CHANGE OF LUBRICATING OIL AFTER: HOURS
174	■ SCOPE OF SUPPLY / WORK
175	ENGINE WITH LUBRICATION SYSTEM, GOVERNING SYSTEM, FUEL SYSTEM, COOLING SYSTEM AND STARTING SYSTEM AS SPECIFIED
176	SUCTION AIR FILTER WITH SUCTION PIPING

[Type here]

177	INSTRUMENTS AND CONTROLS AS SPECIFIED
178	INLET AND EXHAUST MANIFOLDS, EXHAUST PIPING WITH FILLINGS, BENDS AND INSULATION
179	EXHAUST SILENCER (RESIDENTIAL, SPARK ARRESTING TYPE) WITH EXPANSION BELLOWS AND COMPLETE WITH EXHAUST PIPING FROM
180	MANIFOLD TO OUTSIDE SHED WITH FITTINGS AND INSULATION.
181	FLYWHEEL WITH BARRING DEVICE
182	GUARDS FOR MOVING PARTS
183	COUPLING FOR ENGINE - DRIVEN EQUIPMENT
184	BASE PLATE FOR ENGINE & DRIVEN EQUIPMENT
185	SPARES AS PER ORDER
186	ERECTION AND COMMISSIONING SPARES
187	TORTIONAL ANALYSIS REPORT ON ENGINE
188	REFER TECHNICAL SPECIFICATION FOR COMPLETE SCOPE OF SUPPLY
189	FOUNDATION/ ANCHOR BOLTS
190	ANTI VIBRATION PADS
191	FIRST FILL OF LUBRICATING OIL AND COOLANT.
192	ACCOUSTIC ENCLOSURE WITH FORCED VENTILATION FAN
188	
193	
194	REMARKS
191	
192	

18.1 DATA SHEET OF AIR COMPRESSOR MOTOR:

1	Project name:	
2	Driven equipment	Air Compressor
3	Tag No. / Equipment No.	
4	Duty	
5	Manufacturer	
6	Motor Duty & Type	
7	Frame Size/Mounting	
8	Output _____ KW	
9	Voltage _____ VOLT	415 V+/- 10%
10	Full load current _____ AMP	
11	Starting current with star delta starting AMP	
11	Full load speed _____ RPM	
12	Enclosure	TEFC/FLAMEPROOF/IP55 AS PER IS:4691-1985
13	Mounting	
14	Insulation Class	F' – Temp. rise limited to Class – 'B'
15	Ambient temperature _____ °C	
16	Temp. Rise by resistance _____ °C	
17	Applicable Code	
18	Full load torque _____ Kg-m	
19	Starting torque _____ FLT	
20	Efficiency at _____ Load	
	_____75% Load	
	_____50% Load	
21	Rotation viewed from DE	
22	Bearing type No.	
23	Type of Lubrication	
24	Coupling / pulley	DIRECT / FLEXIBLE
25	Net weight (approximate) kg	
26	Cable size / type _____ mm sq.	
27	Phase / connection / No. of terminal	
28	Frequency _____ Hz.	50 Hz + / - 5%
29	No. of poles	
30	Locked rotor current _____ %FLC	
31	LR withstand time (HOT)	

	Sec	
	(COLD) Sec	
32	Stator / rotor time constant Min	
33	Power factor at – 100% Load	
	- 75% Load	
	- 50% Load	
34	Break down or pull out torque ____ %FLT	
n35	Space heaters _____WATT / VOLT	
36	Vibration Level / Noise Level	As per IS12065 / IS12075

19.0 DATA SHEET OF DETECTORS :

19.1 Data Sheet IR-Gas Detection (LEL) System:

1	TECHNICAL GENERAL				
2	PROJECT:				
3	OWNER:			SITE:	
4	EQUIPMENT: GAS DETECTION FOR CNG STATIONS				
5	NO.			GAS DETECTION TYPE:	
6	NOTE: ■ SCOPE OPTION / INFORMATION SPECIFIED BY PURCHASER □ INFORMATION REQUIRED FROM VENDOR.				
7	□ MANUFACTURER:			□ MODEL NO.:	
	SIGNAL TRANSMISSION				
8	□ ANALOG: TRANSMISSION BY 3CORE SHEILDED CABLE				
9	□ MEASUREMENT CONTROL: 4mA to 20Ma				
10	□ SENSOR DRIFTS BELOW ZERO:				
11	□ MEASURING RANGE EXCEEDED:				
12	□ TRANSMITTER FAULT:				
13	□ MAINTENACE SIGNAL:				
14	□ HART COMPATIBLE:				
	■ SITE / ENVIRONMENTAL DATA				
15	SITE DATA:				
16	AMBIENT TEMP. (POPC):	MAX :	45		
17		MIN:	14		
18	RELATIVE HUMIDITY (%):	MAX :	90		
	ALTITUDE (M):		25		
19	INSTALLATION: ■ INDOOR				

20	■ ELECTRICAL AREA HAZARD:		
21	CLASS/ZONE: CLASS I ZONE I DIVISION: I GAS GROUP: D, GROUP IIA, IIB		
	■ APPLICABLE CODES AND STANDARDS		
22	■ GAS DETECTION APPROVALS: CENELEC :Exd IIC 6	■ UL, CSA: Class 1, Div 1, Groups B,C,D	
	VOLTAGE OF SUPPLY		
23	☐ OPERATING VOLTAGE: A.C/D.C	V	Ph
24	☐ IN-RUSH CURRENT: A.C/D.C		
25	☐ POWER INPUT A.C/D.C		
	■ PHYSICAL SPECIFICATIONS		
26	☐ ENCLOSURE: Nema 4+7 (IP65)		
27	☐ SIZE		
28	☐ WEIGHT		
	■ INSPECTION AND TESTS		
29	☐ Physical Tests on site:		
	REMARKS		

19.2 Data Sheet- UV/IR Fire Detection System:

	TECHNICAL GENERAL			
1	PROJECT:			
2	OWNER:		SITE:	
3	EQUIPMENT: UV FIRE DETECTION FOR CNG STATIONS			
4	NO.		FIRE DETECTION TYPE:	
5	NOTE: ■ SCOPE OPTION / INFORMATION SPECIFIED BY PURCHASER □ INFORMATION REQUIRED FROM VENDOR.			
6	□ MANUFACTURER:		□ MODEL NO.:	
7	□ WAVE LENGTHS:		■ TYPICAL RESPONSE TIME: < 3 SEC @ 50FT	
8	□ FIELD OF VIEW:		□ MINIMUM SENSOR RESPONSE TIME:	
9	□ SENSITIVITY		□ MAINTENACE SIGNAL:	
10	■ CLASSIFICATION: CLASS I, DIV 1, GROUPS B, C & D: Eexd IIC, T5, IP66		■ CLASS II, GROUP E,F & GCLASS III, TYPE 4X	
11	■ APPROVALS: CSA, FM, ATEX, CENELEC, CE MARKING			
1	■ ENVIRONMENTAL SPECIFICATIONS			
2				
13	■ OPERATING TEMPERATURE RANGE: -40 (°C) to 85 (°C)			
14	■ STORAGE TEMPERATURE RANGE: -50 (°C) to 85 (°C)			
15	■ OPERATING HUMIDITY RANGE: 0% TO 100% RH NON-CON-DENSING			
16	■ ALTITUDE (M):			
17	■ EARTH QUAKE ZONE V			
18	■ INSTALLATION: ■ INDOOR			
	■ ELECTRICAL SPECIFICATION:			
19	■ INPUT POWER: 20 – 36 VDC, 24 VDC @ 150Ma max.		□ COPM FAULT	
20	■ ANALOG SIGNAL: 4-20mA (600 Ohms Max.)		□ READY SIGNAL	
21	□ FAULT SIGNAL: 0Ma		□ UV SIGNAL:	
22	□ IR SIGNAL:		□ WARN SIGNAL:	
23	□ ALARM SIGNAL:		□ BAUD RATE:	
24	■ RELAY CONTACT RATING: 8A, 250VAC, 8A @ 24VDC		□ RS-485 OUTPUT:	
25	■ RFI/EMI PROTECTION: COMPLIES WITH EN50081-2		□ STATUS INDICATOR:	
26	□ FAULT MONITORING:			
	■ MECHANICAL SPECIFICATION:			
28	■ HOUSING:		■ LENGTH:	
29	■ DIAMETER:		■ MOUNTING:	
30	■ CABLE ENTRY:		■ WEIGHT:	
	SCOPE OF SUPPLY			
31	■ UV FIRE DETCTION SENSORS COMPLETE:			
32	■ DATA SHEET COMPLETED			
33	REMARKS:			

20.0 Operating Conditions & Experience Record Of Compressor (1200 SCMH)

20.1 Compressor Suction Pressure: 16 kg/cm²(g)

Sl no		Units	Stage 1	Stage 2	Stage 3
S1	■ Gas Handled (See Analysis)				
2	□ Corrosion Due to		NONE	NONE	NONE
3	Suction Conditions				
4	■ Pressure (@ Vendor's B/L)	kg/cm ²	14		
5	■ Temp. (+@ Vendor's B/L)	°C	30		
6	Discharge Conditions (Vendor's Battery Limit :)				
7	■ Pressure (@ Vendor's B/L	kg/cm ²			
8	Pressure @ Cylinder Flg.	kg/cm ²			
9	Temp., Adiabatic @Cyl. Flange	°C	<150	< 150	<150
10	Temp.,Actual @Cyl.Flange	°C			
11	Temp.,After After Cooler	°C			
12	Cp/Cv Ratio				
13	Compr. Factor (ZB _{2B}) or (Z avg)				
14	Operating Characteristics				
15	Capacity (wet)	SM ³ /Hr			
16	Mfr's Rated Cap. (Design)	(No –vetol.)			
17	Actual Inlet Flow (wet)	SM ³ /Hr			
18	Specific Gravity				
19	V Belt / Coupling Losses	KW			
20	Volumetric Efficiency	%			
21	Valve Lift Suction /	mm / mm			
22	Valve Lift Area Suction/ Discharge	mm ² / mm ²			
23	Valve Velocity	m/sec			
24	Compressor Speed	RPM			
25	Gas engine sped in	RPM			
26	Compressor Shaft Power (without cooling fan)	KW			
27	Compressor Shaft Power KW @ RV Set Pr.	KW			
28	Transmission efficiency	%			
29	Gas engine heat rate	Kcal/ Kwh			
30	Driver Power	KW			
31	Kcal required by gas engine to drive compressor per hour slno(26*29/28)	KW			
32	Kcal required by gas engine per	KW			

	hour to drive fan and other auxiliaries.				
33	Specific gravity of gas				

20.2 Compressor Suction Pressure: 17.5 kg/cm²(g) (Guaranteed Clause)

Sl no		Units	Stage 1	Stage 2	Stage 3
1	■ Gas Handled (See Analysis)				
2	□ Corrosion Due to		NONE	NONE	NONE.
3	Suction Conditions				
4	■ Pressure (@ Vendor's B/L)	kg/cm ²	17.5		
5	■ Temp. (+@ Vendor's B/L)	°C	30		
6	Discharge Conditions (Vendor's Battery Limit :				
7	■ Pressure (@ Vendor's B/L	Kg/cm ² (G)			
8	Pressure @ Cylinder Flg.	Kg/cm ²			
9	Temp., Adiabatic @Cyl. Flange	°C	<150	< 150	<150
10	Temp.,Actual @Cyl.Flange	°C			
11	Temp.,After After Cooler	°C			
12	Cp/Cv Ratio				
13	Compr. Factor (Z _{B2B}) or (Z avg)				
14	Operating Characteristics				
15	Capacity (wet)	SM ³ /Hr			
16	Mfr's Rated Cap. (Design)	(No –vetol.)			
17	Actual Inlet Flow (wet)	SM ³ /Hr			
18	Specific Gravity				
19	V Belt / Coupling Losses	KW			
20	Volumetric Efficiency	%			
21	Valve Lift Suction /	Mm / mm			
22	Valve Lift Area Suction/ Discharge	mm ² / mm ²			
23	Valve Velocity	m/sec			
24	Compressor Speed	RPM			
25	Gas engine sped in	RPM			
26	Compressor Shaft Power (without cooling fan)	KW			
27	Compressor Shaft Power KW @ RV Set Pr.	KW			
28	Transmission efficiency	%			
29	Gas engine heat rate	Kcal/ Kwh			
30	Driver Power	KW			
31	Kcal required by gas engine to	KW			

	drive compressor per hour slno (26*29/28)				
32	Kcal required by gas engine per hour to drive fan and other auxiliaries.	KW			
33	Specific gravity of gas				

20.3 Compressor Suction Pressure : 19kg/cm²(g) :

Sl no		Units	Stage 1	Stage 2	Stage 3
1	■ Gas Handled (See Analysis)				
2	□ Corrosion Due to		NONE	NONE	NONE
3	Suction Conditions				
4	■ Pressure (@ Vendor's B/L)	kg/cm ²	19		
5	■ Temp. (+@ Vendor's B/L)	°C	30		
6	Discharge Conditions (Vendor's Battery Limit :				
7	■ Pressure (@ Vendor's B/L	kg/cm ²			
8	Pressure @ Cylinder Flg.	kg/cm ²			
9	Temp., Adiabatic @Cyl. Flange	°C	<150	< 150	<150
10	Temp.,Actual @Cyl.Flange	°C			
11	Temp.,After After Cooler	°C			
12	Cp/Cv Ratio				
13	Compr. Factor (Z _{B2B}) or (Z avg)				
14	Operating Characteristics				
15	Capacity (wet)	SM ³ /Hr			
16	Mfr's Rated Cap. (Design)	(No –vetol.)			
17	Actual Inlet Flow (wet)	SM ³ /Hr			
18	Specific Gravity				
19	V Belt / Coupling Losses	KW			
20	Volumetric Efficiency	%			
21	Valve Lift Suction /	mm / mm			
22	Valve Lift Area Suction/ Discharge	mm ² / mm ²			
23	Valve Velocity	m/sec			
24	Compressor Speed	RPM			
25	Gas engine sped in	RPM			
26	Compressor Shaft Power (without cooling fan)	KW			
27	Compressor Shaft Power KW @ RV Set Pr.	KW			
28	Transmission efficiency	%			
29	Gas engine heat rate	Kcal/ Kwh			
30	Driver Power	KW			
31	Kcal required by gas engine to drive	KW			

	compressor per hour slno (26*29/28)				
32	Kcal required by gas engine per hour to drive fan and other auxiliaries.	KW			
33	Specific gravity of gas				

21.0 Experience Record Programme Of Gas Engine Driven Compressor

21.1 For 1200 SCMh

Sl.No.	Description	INFORMATION OF OFFERED COMPRESSOR
	REQUIREMENT AS PER TENDER	
1	a) Status of bidder (Indicate packager or agent of packager)	
	b) In case bidder is the agent submit the agreement of agent ship/dealership with packager.	
2	COMPRESSOR	
	Name of compressor manufacturer	
	Place of compressor manufacturer	
	Compressor model	
	Anticipated Life in running hours	
	Compressor maximum frame BkW	
	Compressor operating RPM	
	Compressor max design RPM	
	Comp Manufacturing code preferably API-618	
	Lubricated or non lubricated	
	Nos of stages	
	Max stage temperature degcen (150)	
	Compressor Operating RPM (max RPM-1500)	
	Piston speed (4.5 m/s lub, 4m/s non lub)	
	Compressor maximum vibrations at cylinders and at frame shall not exceed 10 mm /sec. And 5 mm/s respectively unfiltered peak velocity	
	Material for all stages	
	Cylinder	
	Piston Rings	
	Rider Rings	
	Piston Rod	
	Valve (Rings / Plates/ spring)	
3	PERFORMANCE OF COMPRESSOR	
CASE-L	Performance of compressor at 16 kg/cm ² (g) suction pr, 255 kg/cm ² (g)discharge pr and 30 deg c suction temperature	
CASE-G	Performance of compressor at 17.5 kg/cm ² (g) suction pr, 255 kg/cm ² (g)discharge pr and 30 deg c suction temp	
CASE-H	Performance of compressor at 19 kg/cm ² (g) suction pr, 255 kg/cm ² (g) discharge pr and 30 deg c suction temp	
	CASE-L	

SI.No.	Description		INFORMATION OF OFFERED COMPRESSOR
	a) Capacity Sm ³ /h	CASE-G	
		CASE-H	
	b) BKW required by compressor including compressor's lube oil pump BKW at RV set pr	CASE-L	
		CASE-G	
		CASE-H	
	c) BKW required by compressor including compressor's lube oil pump BKW at RV set pr	CASE-L	
		CASE-G	
		CASE-H	
	d2) Power required for all heat exchanger fans including radiator fan of engine in Kw	CASE-L	
		CASE-G	
		CASE-H	
	e) Ventilation fans for enclosure No of fans Type of fans (induced or forced draft) Power required for all ventilation fans in Kw Capacity of gas engine (max of b+ max of d2 +e above) *1.1		
	Piston rod and cross head pin loading at any specified operating condition including the relief valve set condition shall not exceed 80% of the maximum design rod load of the offered compressor.		
	----Piston rod : max Design		
	----Piston rod : calculated at safety set pr condition		
	----Max cross head pin loading: Design		
	----Cross head pin loading :calculated at safety set pr condition		
	Gas Engine		
	Make and model		
	Anticipated Life in running hours		
	Compression ratio		
	Power (ISO power) & corresponding Max RPM		

SI.No.	Description	INFORMATION OF OFFERED COMPRESSOR
	Power (ISO) and corresponding Operating RPM	
	Site power (kW) at operating RPM after deration	
	KW of engine with availability of 10 % overload for one hour within a period of 12 hrs operation with no negative tolerance.	
5	PACKAGE	
	Name of packager	
	Place of packaging	
	Name of enclosure manufacturer	
	Place of enclosure manufacturing	
	Sound level at 1 m distance from package in db(A) –80	
	Make & model LEL detector	
	Make & model fire detector	
	Co2 flooding system (2 cylinder each of 100% capacity required)	
	Quantity of CO2 in each cylinder in Kg	
	Volume of enclosure in m3	
	Min 3 Nos of explosion proof tube light	
	Coupling Direct/V-belt	
	Separators between inter stage of compressor	
6	Gas inlet train	
	WNRF, Flanged connection; outside canopy	
	Inlet relief valve	
	Inlet gas pressure gauge	
	Non return valve	
	Inlet filter of 5 micron size	
	Inlet twin filter	
	Temporary suction filter after main filter	
	Inlet manual isolation valve	
	Inlet automatic isolation valve	
7	Gas recovery system	
	Gas recovery system with pr relief valve, pr regulator, pr gauge, manual & automatic drainage system	
8	Gas delivery system	
	High pr piping with SS 316 tubing, compression fittings, NRV.	
	Coalescent final separator	
	Coalescent super fine filter with CE mark for removal of liquid (e.g. water & oil) and solid particles down to 0.1 microns out of compressed natural gas. Residual Oil Contents shall be less than 1 PPM.	
	Discharge isolation valve	
	PLC based Priority panel with SS 316 double ferrule	

Sl.No.	Description	INFORMATION OF OFFERED COMPRESSOR
	compression fillings, tubing, and full bore valve ball. Indicate no's of banks	
	Mass flow meter: Coriolis principle; interfaced with PLC; head mounted integral local display to indicate flow rate (Kg/hr), cumulative gas compressed (in Kgs) etc.; inbuilt totaliser non-volatile & non-resettable type ; suitable for hazardous area classification ; One at compressor discharge One at compressor inlet One for engine fuel gas	
	Final gas outlet connection from priority panel 3/4" (1" for bus) pipe OD SS double ferrule compression fittings.	
9	ESD system	
10	Volume bottles/ dampers at each compressor stage of compressor.	
11	Drainage system :Manual isolation valve and automatic valves	
12	Heat exchanger: The gas and water sections shall not be "U" Code stamped but TPI inspected.	
13	Piping between stages shall be continuous with flange and welded connection or SS316 L tubing with ferrule fittings.	
18	Instrument air tubing shall be SS 316	
20	Area classification; "Class 1, Group D, Division 1 as per NEC" OR "Zone 1, Group IIA /IIB as per IS/ IEC"	
	Instruments.	
	Engine	
22	The size of the complete package	
23	Beam for chain pulley block with Chain pulley block (indicate cap of chain pulley block)	
24	Acoustic and pulsation study	
25	Separate Acoustic enclosure for engine and compressor or only one.	
26	Instrumentation are as per tender.	
27	The offered compressors and gas engine and auxiliaries are new.	
28	Human-machine interfacing unit (MMI	
29	String test at shop	
30	Field trial run at site	
31	Electric power requirement (purchaser will give electric power for air compressor, ventilation fans and compressor controls)	

Sl.No.	Description	INFORMATION OF OFFERED COMPRESSOR
	List out if any deviation w.r.t. tender.	
	Other information of existing compressor package :	
	a) Year of manufacturing / packaging the compressor package	
	b) Name and address of user with FAX no ,Phone no , E-mail address	
	c) No's of hours the compressor have clocked on bid due date. (Enclose certificate from user)	
	d) Documentary evidence that the bidder/ manufacturer or packager having the capability and facilities (i.e. shop, manpower, testing facility etc.) for manufacturing / packaging compressor packages.	
	e) Whether the bidder having office set up in India equipped with trained and experienced technical manpower for the operation and maintenance services. If not submit the agreement of O&M company having experience of gas engine driven compressor package	

22.0 LIST OF INSTRUMENTATION & CONTROLS

22.1 List of Instrumentation & Controls for Compressor:

		INDICATION	ANNUNCIATION & PRE ALARM	TRIP & A/V ALARM ANNUN.

Sl no	Description	GUAGE –LOCAL GUAGE BOARD	INDICATOR LOCAL PANEL (PLC) DISPLAY	LOW LOCAL PANEL DISPLAY	HIGL LOCAL PANEL DISPLAY (PLC)	LOW –LOCAL PANEL -PLC-DISPLAY	HIGH LOCAL PANEL PLC-DISPLAY
1	Frame Oil Sump/Reservoir Level	■ yes				■ yes, switch	
2	Main L/O Pump Disch. Pr (supply header).	■ yes	■ yes	■ yes		■ yes	
3	Oil Flow						
4	Oil Pressure at Main Bearing						
5	Supply Header Temp.						
6	Oil cooler Oil Inlet Temp.						
7	Stand by Pump Start						
8	Compressor Main bearing metal Temp.						
9	Cylinder & Packing Oil						
10	Lubricator Oil Level	■ yes local					
11	Lubricator Oil Flow						
12	Lubricator Failure					■ yes	
13	Aux. Oil						
14	Lub. Oil Supply Pr.						
15	Lub. Oil return						
16	Elec. Motor bearing metal temp.						
17	Coolant System						
18	Each cylinder CW outlet temp.						
19	Inter/After/Oil Cooler CW outlet temp.						
20	CW Supply header flow						
21	Sight Flow CW return each cylinder, Cooler & Header						
22	For Closed Circuit Cooling						
23	Coolant main pumpdisch. Pr.		■ yes	■ yes			

24	Coolant standby pump disch. Pr.						
25	Coolant stand by pump start						
26	Coolant supply header Pr.						
27	Coolant supply header temp						
28	Coolant cooler Outlet Temp.	■ yes					
29	Coolant reservoir Level	■ yes		■ yes		■ yes	
30	Cylinder Coolant Outlet temp.						
31	For Static/Thermo-siphon System						
32	Cylinder Coolant Outlet temp.						
33	Diff. Pr. Across packing coolant filter						
34	Process Gas System						
35	Temperature before twin filter at suction	■ yes					
36	Pressure before twin filter at suction *	■ yes	■ yes	■ yes	■ yes	■ yes	■ yes
37	2 nd stage Outlet Pressure	■ yes	■ yes		■ yes		
38	Each stage Outlet temp.	■ yes	■ yes		■ yes		■ yes
39	After Cooler Gas Outlet temp.	■ yes	■ yes		■ yes		■ yes
40	1st stage dish pressure low / high	■ yes	■ yes	■ yes	■ yes	■ yes	■ yes
41	Cylinder Packing Vent Pressure						
42	Final Disch Pressure after coalescent filter *	■ yes	■ yes	■ yes	■ yes	■ yes	■ yes
43	Blow Down vessel level	■ yes					
44	Piston Rod Drop Indicator						
45	Distance piece diff. Purge pressure						
46	Common process parameters						
47	Common machine parameters						
48	Blow Down vessel Pressure	■ yes	■ yes				■ yes
49	Vibration Measurement on comp , heat exchanger fan						■ yes switch

* Pressure transmitter shall be of smart type with LCD display

22.2 List of Instrumentation & Controls for Gas Engine:

		INDICATION	ANNUNCIATION & PRE ALARM	TRIP & AV ALARM ANNUN.

Sl no	Description	GUAGE –LOCAL GUAGE BOARD	INDICATOR LOCAL PANEL (PLC) DISPLAY	LOW LOCAL PANEL DISPLAY	HIGL LOCAL PANEL DISPLAY (PLC)	LOW –LOCAL PANEL -PLC-DISPLAY	HIGH LOCAL PANEL PLC-DISPLAY
1	RESERVOIR OIL LEVEL	■ yes				■ yes, switch	
2	RESERVOIR TEMP.				■ yes		■ yes
3	MAIN L/O PUMP DISCH. PR.			■ yes			
4	LUB OIL FILTER DIFF. PR.						
5	L/O SUPPLY HEADER TEMP.						
6	OIL COOLER OIL OUTLET TEMP.	■ yes			■ yes		■ yes
7	STAND BY PUMP START						
8	Differential pressure gauge for fuel and air mixture	■ yes					
9	OIL COOLER CW OUTLET TEMP.						
10	CW SUPPLY HEADER FLOW						
11	SIGHT FLOW CW RETURN EACH COOLER & HEADER						
12	Exhaust gas temperature from engine		■ yes		■ yes		
13	WATER LEVEL IN MAKE UP WATER TANK / RADIATOR	■ yes					
14	ENGINE JACKET C.W SUPPLY TEMP.				■ yes	■ yes	
15	ENGINE JACKET C.W RETURN TEMP. (INLET OF RADIATOR)						
16	COOLANT MAIN PUMP	■ yes					

	DISCH. PR.						
17	COOLANT SUPPLY HEADER PR.	■ yes					
18	COOLANT SUPPLY HEADER TEMP						
19	COOLANT COOLER OUTLET TEMP.	■ yes					
20	COOLANT RESERVOIR LEVEL					■ yes, switch	
21	STARTING SYSTEM						
22	AIR RECIEVER PRESSURE		■ yes	■ yes			
23	INLET AIR SYSTEM						
24	INLET AIR FILTER DIFFERENTIAL PRESSURE		■ yes				
25	BOOST AIR (TURBO CHARGER) DISCHARGE PRESSURE (IF REQUIRED						
26	CHARGE AIR COOLER OUTLET AIR TEMP. (IF REQUIRED)						
27	MISCELLANEOUS						
28	ENGINE VIBRATIONS						■ yes switch
29	ENGINE/ MAIN motor speed	■ yes	■ yes				
30	START STOP BUTTON	■ yes					
31	ENGINE OVERSPEED						■ yes
32	ENGINE /MAIN FAILS TO START					■ yes	
33	FEUL GAS / ELECTRIC POWER CONSUMPTION INDICATION AND CUMMULATIVE	■ yes	■ yes				
34	TACHO-HOUR METER	■ yes	■ yes				
34	Fuel gas pressure after PRV		■ yes	■ yes			

23.0 QUALITY ASSURANCE PLAN AND CONTROL:

The supplier shall perform all test and inspection as per tender and as per this quality assurance plan.

CUSTOMER'S REF..... :

REF..... :

COMPRESSOR MODEL.....:

Sl. No.	Description	D	R	TW	W	
	Compressor					
	Material TC for : crank shaft, connecting rods, cylinder, liner piston (compliance report/ certificate)	Yes	Yes	-	-	
	Hydro test of cylinder heads	Yes	Yes	-	-	
	Hydro test of pressure vessels (at sub-vendor works)	Yes	Yes	-	-	
	Ultrasonic test of – crank shaft, connecting rod,piston rod. (refer note: 1)- (MFR's compliance report/ certificate)	Yes	Yes	-	-	
	End clearance of the cylinders, piston rod run out	Yes	Yes	-	-	
	No load mechanical run test as per manufacturers standard (4 hours test at packager's end)	Yes	Yes	-	-	
	Strip check and internal inspection after "NLMRT" of all compressors –Refer note: 2 at packager's end	Yes	Yes	-	-	
	Engine					
	Manufacturers' compliance report	Yes	Yes	-	-	
	Dimension and Visual Inspection Report as per drawing	Yes	Yes	-	-	
	Material test certificates for RAW Material (Pressure Parts)	Yes	Yes	-	-	
	Radiography of pressure vessels at applicable	Yes	Yes	-	-	
	Hydro test of pressure vessels	Yes	Yes	-	-	
	Final painting and cleaning	Yes	Yes	-	-	
	Heat Exchangers (at sub-vendor works)					
	WPS / PQR – Welder Qualification	Yes	Yes	-	-	
	Material test certificates for RAW material (pressure parts)	Yes	Yes	-	-	
	Dimension and visual inspection report as per	Yes	Yes	-	-	

	drawing / Data Sheet					
	Radiography of heat exchangers as applicable	Yes	Yes	-	-	
	Hydro test of heat exchangers	Yes	Yes	-	-	
	Final painting and cleaning	Yes	Yes	-	-	
	Control Panel and Soft Starter	Yes	Yes	Yes		
	Dimensions / visual as per drawing	Yes	Yes	-	Yes	
	Functional test	Yes	Yes	-	Yes	
	Instrumentation					
	Manufacturers test certificates / calibration certificates of meas. Instruments for transmitters, gauges, switches & safety valve, filter, SS tubes, chain pulley block, acoustic material, pipe, fittings, flanges, fastners, valves, etc.	Yes	Yes	-	-	
	Manufacturers' test certificates	Yes	Yes	-	-	
	PLC/HMI	Yes	Yes	-	Yes	
	Acoustic Encloser					
	Surface preparation after cleaning & prior to primer painting, dimensions / visual as per drawing	Yes	Yes	-	-	
	Assembly check as per P&ID for each package	Yes	Yes	-	Yes	
	Mechanical string test with Natural Gas for each package.	Yes	Yes	-	Yes	
	Field trial run at site for each package after commissioning.	Yes	Yes	-	Yes	
	Package performance test at site for each package.	Yes	Yes	-	Yes	

LEGENDS : **D** = Documents to be submitted by vendor / sub-vendor ; **R** = Review of documents by client/consultant; **TW** = witness by third party; **W** = Witness by client or consultant/ Third Party in case of foreign bidder.

NOTES:

- 1 Crank Shaft, Connecting Rod : UT / MPT shall be conducted either in forging or in finish condition.
- 2 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.
- 3 If bidder is only packager and not manufacturer of main CNG compressor the standard QAP of compressor OEM with test report of compressor and motor from manufacturer or as witnessed by TPE appointed by manufacturer shall be accepted
The final QAP of the successful bidder shall be submitted for review / approval of client / Consultant . Any testing / inspection activity felt appropriate by Client / consultant during Detailed engineering shall be incorporated in the final QAP.

24.0 PREFERRED MAKES:

Approved makes of equipment shall be as follows:

Sl. No.	Item description	Preferred Makes
1.	FLP motors	ABB / Compton Greaves / Kirloskar / Siemens / Bharat Bijlee/Weg/Marelli/LHP
2	FLP Switchgear	Baliga/ FCG/ FPE / Flexpro/Sudhir
3	Switches/fuses/contactors	L & T/ GEC/ Siemens/ Schneider
4	Push Button	L & T/ Vaisno/Technik
5	MCCB	Siemens/ Legrand/Schnieder
6	Vibration switch	Robertshaw Control/ Murphy
7	PLC	Rockwell Automation/ GE Fanuc/ Siemens/ Allen Bradley / L&T/Telemechanique/ Schneider
8	IR Gas detectors	General Monitors / Crowcon / Honeywell / Sieger / Detronics/ Khrome Schroder / Net safety/ESP Safety Pvt. Ltd/M/s Oldham/Ambertronics
9	UV Flame detectors	General Monitors / Crowcon / Honeywell / Sieger/ Detronics / Khrome Schroder/ Net safety/ ESP Safety Pvt. Ltd/M/s Oldham/Ambertronics
10	Mass Flow meter	Micromotion CNG 50 , Endress& HauserCNGmass DCI
11	Pressure Transmitter	Druck/ Wika/ Honeywell/ ABB/Fisher/Rosmount/ Yokogawa
12	Pressure Regulator & Slam Shut Valve	M/s PietroFiorentiniS.p.A. (Italy)/ M/s EmersonProcess Management/ M/s RMG-RegelMesstechnik (Germany) / M/s Mokveld Valves BV(Netherlands)/ Tartarini / Fisher /M/s Gorter Controls (Netherlands)/M/s Dresser/ Nirmal /M/s Vanaz
13	Pressure Safety Valve	M/s BHEL, OFE & OE Group (New Delhi)/ M/s Keystone Valves (India) Pvt. Ltd. Baroda/ M/s Sebim Sarasin Valves India (P) Ltd. (New Delhi/ Halol-Gujarat)/ M/s Tyco Sanmar Ltd. (New Delhi/ M/s Parcol SPA, Italy/ M/s Nuopignone,

		Italy/ M/s Sarasin, France/ M/s Tai Milano SPA, Italy/ M/s Fisher Rosemount (Now M/s Emerson Process) Singapore/ Mercer USA/ M/s FaingerLeser.
14	Pressure Gauges & Temperatures Gauges.	M/s AN Instruments Pvt. Ltd., New Delhi/ M/s General Instruments Ltd., Mumbai/ M/s WIKA/M/s Altop/Baumer
15	RTDs :	M/s General Instruments Ltd. Mumbai/ M/s Nagman Sensors (Pvt.) Ltd./ M/s Pyro Electric, Goa/ Altop/Baumer
16	SS Tubes for CNG application	M/s Sandvik, Sweden/ M/s Tubasax/ M/s Ratnamani Metals & Tube
17	SS tube Fittings/ On Off SS ball/ needle/ non-return valvefor CNG application	M/s Swagelok (USA)/ M/s Parker (USA)/ M/s Hoke (Circore Instruments)/ M/s Hamlet/ M/S SSP/M/S BMT Korea/ HYLOK/ M/s Dk-Lok
18	Plug Valve for air water	M/s Nordstrom Valves Inc. USA/ M/s SerckAudcoValves, UK/ M/s Breda Energia Sesto IndustriaSpa, Italy/ M/s Sumitomo Corporation, New Delhi/M/s Fisher XomoxSanmar India Ltd., New Delhi/M/s Larsen & Toubro Ltd. (Audco India Limited),Chennai/M/s Microfinish/M/s Virgo/M/s BDK/M/s Petro valves
19	Solenoid Valve	M/s ASCO / M/s Rotex / M/s Parker Hanifen/M/s Swagelok
20	Cables and wires	INCAB/ Universal/ ASEAN/CCI/ FORT Gloster/ Finolex/ KEI/ Hylite/Polycable/Associated cables
21	Barrier/ Isolators/ Surge protector	MTL / Phoenix / P&F
22	Air exchanger	GEI HamonInd Ltd/ GEA India / Patel Air temp /PE/ M/s Kirloskar Pneumatic Co. Ltd./CP/
23.	SMPS	Telemecanique (Schneider)/ Siemens/Phoenix
24.	Pressure switch	Orion/Switzer/Danfoss/Wika/IFM

Notes:

- Above vendor list is indicative only and any other vendor(s) apart from as mentioned above may be accepted subject to approval by Owner/Owners representative based on their past track record / credentials. However no relaxation or advantage in delivery period will be given to the successful bidder on account of this approval.
- For the vendors of items not covered in above vendor list, but required for completion of project successfully, supplier shall take approval form Owner/Owners representative for the same during project execution. Bidder shall submit the required certifications, documents, PTR and Performance letters from clients for the same.

25. **CHECKLIST**

Scope of Supply for Reciprocating Gas Compressor Package:

Notes :

- (i) Bidder shall furnish all equipment, drivers, auxiliary systems, instruments and controls and safety devices as per the enquiry document. Anything required over and above what is specified, for safe and satisfactory operation of the equipment package shall be included by the Bidder in his scope.
- (ii) Bidder to write YES/NO against each item. Bidder is required to include complete scope, as such 'NO' is not warranted. However, in case for any of the items if vendor's reply is 'NO', vendor should give reasons for the same:
- (iii) Bidders' scope of supply shall include but not be limited to the following:

Sr. No.	Description	Specified by Purchaser (Yes/No)	Included by Bidder (Yes/No)	Remarks
1	Each Reciprocating Compressor package complete with :			
1.1				
1.2	Suction / discharge pulsation dampers	Yes		
1.3	Process equipment such as separator complete with supports, manual drain with isolation valves, and automatic drain system for separators	Yes		
1.4	Air cooled, lube oil, cooling water, inter-stage and discharge gas coolers with necessary air cooling arrangement	Yes		
1.5	Combined or separate closed circuit cooling water system for compressor (As required)	Yes		
1.6	Lubricating oil system for compressor	Yes		
1.7	Safety relief valves on each stage of the compressor	Yes		
1.8	All interconnecting oil, gas, water, air piping within the compressor package	Yes		
1.9	All valves, tubing, fittings as specified and required within the compressor package	Yes		
1.10	Fuel supply hardware complete with	Yes		

	SS piping, control valves, Regulators, Flow-meter, filter, vent/drain within the package suitable for the specified fuel gas	
1.13	Common skid for compressor and other auxiliary systems	Yes
1.14	Acoustic enclosures for compressor for noise attenuation up to 80 dBA @ 1 m distance fitted with fire detection and extinguishing system as specified	Yes
1.15	Instrumentation and control system complete with PLC based control panel configured as RTU of supervisory computer and data acquisition, instrumentation as specified.	Yes
1.16	Cabling with cable trays for all the electrical devices within the package.	Yes
1.17	Mass flow meter with integral display	Yes
1.18	Inlet Pressure Regulators (Compressor Suction)	No
1.19	Priority Panel (as specified) at Package Discharge	Yes
1.20	Compressor gas twin inlet Y-type temporary strainer, permanent inlet filter.	Yes
1.21	Y-type strainers, valves, sight flow indicators, check valves, auto/manual drain traps as required for various compressor auxiliary systems, i.e. frame lubrication system, cylinder lubrication, cooling water systems etc.	Yes
1.22	Manual package isolating valves and auto inlet isolation valve	Yes
1.23	All couplings and guards	Yes
1.24	Flywheels, barring device	Yes
2	Spares and Tools / Tackles	
2.1	Mandatory Spares if specified in the TS " (Indicate separate price for each item)	No
2.2	Erection and commissioning spares as recommended by Bidder including lube oil consumables etc. as required for erection & commissioning of each compressor package.	Yes

2.3	Two year normal operation and maintenance spares over and above the spares as required during one year warranty period normal operation and maintenance of each package by the Bidder	No
2.4	Quote for five year Normal operation & maintenance spares (excluding lube oil etc.)	No
2.5	Special tools and tackles required for normal operation & maintenance of each equipment of compressor package as required and recommended by the Bidder	Yes
3	Inspection and Testing	
3.1	As specified on the datasheets and tech. Spec.	Yes
4	Vendor data and drawings	
4.1	All data & drawings as required	Yes
5	Erection, commissioning and trial runs at site of the complete package	Yes
6	Miscellaneous	
6.1	Foundation and anchor bolts	Yes
6.3	Acoustical and mechanical analysis report & pulsation study (approach-3)	Yes
6.4	Additional items not specified by Purchaser but recommended by Bidder for safe smooth and normal operation. (Bidder shall indicate separate list of such items in his proposal)	Yes
6.5	Optional price quoted for complete compressor package with Non-flame proof electric panel in lieu of flame proof electric panel.	Yes
6.6	Data sheet of compressor, gas engine motor, LEL and UV Detection system duly filled.	Yes
6.7	Combined Speed-Torque Characteristic curve of gas engine and Compressor at rated inlet pressure.	Yes
6.8	Electrical Load summary	Yes

6.9	Catalogues of electric motor, flame proof equipments and Instrumentation	Yes
6.10	Power required from UPS Supply (230 V AC Single Phase	Yes
6.11	Power required from Non UPS Supply (415V TPN)	Yes
7	Operation maintenance contract including all operating spares, consumables, man power etc.	Yes

27.0 FORMAT OF DEVIATION TO THE TECHNICAL SPECIFICATION:

All deviations sought by the vendor shall be furnished in this format. If some deviations/ observations/comments are furnished by the vendor at some other places of the offer, the same shall not be considered as deviation. Purchaser may accept some deviation in the interest of project. However, 1.5 times the cost of deviation shall be loaded in the offered cost for evaluation purpose.

S No.	Clause no.	Tender Specification	Deviation taken	Reasons for deviations / remarks

Certified that, only the above-mentioned deviations have been taken against this tender.

Name of the Bidder

Signature

Seal of the Company.



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SECTION-VI

Special Conditions of Contract (SCC)

PROCUREMENT OF CNG COMPRESSORS

(2 Years ARC)



SPECIAL CONDITIONS OF CONTRACT [SCC]

1.0 Payment Terms:

1.1 Payment Breakup of SOR A1 – 11 numbers of EMD Compressor

Sl no	Procurement of EMD OL Compressor			Qty
A1	Supply , erection commissioning , transportation of Online 1200 SCMH EMD Compressor and operation and comprehensive maintenance for 5 years (including warranty period)	To be Quoted by Bidder (100 %)	Percent (%) of A1	
A1.1	Supply of Online 1200 SCMH EMD Compressor	Not to quote	53.2	11
A1.2	Transportation of Compressor		0.2	11
A1. 3	Re-transportation Compressor		0.1	11
A1.4	Installation, commissioning & Field performance test of Compressor Package including all accessories/ equipment(s) i.e. air compressor, CO2 flooding system etc. system at site.		0.7	11
A1.5	Operation and maintenance for 1st yr (3 rd shift in Auto mode)		7.5	11
A1.6	Operation and maintenance for 2nd Year (3 rd shift in Auto mode)		8.2	11
A1.7	Operation and maintenance for 3rd year (3 rd shift in Auto mode)		9.1	11
A1. 8	Operation and maintenance for 4th year (3 rd shift in Auto mode)		10	11
A1. 9	Operation and maintenance for 5th year (3 rd shift in Auto mode)		11	11
	Total		100	

1.2 Payment Breakup of SOR A2 – 01 numbers of GED Compressor



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sl no	Procurement of EMD OL Compressor			Qty
A2	Supply , erection commissioning , transportation of Online 1200 SCMH GED Compressor and operation and comprehensive maintenance for 5 years (including warranty period)	To be Quoted by Bidder (100 %)	Percent (%) of A2	
A2.1	Supply of Online 1200 SCMH GED Compressor	Not to quote	44	01
A2.2	Transportation of Compressor		0.2	01
A2. 3	Re-transportation Compressor		0.1	01
A2.4	Installation, commissioning & Field performance test of Compressor Package including all accessories/ equipment(s) i.e. air compressor, CO2 flooding system etc. system at site.		0.7	01
A2.5	Operation and maintenance for 1st yr(3 rd shift in Auto mode)		9	01
A2.6	Operation and maintenance for 2nd Year(3 rd shift in Auto mode)		10	01
A2.7	Operation and maintenance for 3rd year (3 rd shift in Auto mode)		11	01
A2. 8	Operation and maintenance for 4th year (3 rd shift in Auto mode)		12	01
A2 .9	Operation and maintenance for 5th year (3 rd shift in Auto mode)		13	01
	Total		100	

PAYMENT FOR SUPPLY PORTION(SI no A1.1 & A 2.1 (whichever is applicable)) :

- 90% (GST Compliant Invoice value with taxes and duties) of the total supply order price (per Compressor package) will be paid against receipt of ordered item(s) by owner at site within 30 days of receipt and acceptance of bills at site against relevant documents as mentioned in order:



1. Inspection release note by Purchaser or by his approved TPI Agency.
 2. LR/GR in original.
 3. Packing List.
 4. Proof of customs clearance including payment of custom duty for imports permitted in the contract.
 5. Proof of receipt at store.
 6. A certificate from manufacturer that the all items/ equipment under supply including its component or raw material used with manufacturing are new and conform to the tender requirement. In case manufacturer is not the contractor, the contractor owning Overall responsibility will duly endorse this certificate.
 7. Dispatch instructions clearance by purchased.
 8. Performance Bank Guarantee(s) of 03% of Supply Order Value. If already submitted, a copy of the same.
 9. Documents/drawings as specified in Vendor Data Requirement in Material.
- 10% (Ten Percent) Payment shall be released after successful completion of installation, Testing and Commissioning of each compressor package at the site & acceptance thereof by the OWNER and after successful Performance acceptance Test at site and acceptance by owner for each compressors.

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.

1.3 TRANSPORTATION AND RE- TRANSPORTATION OF COMPRESSOR (Sl no A1.2 , A 1.3 & A 2.2 , A 2.3 (whichever is applicable)) :

100% within 30 days on successful shifting at foundation/site .

1.4 ERECTION, INSTALLATION, COMMISSIONING & FIELD PERFORMANCE TESTING (A1.4 & A 2.4)

100% within 30 days on successful Installation, commissioning & Field performance test of Compressor Package including all accessories/ equipment(s) i.e. air compressor, CO2 flooding system etc. system at site and handing over to owner.

1.5 ANNUAL OPERATION AND COMPREHENSIVE ANNUAL MAINTENANCE SERVICE CHARGES (A 1.5 to A 1.9 & A 2.5 to A 2.9)

1.5.1 On pro-rata monthly basis, against monthly invoices duly certified by Engineer-in-Charge within 45 (Forty-Five working days) working days from the date of submission of bills to the OWNER.

1.5.2 The date of successful performance test at site (which shall be conducted within 90 days from the date of successful commissioning of the machine or from the date of commercial operation whichever is earlier) will be considered as date of start of the



Note: A declaration on letterhead shall be submitted by supplier along with each bill, confirming fulfillment of all statutory compliances and contractual obligations as defined in the Order/ bid document for the period for which bill has been raised.

1.6 100% payment against loading from stores, re-transportation from stores to unloading at site shall be processed based on certification from site in-charge.”

1.7 General Notes

- i) Invoice shall be raised on the basis of not less than one fortnight interval.
- ii) All efforts shall be made to release the payment within 30 days after receipt of relevant documents complete in all respects.
- iii) All bank charges incurred in connection with payments shall be to vendor's accounts.
- iv) Unless otherwise specifically stated in bid document, all payments shall be made in the currency quoted.
- v) No interest charges for delay in payments, if any, shall be payable by Owner.
- vi) Bidder shall ensure payment of minimum wages, as per Central Govt. or respective State Govt., whichever is higher, to its people engaged in the site activities/ AMC.
- vii) Penalty/ deductions for non-performance, if any, shall be applicable as per provisions stipulated in Technical volume (Vol.-II).
- viii) EIC for Annual Operation, repair & Maintenance shall be M/s BGCL.
- ix) The rates quoted for Annual Operation, repair & Maintenance shall be inclusive of cost of relievers, fulfillment of statutory compliances and meet all the contractual obligation as defined in the bid document.

2.0 Delivery Schedule:

12 Weeks From the date of approved drawing by EIC.

3.0 General:

- 3.1 Special Conditions of Contract shall be read in conjunction with the General Conditions of Contract, Scope of Work, Deliverables, Specifications, SOR, and any other documents forming part of this Contract, wherever the contract so requires.
- 3.2 Notwithstanding the sub-divisions of the document into these separate sections and volumes, every part of each shall be deemed to be supplementary to and complementary of every other part and shall be read with and into the Contract so far as it may be practicable to do so.
- 3.3 Where any portion of the Special Conditions of Contract is repugnant to or at variance with any provisions of the General Conditions of Contract, then unless a different intention appears, the provision(s) of the Special Conditions of Contract shall be deemed to override the provision of



the General Conditions of Contract only to the extent such repugnance or variations in the Special Conditions of Contract as are not possible of being reconciled with the provisions of General Conditions of Contract.

- 3.4 Wherever it is mentioned in the specification that the CONTRACTOR shall perform certain work or provide certain facilities, it is understood that the CONTRACTOR shall do so at his own cost and the contract price shall be deemed to have included the cost of such performances and provisions, so mentioned.
- 3.5 The materials, equipment, design and workmanship shall satisfy the applicable Indian and International Standards, specifications contained herein and codes referred to. Where the Technical Specifications stipulate requirements in addition to those contained in the Standard Codes and Specifications, those additional requirements shall also be satisfied.
- 3.6 In general, this contract is intended for full comprehensive operation & maintenance of the 1200 SCMH Motor Driven compressor packages at BGCL CNG Stations, thereby the contractor making available the equipment in running condition at all the times, through the supply of adequate skilled technician, OEM spares, OEM recommended consumable, tools tackles, any other specialized service etc. the services are to be provided on per CNG package basis, which shall be including the entire Motor Driven CNG Compressor package at each station.
- 3.7 If the quantities of any items change to any extent due to any reason whatsoever, the contractor shall be bound to be execute them at the rates quoted by him. BGCL also reserves the right to split the work in full or in part without assigning any reason thereby. The decision of EIC shall be final & binding on contractor in this regards.
- 3.8 The work shall be executed to the satisfaction of EIC/Owner and the contract rates shall include any incidental & contingent work charges as to complete the work in all respect in prompt, efficient and workmanlike manner.
- 4.0 DEFINATION:**
- 4.1 The EIC means the Engineer in-Charge nominated by BGCL and shall include any person acting as in charge on his behalf for CNG station.
- 4.2 Authorized representative shall mean any officer/supervisor/consultant/staff of BGCL authorized by EIC/Head of Dept.
- 4.3 Where any portion of the general condition of contract is pregnant to or at variance with any provision of special condition of contract, the provision of special condition of contract shall be deemed override the provision of general condition of contract and shall to the extent of such repugnancy of variation prevail.



- 4.4 CNG Compressor package: The CNG compressor package include the CNG compressor, all other associated equipment like Air Compressor, Air Volume bottle, Co2 Flooding System, Gas filter, Interconnecting pipes, UPS etc.

5.0 SITE INFORMATION:

5.1 Location of Site:

The contract shall apply for all locations in and around Kolkata and the awarded rates shall be applicable for any/ all locations within the Kolkata.

5.2 Site Conditions:

The Contractor shall fully familiarize with the Site/ City Conditions before quoting for the tender and conduct thorough studies of the site as regards local conditions, available infrastructure, sale, consumer base, traffic, climate, services' availability, power, water, material and equipment availability, transport, communication facilities, office within the city, residential quarters and all other factors and facilities and things whatsoever necessary or relevant for performing the work.

6.0 INTERPRETATION

- 6.1 The several documents forming the Contract are to be read together as a whole and are to be taken as mutually complementary.
- 6.2 Should there be any doubt or ambiguity in the interpretation of the Contract Documents or error, omission or contradiction therein or in any of them, the Contractor shall, prior to commencing the related work, apply in writing to the Engineer-in-Charge for his decision in resolving the issue, ambiguity or contradiction or correction of the error or omission, as the case may be. Should the Contractor fail to apply to the Engineer-in Charge for his decision, as aforesaid prior to commencing the related work, the Contractor shall perform the said work at his own risk.
- 6.3 The decision of the Engineer-in-Charge on any application under clause 3.2 hereof shall be in writing and shall be final and binding on the Contractor in this behalf.
- 6.4 No verbal agreement, assurances, representations or understanding given by any employee or officer of BGCL or so understood by the Contractor, whether given or understood before or during or after the execution of the Contract, shall anyway bind BGCL or alter the Contract Documents unless specifically given in writing and signed by Engineer-in-Charge on behalf of BGCL and given as an agreed variation to the relative term(s) in the Contract Documents.



- 6.5 Clause headings given in this or any other Contract Document are intended only as General guide for convenience in reading and segregating the general subject of various Clauses.

7.0 TERMS OF PAYMENT.

- 7.1 The payment shall be released by the owner against submission of monthly bills. The payment will become due and payable By BGCL within 30 working days from the date of receipt of Contractor's bill/ invoice by BGCL. The Contractor shall prepare the monthly invoice with all the required supporting documents - proof of payment through e-banking to all the employees as per contract duly signed by each workmen in original, Electronic Challan cum Return (ECR)/ Electronic Challan along with online Upload list of contract workers/members for the proof of remittance of Provident Fund (PF) and Employee State Insurance (ESI) contributions with respective authorities for the contract workers engaged by him/them in contract, Professional Tax receipt, Reports- Maintenance including PM, BD, SM, Overhauling, Running Hours, Spares Consumption etc and submit the said invoice to Engineer-in Charge for certification of the work.
- 7.2 The operation & Maintenance service charges: Monthly payment as per SOR as certified by EIC shall be made against the invoice raised.
- 7.3 The Monthly bills, maintenance report, breakdown report & all other services will be on CNG Compressor package wise basis. The bill and its certification will also be done compressor wise basis.
- 7.4 In case any amount has been disbursed wrongly the Contractor or any other amount is due from the Contractor to BGCL, BGCL may without prejudice to it's rights, recover such amount from any claim/ payment due to the Contractor. At the same time, the Contractor shall have the right to receive the payment that has been omitted in previous invoice by mistake on the part of BGCL or the Contractor.
- 7.5 BGCL shall not be responsible or obliged for making any payment or any other related obligations under this Contract to the Contractor Sub-Contractor/ Personnel or Vendors. The Contractor shall be fully liable and responsible for meeting all such obligations and all payments to be made to its Sub-Contractors/ Personnel / vendors and any other third Contractor engaged by the Contractor in any way connected with the discharge of the Contractor's obligations under the Contract and in any manner whatever.
- 7.6 Payment shall be made in the Indian Rupees only as indicated in the price schedule. Payment shall be made by crossed account payee cheque or electronically transferred to the Contractors account.
- 7.7 BGCL will not absorb any Foreign Exchange fluctuations



- 7.8 The prices/ rates shall remain firm till the expiry of the Contract and shall not be subjected to any escalation.
- 7.9 The Price Schedule shall be deemed to include and cover the cost of all royalties, rent and claims on the articles, equipment, processes, protected by letters patent or otherwise incorporated in or used in connection with the works.

8.0 COMPREHENSIVE OPERATION & MAINTENANCE SERVICES:

The contractor must follow the maintenance requirement as stated below of special condition of contract, but not limited to and ensure to provide trouble free services to the satisfaction of the owner.

9.0 ACCOMMODATION/ TRANSPORTATION / MEDICAL.

The contractor shall make his own arrangements for the accommodation of his personal at respective locations and subsequent transportation arrangement for them from their place of residence to work place or any other place as required and company shall have no obligation in this respect. The company shall not be responsible for providing any medical assistance to the contractor's Personnel.

10.0 DISCIPLINE

The contractor shall be responsible for the discipline and good behavior of all his personnel deployed in the service contracted out and should any complaint be received against any of his employee, he shall arrange to replace such persons within 24 hours of notice issued by the Engineer-in-Charge. The decision of the Engineer-in-Charge in this matter shall be final and binding on the contractor.

11.0 GATE PASS

The contractor shall arrange to supply/ renew identity card & police verification of his work force at his own cost for security or for any other reasons. Those contractor's personnel shall be required to carry their respective identity card at all times while on duty and produce on demand.



12.0 RIGHT TO GET SERVICES CARRIED OUT THROUGH OTHER AGENCIES

Nothing contained herein shall restrict owner from accepting similar service from other agencies, at its discretion and at the risk and cost of the contractor. If the contractor fails to provide the said services any time.

13.0 SUB-LETTING OF CONTRACT

Partial Sub-letting of the contract may be permitted subject to due approvals from BGCL however, the overall responsibility of the contract will remain with the Main contractor.

14.0 COMPLIANCE OF LAWS

The Contractor shall have to obtain license from appropriate licensing authority' if required the Contractor (which shall include the contracting firm I company) shall be solely liable to obtain and to abide by all necessary licenses from the concerned authorities as provided under the various labour laws legislation's including labour license from the competent authority under the contract labour (regulation & abolition) act 1970 and acts made therefore.

The Contractor shall be responsible for necessary contributions towards PF, family pension, ESIC, insurance, E-banking transfer or any other statutory payments to Government agencies as applicable under the laws in respect of the contract and personnel deployed by the Contractor for rendering services to OWNER and shall deposit the required amount with the concerned statutory authorities on or before due dates' The contractor shall obtain a separate PF number from the concerned regional provident fund commissioner and submit necessary proof of having deposited the employees as well as the employer's contribution to the provident fund.

The Contractor shall not engage deploy any person of less than 18 years under this contract and the persons to be deployed should be physically and mentally fit.

The installation where job is to be carried out is alive and have hydrocarbon environment Contractor shall comply with all safety and security rules and regulations and other rules laid down by owner for its operation. It shall be the duty/responsibility of the contractor to ensure the compliance of fire, safety, security and other operational & maintenance rules and regulations by his personnel. Disregard of these rules by the contractor's personnel will lead to the termination of the contract in all respects and shall face panel legal consequences. The Contractor shall arrange



for insurance of all works engaged on the job as per the relevant acts, rules and regulations etc. in case by virtue of provisions of workers compensation act, 1923 or any other law in force. Contractor has to pay compensation for a workman employed by the due to any cause.

15.0 PERIOD OF MOBILIZATION & DEPLOYMENT OF MANPOWER:

- a. The CONTRACTOR shall mobilize all his resources within 15 (Fifteen) Days from the date of written advice by Email/Fax/letter from the Engineer-in-Charge (EIC).
- b. The contractor shall provide and maintain all requisite personnel of qualified, trained, experienced, well behaved, neatly dressed and physically fit – engineer/supervisor, operators, technicians etc. for operation and maintenance work.
- c. Workmen deployed by the contractor should be non-alcoholic and non-smoker. Chewing pan, pan-masala, gutka, tobacco etc. and spitting by deployed personnel is strictly banned in BGCL CNG Stations. They should have good track record and shall have no criminal antecedent. The contractor should submit police verification certificates for the manpower deployed in this contract for character verification as directed by EIC.
- d. The contractor shall manage, at his cost, uniform/ dress for all its personnel deployed for the work Design and material of the dress shall be as approved by the Engineer-in Charge Workmen deployed by the contractor shall be desired to be neatly dressed, while working at CNG Station.
- e. The contractor shall provide, at his own cost, Identity Card to his personnel deployed for the work. All workmen shall be required to bear their identity cards on their chest while on duty. No workman shall be allowed entry to BGCL premises/ installation without I card. Sky Blue Shirt & Navy Blue Pant Dress with embossing of BGCL Logo.
- f. The contractor shall make arrangement for – (i) the accommodation of his personnel at respective locations, (ii) to and fro transportation/ conveyance arrangement for them between their residence to work place and any other place as may be required and (iii) medical assistance/ treatment at his own risk and cost. BGCL shall have no obligation towards providing accommodation transportation and medical assistance to the contractor personal.
- g. The contractor shall provide all necessary documents, personal data, mark sheet, qualification certificates, police verification etc. pertaining to personnel proposed to be deployed for the work for verification and produce the individuals for a formal interview/ selection by EIC or his authorized representative. Manpower so selected/ deployed shall be given initial training for related activities and shall not be changed by the contractor on his own/ without permission of EIC. However, any person deployed for the work and found erring misbehaving not skilled shall be replaced/ removed by contractor if so ordered by EIC.



- h. Contractor shall keep all the personnel insured with a recognized insurance company. BGCL will not be responsible for any liability arising in case of accident explosion, casualty, fire, injury or damage to anyone deployed under this contract.
- i. After the operation of contract deployment of manpower at site, the wages of all manpower should be paid through bank only and mapping of account/ opening of account etc of all manpower has to be done by contractor within 01(One) month from the date of operation of contract. Also, during the period of contract, if any manpower left the site, the contractor has to provide the replacement as per contract and ensure proper mapping of account / opening of account etc of new manpower has to be done within 01 (One) month from the date of deployment and copy of bank statement should be submitted along with monthly bills.
- j. In the event of delay in mobilizing the services/ manpower for the particular CNG compressor package a penalty at the rate of 0.5 % of the contract value per week or part thereof shall be recovered from the contractor subject to a maximum of 5% of the contract value.
- k. In the event of delay in mobilization of resources to commence O&M of CNG compressor package, BGCL shall have option to get the work done from any other agency at the risk and cost of the Contractor. The expenditure so incurred plus administrative charges @ 20% shall be recovered from Contractor's bill without any prior intimation.

16.0 PERIOD OF CONTRACT (For Operation and Maintenance):

The period of the contract shall be valid for **60 (Sixty) Month reckoned from the commissioning of each Compressor package**. However, the period may be extended for another term of one year under the same terms and conditions with mutual consent subject to satisfactory performance and at sole discretion of BGCL.

17.0 REPEAT ORDER

PURCHASER reserves the right, within 06 months of order (PO / Part Delivery Order / DO) to place repeat order up to 50% of the original ordered quantity (s) without any change in unit price or other terms and conditions.

18.0 REPATRIATION AND TERMINATION OF CONTRACT

The Owner/ Engineer-in-Charge reserve the right to terminate the contract on giving 30 Days/ 1 month notice without assigning any reason and upon expiry of such notice period the Contractor shall vacate the site/office occupied by him immediately



19.0 INDEMNITY AGREEMENT

The contractor shall exclusively be liable for non-compliance of the provision of any act, laws rules and regulations having over engagement of workers directly or indirectly for execution of work and the hereby undertake to indemnify the company against all actions, suits, proceedings, claims, damages, demands losses etc. which may arise under minimum wages act, payment of wages act, workmen compensation act, personnel injury (compensation insurance act ESI act, employees provident fund act, family pension and deposit linked insurance scheme or any other act or statutes for the persons engaged under this contract.

20.0 PENALTY CLAUSE

A. PENALTY TOWARDS EXCESS GAS LOSS:

At the start of O&M period or even at any point of time 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:

$$F = [G - \{(Q / 903 \text{ (for 1200 SCMH)}) * D\}] * H$$

Where,

F = Penalty in Rupees to be deducted from O&M bill

G = Monthly Vent/Leakage loss observed during O&M period in KG

Q = Vent / Leakage loss quoted in Percentage

H = Cost of Natural Gas/Kg – Rs. 55/- per Kg

D = Production during the month (Discharge Meter) considering:

G above shall be taken as (Suction – Discharge) OR Reading from Vent Mass Flow Meter, whichever is higher.

Note: - Accuracy of Mass Flow Meter considers as per OEM Guideline and bidder may submit the same.



B. PENALTY TOWARDS EXCESS ENERGY CONSUMPTION:

At the start of O&M period or even at any point of time during the O&M period, cost towards excess power consumption beyond quoted figure shall be deducted from O&M bills.

Following calculations shall be used for deduction towards excess power consumption. $F = (G - Q) \times H$

Where,

F = Monthly Penalty in Rs.

G = Monthly Actual power consumption

Q = Guaranteed consumption rate quoted by supplier for every 903 Kg of CNG
903 (for 1200 SCMH)

X

CNG produced during the month

H = Cost of power Rs. 8/Kwh

C. PENALTY TOWARDS PACKAGE EFFICIENCY LOSS

This penalty shall be imposed on compressor blocks not capable of delivering rated capacity of 1200 SCMH. Following calculations be used for penalty towards package efficiency loss:

$$F = 2 \times \{(1200 \times H \times RD \times AD) - M\}$$

Where,

F = Penalty Amount in Rupees

H = Hours clocked in a month

RD = Average Relative Density for the month using GC Data

AD = Air Density = 1.22541



M = Discharge mass flow during the month in Kgs

Note:

- 1) Gauge Pressure at Station Inlet shall be used as benchmark for imposition of penalties and not suction pressure being displayed at the PLC.
- 2) Pressure regulator shall not be used to reduce the pressure at the compressor block inlet below 16 Kg/Cm².
- 3) In case pipeline pressure at the station itself is less than 16 Kg/Cm², then the penalty shall be imposed if the package delivery falls below discharge values corresponding to the station pressure.

D. Penalty for Non-Performance during Period of Operation & Maintenance

Details of Penalty for non-performance of equipment's

a. On normal day (i.e. the day other than the schedule maintenance day):

The party has to ensure that the equipment are available for operation for minimum 20 hours per day and on an average the equipment availability has to be 98% in a month.

If the equipment is down for more than 4 hours on any day or availability is less than 98% in a month. Penalty would be applicable as follows:

4 to 12 hours: Rs. 20,000/-

Beyond 12 hours: Rs. 40,000/- per day.

In case of daily availability, it is 20 hrs. but monthly average availability is below 98%. Then penalty of 10,000 per % or part thereof shall be applicable.

Note: If there is carry-over of breakdown from previous month to next month (for example if machine breaks down on last day of a month and is not operational till next month) then the



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penalty will be calculated on cumulative basis & the invoice for the final bill will be paid once the machine is operational.

b. On schedule maintenance day:

- i. The party would be required to carry out the recommended schedule/preventive maintenance of the equipment's for which the party has to indicate the time required for each type of schedule maintenance.
- ii. If the equipment is down for more than 4 hours & upto 12 hours beyond the time indicated for the agreed schedule maintenance, the party would be penalized Rs. 20,000/- and for more than 12 hours Rs. 40,000/- per day.
- iii. In any case, the maximum penalty imposed in a month for non-performance of the equipment turns out be 50% or more of the amount of O&M charges to be paid to the party per month per compressor (a complete cost break up of O&M charges need to be furnished by the bidder during bid), OWNER will take necessary actions as per terms and conditions of the contract for such non-performance.

- E. In any case/ any situation, total penalty will be limited to 50% of monthly invoice value of concerned package.
- F. The calculations for levy of penalty as mentioned above shall be calculated on CNG Compressor wise basis for each locations of Vadodara Gas Ltd.
- G. Penalty shall be excluding preventive maintenance work and other work like power cut, planned shutdown.
- H. The wages of all manpower deployed at site should be paid through bank only and the copy of bank statement should be submitted along with monthly bills. If the contractor fails to pay the wages through bank will attract penalty Rs. 1000 per person per month and same will be deducted from contractor running bill.
- I. After the operational of contract, Contractor has to provide the uniforms (as per clause no. 4 of scope of work) & safety shoes within 1 month, Incase not wearing/ providing of Uniform & Safety Shoes by any employee during their shift/duty, the penalty shall be imposed Rs. 500/- Per person deducted from contractor running bill per observed any time during the random/regular inspection by EIC or his authorized representative.



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- J. The contractor has to submit recent police verification for all the persons within a period of 90 days from the date of deployment under this contract for character verification as per TABLE – A of SOW, non-submission of character certificate will attract penalty Rs. 1000 per workmen & will deduct from running bill. Incase authority are unable to issue character certificate, letter to be submitted to BGCL. Old police verification will not be considered. Date of police verification shall be after date of award of contract only.
- K. Mass Flow Meters shall be calibrated through MFM OEM approved agency or BGCL approved agency once in a year, if not done penalty shall be Rs. 25,000/- per mass flow meter.
- L. Non calibration of instruments and PRVs as per SOW, penalty shall be Rs. 25,000/- for yearly instruments & Rs. 15,000/ for half yearly instruments.

21.0 RESPONSIBILITIES OF THE CONTRACTOR FOR COMPLINACE WITH LABOUR/INDUSTRIAL LAWS:

The Category of manpower is as under & accordingly wages to be paid as stated.

- Operator - X+ITI with experience in compressor operation: Semi skilled rates of minimum wages.
- A. The site is situated at Kolkata & wages will be applicable time to time, rates of Kolkata, West Bengal . The contractor has to pay following wage components to the persons engaged by him in BGCL.
- B. The Contractor has to fully comply with all applicable laws and regulations passed, modified and notified from time to time by the Central, State and local Government agencies/authorities. Specific attention of the Contractor is drawn to the following obligations amongst others:

Sr. No.	Particulars	Remarks
1	Labour License	The Contractor is required to obtain labour license under the provisions of The Contract Labour (Regulation & Abolition) Act, 1970 from the Office of Regional Labour Commissioner (Central), Kolkata.



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2.	Minimum Wage	The Minimum Wages shall be paid as notified by the Central Government or State Government, whichever is higher, as per the provisions of The Minimum Wages Act, 1948 / The Code on Wages, 2019, as applicable to Kolkata being notified by Dy. Chief Labour Commissioner (Central), from time to time. Wage Period and Monthly wages– Wage period shall be monthly and wages for a month will be calculated by multiplying daily rate of Minimum Wages by 26. The contractor shall be solely responsible for the payment of wages and other dues to the personnel, if any, deployed by him latest by 7th day of the subsequent month and submit the proof towards its remittance in the concerned bank account of each person engaged under this contract along with all necessary documents as specified in this contract which shall be duly certified by the Contractor and EIC.
3.	Provident Fund contribution including Employee Deposit Linked Insurance (EDLI) & Administrative charges	(a) The Contractor shall have his own PF Registration / Code No. with the Regional Provident Fund Commissioner (RPFC) as required under the provisions of The Employees' Provident Funds and Miscellaneous Provisions Act, 1952 and extend the benefits of Provident Fund, Employees Deposit Linked Insurance Scheme and Employee Pension Scheme, wherever applicable. (b) The Contractor has to ensure compliance (as per prevailing rates) and extend benefits under Employees' Provident Fund Scheme 1952, Employees' Pension Scheme 1995 & Employees' Deposit Linked Insurance Scheme 1976 to the resources deployed by him. Presently, the rate is 13.00% which includes PF @ 12%, Administrative charges @0.50% and EDLI @0.50%. (c) The Contractor should submit copies of separate e-Challans/ ECR/ proof of payment/receipt in respect of resources engaged through this contract only, on monthly basis. Common challans would not be acceptable in BGCL. The Contractor should submit copies of previous months EPF e-Challans / ECR along with current month's bill.



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4.	Employee State Insurance(ESI) contribution	(a) The Contractor shall have his own ESI Registration / Code no. allotted by Employee State Insurance Corporation (ESIC) as required under Employee State Insurance Act, 1948. (b) The Contractor is required to deposit ESI contributions through bank with Employee State Insurance Corporation on monthly basis and to arrange Smart Cards / any other prescribed documents to contract labours engaged by him. (c) The rates towards ESIC contribution shall be as prescribed by the authority from time to time. Presently, ESIC rates are 4.00% of minimum wages i.e. 3.25% Employer Contribution and 0.75% Employee Contribution. (d)The Contractor shall submit challan along with bank receipts/bank statement on monthly basis for the proof of depositing ESI contribution with ESIC.
5.	Employee's Compensation Act,1923	In case the work place is out of the notified coverage area under ESIC i.e. ESIC is not implemented in the area or in case of excluded employees under ESIC, the Contractor is required to take Employee Compensation / Workmen Compensation Policy from IRDA approved Insurance Company taking into consideration the maximum compensation liability as per provisions of Employee Compensation Act, 1923. The amount apportioned towards the Insurance Policy and the premium thereof shall release /reimburse, as per actual, only after submission of necessary proof.
6.	Bonus	The Contractor shall ensure the payment of bonus as per the provisions of The Payment of Bonus Act, 1965 / The Code on Wages, 2019 (if and when applicable). Present minimum rate of Bonus as per the Payment of Bonus Act, 1965 is 8.33% of minimum wages per month. The maximum bonus including productivity linked bonus to be paid in an accounting year shall not exceed 20% of the salary / wage of an employee. In case the wages are above the prescribed wage ceiling limits under the Payment of Bonus Act, 1965 / The Code on Wages, 2019, the ex-gratia may be paid at the rate of minimum Bonus i.e. currently @8.33% of minimum wages. The payment of Bonus / ex-gratia shall be made preferably before festival time.



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7.	Death / Permanent Disability Gratuity	The payment of Gratuity in cases of death or permanent disablement during the currency of the contract shall be as per the provisions of The Payment of Gratuity Act, 1972. The amount towards payment of gratuity shall be reimbursed to the contractor on submission of proof of disbursement of gratuity to the nominee of the deceased/permanently disabled contract employee. Nomination form as prescribed under The Payment of Wages Act must be maintained by the Contractor.
8.	Leave wages as per Factories Act/ Rules or Shops & Establishment Act of respective State	The Contractor shall comply with all the applicable leave Rules including leave with wages in terms of applicable labour legislations i.e. Factories Act / Shops & Establishment Act/ Industrial Establishment (national & festival holidays, casual & sick leave) Act, 1965. The Contractor shall extend the leave with wages and maintain the Register of Leave pertaining to the resource deployed. The payment towards un-availed leave, as per Factories Act, 1948 / Shops & Establishment Act, shall be settled with the resource at the time of closure of the contract or separation of resource. i. As per Factories Act, 1948:-Annual Leave with Wages @ 01 day for every 20 days of work performed by him in the previous calendar year. ii. As per Shops & Establishment Act : Privilege Leave not less than 15 days and Sickness/Casual Leave not less than 12 days (this provision may vary from state to state) iii. As per Industrial Establishment (national & festival holidays, casual & sick leave) Act, 1965: (a) three national holidays of one whole day each on the 26th January, 15th August and 2nd October (b) five other holidays on any of the festivals specified in the Schedule appended to this Act. (c) Every worker shall in each calendar year, be allowed by the employer 07 casual leaves and 14 sick leaves in such manner and on such conditions as may be prescribed. (This provision may vary from state to state).
9.	Overtime for working extra work/ Compensatory off (provision for over time should be made in the contract value as per requirement)	Over time as applicable under Factories Act, 1948 or Shops & Establishment Act. Disbursement should be maintained in Overtime Register as prescribed in The Contract Labour (Regulation and Abolition) Act, 1970 .



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10.	Cost of safety kit & liveries in terms of safety provisions under Factories Act, 1948 (for workers working in factories only)	Contractor has to distribute safety kit and liveries as per instructions of EIC. The cost will be reimbursed on submission of proof of purchase and distribution.
11.	Professional Tax	The Contractor should take Professional Tax Registration and also make timely payment in line with the existing laws.
12.	Other Acts	The contractor should also fully comply with all applicable laws and regulations including, but not limited to the following legislations: a) The Factories Act, 1948 or The Shops & Establishment Act, 1948 b) The Maternity Benefit Act, 1961 (wherever applicable) c) The Inter State Migrant Workmen (Regulation Of Employment And Conditions Of Service) Act 1979 (if applicable) d) The Building and Other Construction Workers (Regulation Of Employment And Conditions Of Service) Act, 1996 (wherever applicable) e) Labour Welfare Fund (if applicable) Any other Acts, rules & regulations and terms and conditions which may be applicable from time to time.

C. Other responsibilities of the Contractor under Labour Laws –

- All personnel deployed by the contractor should be on the rolls of the Contractor.
- No contract worker below the age of 18 years shall be deployed on the work.
- The Contractor shall ensure regular and effective supervision and control of the personnel, if any, deployed by him and give suitable direction for undertaking the contractual obligations.
- The personnel to be deputed by the contractor shall observe all security, fire and safety rules of BGCL while at the site/work. His Work/Services will be supervised by the supervisors of contractor. Contractor has to strictly adhere to guidance, instruction whenever issued from time to time.
- Contractor shall provide proper identification cards to his employees to be deputed by him for Work/Services, duly signed by the contractor or authorized person on behalf of contractor.



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- Contractor has to deploy the personnel with no past criminal records. Also, the contractor has to provide police verification for all the persons deployed by him.
- All existing and amended safety / fire rule of BGCL are to be followed at the work site.
- The contractor shall not employ or permit to be employed any person suffering from any contagious loathsom or infectious disease. The contractor shall get examined his employees / persons deployed from a civil govt. doctor.
- No employees or person of contractor (including contractor) be allowed to consume alcoholic drinks or any narcotics, while on duty. If found under the influence of above, the owner / BGCL will terminate the contract immediately and may refer the case to police.
- It is the responsibility of the Contractor to adhere to the applicable laws from time to time and comply with all applicable amendments in labour laws.

Following documents shall be submitted by the Agency/Contractor to Engineer-In- Charge at various stages during the currency of the contract:

D. Immediately after issuance / receiving of Letter of Intent (LOI)

1. Application for issuance of Form-III for obtaining Labour license from Licensing Authority for engaging 20 or more contract workers or such other threshold limits as may be prescribed from time to time.
2. Copy of Labour License before commencement of work if 20 or more contract workers are engaged or such other threshold limits as may be prescribed from time to time.
3. List of persons along with Designation, Employee No., PF Account No., ESIC Account Number, Insurance Coverage Number etc.
4. Copies of Identity Card issued by the contractor of persons to be engaged in BGCL.
5. Copy of Provident Fund Registration Certificate issued by concerned Regional Provident Fund Commissioner.
6. Copy of Employee State Insurance Registration Certificate issued by Concerned ESIC (wherever applicable)

E. At the time of submission of Monthly Bills

1. The payment to be made to the person deployed at site should not be less than the Minimum wages applicable for Kolkata (UA) i.e. A Category Area declared by Dy. CLC (Central), Ahmedabad, from time to time, towards applicability of Central / State Govt. rates whichever is higher.



2. The Contractor is required to obtain labor license if applicable under the provisions of Contract Labour (R&A) Act, 1970 from the Office of RLC (Central), Kolkata prior to mobilization of contract.
3. Unless otherwise specifically mentioned in the Special Conditions of Contract (SCC) and/or Scope of Work (SOW), the contractor shall bear any upward revision in the rate of Minimum Wages and other wage components, including but not limited to any kind of unprecedented or steep hike over and above the half yearly revisions of variable dearness allowance from time to time at its own cost during the contract period.

F. Contractor is required to ensure the following documents to be submitted before settlement of monthly RA Bill:

- A. Payment of wages to the contract workers must be made **through e-banking / digital mode through cashless transaction only** and duly stamped e-banking wage sheet/bank statement of the bank must be duly certified and signed by both the contractor and EIC. Further, a copy of certified and signed duly stamped e-banking monthly wage sheet/bank statement must be submitted to EIC along with subsequent monthly bill.
- B. Monthly bill duly certified by the contractor or his authorized representative.
- C. Copy of wage register duly certified by the contractor or his authorized representative and EIC of BGCL.
- D. Copy of e-banking wage sheet/bank statement duly stamped by designated bank and duly certified by the contractor or his authorized representative and BGCL EIC.
- E. Copy of e-banking wage sheet duly certified by authorized representative(s) of the contractor and BGCL certifying as "Certified that the amount shown in the column No. ---- has been paid to the workman concerned through e-banking / digital mode".
- F. Copy of Electronic Challan cum Return (ECR) and bank remittance slip for the proof of deposit of Provident Fund contribution with RPFC along with details of employees and Provident Fund A/C No duly certified by Contractor and EIC of BGCL.
- G. Copy of Electronic Challan cum Return (ECR) and bank remittance slip for the proof of deposit of ESI contribution with ESIC along with details of contributions of employees and employer etc. for the previous month duly certified by Contractor and EIC of BGCL.
- H. Copy of Professional Tax receipt for the concerned period.
- I. Contractor shall submit bills in duplicate on monthly basis to the Company (not in piece meal). Contractor is required to submit the bills within 15 days of the following month, duly filled in all respect, to the Engineer-in-Charge or his authorized person. The bills complete in all respects will be processed and paid within 15 days from the date of receipt by the Finance & Accounts Department.

G. Registers/documents to be maintained by the contractor:



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- a. Contract Labour (Regulation & Abolition), Act, 1970 & Payment of wages Act, 1936: During the currency of the contract, the contractor has to maintain registers e.g. :
- b. Muster Roll in prescribed format
- c. Register of workmen in prescribed format
- d. Wage Register in prescribed format
- e. Register of Deductions in prescribed format
- f. Register of Over time in prescribed format
- g. Register of Fines in prescribed format
- h. Register of Advances in prescribed format
- i. Issuance and maintenance of Wage Slip in prescribed format
- j. Issuance of valid Identity Card by the contractor in prescribed format
- k. Such other Registers / documents as applicable and as may be prescribed from time to time.

H. Employee State Insurance Act, 1948: : During the currency of the contract, the contractor has to maintain registers e.g.:

- a. Register of employees in prescribed format
- b. Accident Book in prescribed format
- c. Such other Registers / documents as applicable and as may be prescribed from time to time.

I. Provident Fund & Misc. Provisions Act, 1952

- a. Monthly return in prescribed format for employees qualifying for membership of the PF fund.
- b. Contribution card in prescribed format
- c. Return of contribution card sent to the Commissioner on expiry of the Financial Year in prescribed format
- d. Consolidated annual contribution statement in prescribed format. Copy of same should also be given to the individual contract worker and EIC every year.
- e. PF Nomination Form. A copy should be provided to individual contract worker.
- f. Such other Registers / documents as applicable and as may be prescribed from time to time

22.0 BANK GUARANTEE :

PART – A (SUPPLY, INSTALLATION): Value: @ 5% of the value of order (including supply, services like erection, testing, Commissioning, Transportation etc.), Refer SOR SI No. – A.1 (Supply , erection commissioning , transportation of Online 1200 SCMH EMD – 11 NOS Compressor and operation and comprehensive maintenance for 5 years (including warranty period) & A2 (Supply , erection commissioning , transportation of Online 1200 SCMH GED – 1 NOS , Compressor and operation and comprehensive maintenance for 5 years (including warranty period)



Validity: Three months beyond expiry of Guarantee/ Warrantee/ Defect Liability period. Validity of CPS/SD shall be 39 months from the date of GeM Contract CPS shall be submitted within 30 days from the date of Award/FOA.

PART B - FOR LUMP-SUM ANNUAL OPERATION, REPAIR & COMPREHENSIVE MAINTENANCE CHARGES FOR ONLINE 1200 SCHM EMD COMPRESSOR (11 NOS) & FOR LUMP-SUM ANNUAL OPERATION, REPAIR & COMPREHENSIVE MAINTENANCE CHARGES FOR ONLINE 1200 SCHM GAS ENGINE DRIVEN COMPRESSOR (01 NOS)

Validity: Three months beyond expiry of Guarantee/ Warrantee/ Defect Liability period. Validity of CPS/SD shall be 63 months from the date of commencement of AMC. CPS shall be submitted within 30 days from the date commencement of AMC

In case, BGCL allows additional time for submission of CPS beyond 30 days, a penal interest of Marginal Cost of Fund based Lending Rate (MCLR) for one year charged by SBI (applicable on due date of submission of CPS i.e. 30th day after issuance of FOA/Notification of award) plus 4.0% p.a (on CPS amount) shall be charged for delay beyond 30 days i.e. from 31st days after issuance of order/FOA.

23.0 LIABILITY OF TAXES, DUTIES & STATUTORY LEVIES ETC:

The Contractor shall be exclusively liable to pay all taxes, duties, Octroi, royalties, fees, etc, including but not limited to Income Tax, Personal Tax, etc. that may be levied or leviable from time to time on Contractor, its Sub-Contractor and their personnel in respect of the work, services and materials and all contributions, and taxes for unemployment, compensation, insurance and old age pensions or annuities now or hereinafter imposed by any Central or State Government authorities BGCL shall deduct at source any other taxes, levies or duties imposed by Central Govt./ State Govt./ Statutory Authority at the applicable rates - present or future from the sums payable to the Contractor. The rates quoted by the Contractor shall be deemed to be inclusive of all such taxes.

24.0 SUBLETTING & ASSIGNMENT

The Supplier shall not sublet, transfer or assign the Contract or any part thereof or interest therein or benefit or advantage thereof in any manner whatsoever.



25.0 GOODS & SERVICE TAX:

Goods & Service Tax extra as applicable, the current rate of Service Tax is 18%. This rate may vary as per Government of India Guidelines published from time to time duration the tenure of contract.

26.0 RATES TO BE QUOTED

The rates quoted by the bidder shall be inclusive of services, taxes/ duties including service tax, work contract tax, all levies of State Govt. enforced from time to time; statutory requirements, compliance of labour laws, cost of personnel (including as per the minimum wages of the Central Govt. / State Govt. whichever is higher applicable, PF ESI, Accommodation, Transportation etc.) printed materials, office infrastructure, telecommunication expenses, insurances, administrative expenses, contingencies etc. and contractor's profit and any unforeseen expenditure which may be required for the successful completion of the work covered under the scope of work excluding services tax.

27.0 CONTRACT CUM PERFORMANCE BANK GUARANTEE

- i. After finalization of the Contract, whenever work order is issued by the Owner, CONTRACTOR shall furnish to the Owner within 30 (Thirty) days from the date of issue of work order, an unconditional Contract Performance Bank Guarantee from a nationalized/ scheduled bank of India or any international bank of repute having a branch in India for due Performance of the Contract for a sum equivalent to 03 % of the Service Contract Value. This Contract-cum-Performance Bank Guarantee shall be drawn in favour of the Owner and shall be initially valid for a period adequate to cover up to 90 days after end of defect liability period.
- ii. In the event, completion of work is delayed/ extended beyond the scheduled completion date for any reason, whatsoever, the CONTRACTOR shall have the validity of the guarantee suitably extended to cover the period mentioned above.
- iii. The Owner shall have an unqualified option under this guarantee to invoke the Banker's Guarantee and claim the amount there under in the event of the CONTRACTOR failing to honor any of the commitments entered into under this Contract and or in respect of any amount due from the CONTRACTOR to the Owner. In case CONTRACTOR fails to furnish the requisite Bank Guarantee as stipulated above, then the Owner shall have the option to terminate the Notification of Award of Work and forfeit the Bid Security amount and no compensation for the works performed shall be payable upon such termination. Upon completion of the works as per completion schedule stipulated in the Contract, the above said guarantee shall be considered to constitute the Contractor's warranty/ guarantee for the work done by him or for the works supplied and their Performance as



per the specifications and any other conditions against this Contract. The warranty/guarantee shall be in force from the date of issuance of certificate of Completion and Acceptance against this Contract as per GCC.

- iv. The CONTRACTOR shall also arrange for the Contact Performance Bank Guarantee to remain valid until the expiration of the guarantee period for the entire work order period.
- v. In the event of Completion of project being delayed beyond the Scheduled Completion Date, for any reason whatsoever, the Owner may without prejudice to any other right or remedy available to the Owner, operate the Bank Guarantee to recover the Compensation for delay leviable as per relevant clause of GCC. The Bank Guarantee amount shall thereupon be increased to the original amount, or the CONTRACTOR may alternatively submit a fresh Bank Guarantee for the equivalent amount of compensation for delay recovered.

28.0 DISCIPLINE

CONTRACTOR shall carry out operations hereunder with due diligence and in a safe and workman like manner according to good international practice. CONTRACTOR shall maintain strict discipline and good conduct among its employees and shall abide by and conform to all rules and regulations promulgated by the BGCL governing the operations. Should BGCL feel that the conduct of any of CONTRACTOR's employees is detrimental to BGCL's interest, the Engineer – in – Charge shall have the unqualified right to ask for the removal of such employee either for incompetence, unreliability, misbehavior, security reasons etc. while on or off the job. The CONTRACTOR shall unconditionally comply with such instructions at his own expense. The contractor shall be responsible for the discipline and good behavior of all his personnel deployed in the Service contracted out and should any complaint be received against any of his employee, he shall arrange to replace such persons within 24 hours of notice issued by the Engineer-In-Charge. The decision of the Engineer-In-Charge in this matter shall be final and binding on the contractor.

29.0 DEFENSE OF WORK

If any action in court brought against owner or an officer or agent of the owner, for the failure, omission or neglect on the part of the CONTRACTOR to perform any acts, matters, covenant or things under the contract or injury caused by the alleged omission or negligence on the part of the CONTRACTOR, his agent, representative of his sub-CONTRACTOR or in connection with any



claim based on lawful demand of sub CONTRACTOR'S workmen supplier or employee, the CONTRACTOR shall in such cases indemnify and keep the owner and /or their representatives harmless from all lesson, damages, expenses, decreases arising out of such action.

30.0 The contractor shall exclusively be liable for non-compliance of the provisions of any act, laws, rules and regulations including any amendments / modifications thereof from time to time, applicable to engagement of workers directly or indirectly for execution of work under this contract and hereby undertake to indemnify the company against all actions, suits, proceedings, claims, damages, demands, losses etc. which may arise under The Minimum Wages Act, 1948; The Code on Wages, 2019; The Payment of Wages Act, 1936; The Contract Labour (Regulation and Abolition) Act, 1970; The Payment of Gratuity Act, 1972; The Payment of Bonus Act, 1965; The Workmen's Compensation Act, 1923; The Employees' State Insurance Act, 1948; The Employees' Provident Funds and Miscellaneous Provisions Act, 1952; The Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979; The Maternity Benefit Act, 1961; The Factories Act, 1948; The Shops & Establishment Acts; or any other applicable acts or statutes for the time being in force, as may be amended from time to time. The contractor shall indemnify BGCL against all losses or damages, if any, caused to it on account of acts of the personnel, if any, deployed by him.

31.0 COMPLETION CERTIFICATE

Within 15 days of the completion of the work in all respect, the CONTRACTOR shall be furnished a certificate by the Engineer-in-Charge of such completion, but no certificate shall be given nor shall the work be deemed to have been executed fully until all, documents and reports at each and every stage of the work including but not limited to compliance with all applicable statutory labour laws, and the final completion report as mentioned in the Scope of work is submitted and accepted. Deliverables are included in the Scope of Work. The reports will be in computerized form on suitable package. Three hard copies of the reports, etc shall also be submitted along with soft copy. The quality of deliverables shall be accepted by the Engineer-in-Charge whose decision shall be binding and conclusive.

32.0 OWNER NOT BOUND BY PERSONAL REPRESENTATION

The CONTRACTOR shall not be entitled to increase on the scheduled rates or any other right or claim whatsoever by reason of any representations, explanations, statements or alleged representation, promise or guarantee given or called to have been given to him by any person.

33.0 DOCUMENTATION/ REPORT



The CONTRACTOR shall maintain all records and relevant documents as required. The CONTRACTOR shall submit detailed reports to BGCL compiling the salient features and/or outcome of the work immediately after conducting the work. BGCL shall review the reports submitted by the CONTRACTOR and offer its comments, which shall be incorporated in subsequent reports by the CONTRACTOR.

34.0 MANAGEMENT REVIEW

The CONTRACTOR shall attend Management Level Review Meeting once in a month or as and when required with agenda of progress achieved and major hold-ups at Owner's office. Monthly Review Meeting will be held at OWNER'S OR CONTRACTOR'S office with agenda of progress and holds in engineering, procurement and construction program for next month.

35.0 SITE CLEANING

- a. The Contractor shall take care for cleaning the working site from time to time for access to work site and also from safety point of view. The Contractor at its own cost and risk shall carry out all such work.
- b. Working site should be always kept cleaned up to the full satisfaction of the EIC, till handing over any work to BGCL. The Contractor in addition to other formalities to be observed as detailed in the document shall clear the site to the full satisfaction of the EIC and the Authority having jurisdiction over it.

36.0 DISPOSAL OF UNSERVICEABLE MATERIALS, PACKINGS ETC.

- i. Disposal of the damaged/ unserviceable materials, consumables, packing, etc shall be the responsibility of the Contractor.
- ii. The Contractor shall dispose off the unserviceable materials, debris etc. to any area, as decided by the Engineer-In-Charge. Disposal area shall be arranged by the Contractor at his own risk and cost.
- iii. The Contractor shall sort out, clear and stack the serviceable materials obtained during the maintenance/replacement at places as directed by the Engineer - In - Charge.



- iv. No extra payment shall be made on this account. The quoted rates shall be inclusive of such disposals.
- v. The Contractor shall be the custodian of the dismantled materials till the Engineering Charge takes charge thereof.

37.0 GUARANTEE/DEFECT LIABILITY PERIOD

- i) This is a Service Contract. There will be No Defect Liability Period for this contract. However, the Contract Performance Bank Guarantee shall be released after 03 (Three) months of completion of the contract. Incase contractor fails to comply Clause no. 15.BB.1 of SCC, the bank guarantee will be extended for further period.
- ii) The guarantee will cover any repairs required or claims arising due to faulty or substandard workmanship. This will also include the repair and maintenance of any reinstatement undertaken by the CONTRACTOR. Such rectification of reinstatement may be carried out by BGCL or a third party CONTRACTOR BGCL's behalf and any such costs incurred by BGCL will be recovered from the CONTRACTOR under the guarantee. Any acceptance or reinstatement by the concerned owner of property or BGCL is conditional at the time of acceptance and does not absolve the CONTRACTOR from the responsibility for further maintenance throughout the guarantee period.
- iii) The guarantee may also be used for the recovery of any adverse variations in the material reconciliation at the end of the job, work order or project, and for any damage or loss to plant and equipment loaned to the CONTRACTOR by BGCL.

38.0 OFF-LOADING

Further to the provisions as per relevant clause of GCC of Contract, in the event the Contractor is not performing to the satisfaction of Engineer-In-Charge, BGCL is entitled to cancel the Contract for the uncompleted portion without being in anyway liable for any compensation payment to the Contractor on account of such cancellation and offload the uncompleted portion to another Agency/ Contractor in order to ensure satisfactory performance of the work at the risk and cost of the contractor.

39.0 SEVERABILITY



Should any provision of this agreement be found to be invalid, illegal or otherwise not enforceable by any court of law, such finding shall not affect the remaining provisions hereto and they shall remain binding on the parties hereto.

40.0 CONSEQUENTIAL DAMAGES:

Notwithstanding either party's fault, neither party shall be liable to the other party in Respect of any consequential damages whatsoever. The term "Consequential damages" as used herein shall include without limitations to the meaning, loss of profit, production, business opportunities or use of assets.

41.0 CHANGE IN LAW:

In the event of any change or amendment of any Act or law, Rules or Regulations of Govt, of India or Public Body or any change in the interpretation or enforcement of any said Act or law, rules or regulations by Indian Govt. or public body which becomes effective after the date as advised by the BGCL for submission of final price bid for this CONTRACT and which results in increased cost of the works under the CONTRACT through increased liability of taxes, (other than personnel and Corporate taxes), duties, the CONTRACTOR shall be indemnified for any such increased cost by the BGCL subject to the production of documentary proof to the satisfaction of the BGCL to the extent which is attributable to such change or amendment as mentioned above.

Similarly, if any change or amendment of any Act or law, Rules or regulations of Govt. of India or public body or any change in the interpretation or enforcement of any said Act or Law, rules or regulations by Indian Govt. or public body becomes effective after the date as advised by the BGCL for submission of final price bid of this CONTRACT and which results in any decrease in the cost of the project through reduced liability of taxes (other than personnel and Corporate taxes) duties, the CONTRACTOR shall pass on the benefits of such reduced cost, taxes or duties to the BGCL.

Notwithstanding the above mentioned provisions, BGCL shall not bear any liability in respect of (I) Personnel taxes on the employees of CONTRACTOR and the employees all it's SUB-Contractors etc. (II) Corporate taxes in respect of the CONTRACTOR and its SUB-Contractors etc.



Force Majeure

In the event of either party being rendered unable by Force Majeure to perform any obligation as required under this contract, the relative obligation of the party affected by such force majeure shall, after notice under this article be suspended for the period during which such cause lasts. The term —Force Majeure as employed herein shall mean acts of God, wars (declared or undeclared), riots or civil commotion, fires, floods and notices, acts and regulations of the Government of India or State Government of any of statutory agencies. Upon the occurrences of such cause and upon its termination, the party alleging that it has been rendered unable as aforesaid, thereby shall notify the other party in writing immediately but not later than twenty-four (24) hours of the alleged beginning and ending thereof giving full particulars and satisfactory evidence in support of its claim. During the period, the obligations of the parties are suspended by force majeure; the Contractor shall not be entitled to payment at any rate. In the event of force majeure conditions continuing or reasonably expected to continue for a period more than fifteen (15) days, Vadodara Gas Ltd shall have the option of terminating the contract agreement by giving seven (7) days' notice thereof to the Contractor. If this agreement is so terminated, both parties shall pay to the other party, the amount payable upto the date of occurrence of such force majeure



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SECTION-VII

SCHEDULE OF

RATES/PRICE SCHEDULE

**[Note: Prices shall be quoted strictly in GeM
Portal Inclusive of all charges & GST]**



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SCHEDULE OF RATES

THE FOLLOWING IS FOR REFERENCE SOR FORMAT ONLY. BIDDERS MUST SUBMIT THEIR QUOTES
EXCLUSIVELY ON GEM AND **SHOULD NOT QUOTE HERE**

ARC FOR SUPPLY, INSTALLATION AND COMMISSIONING OF 11 NOS 1200 SCM H EMD & 1 NO 1200 SCM H GAS DRIVEN ONLINE COMPRESSOR FOR CONSTRUCTION OF CNG STATION AT BGCL FOR A PERIOD OF 2 YEARS WITH CAMC FOR FIVE YEARS (INCLUDING 1 YEAR WARRANTY PERIOD)				
Item No.	Description	UoM	Quantities	Total Quoted Price incl. GST
A.1	SUPPLY OF ONLINE 1200 SCM H EMD COMPRESSOR as per SOW			
	Supply of Online 1200 SCM H EMD Compressor including erection commissioning , transportation , Operation and Comprehensive maintenance for 5 years (A1) (without Tax)	Number	11.00	To be Quoted at GeM Portal
A.2	SUPPLY OF ONLINE 1200 SCM H GAS ENGINE DRIVEN COMPRESSOR as per SOW			
	Supply of Online 1200 SCM H GED Compressor including erection commissioning , transportation , Operation and Comprehensive maintenance for 5 years (A2) (without Tax)	Number	1.00	To be Quoted at GeM Portal
TOTAL COST FOR SCHEDULE A.1 & A.2				(A.1 + A.2)