



Bhagyanagar Gas Ltd.
Bhagyanagar Gas
Limited

**Procurement of Smart Meter, RPD Meters and EVCs with all
required accessories for Industrial & Commercial Customers in
Hyderabad
Bid Document No. BGL/619/2024-25**

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II OF II



BHAGYANAGAR GAS LIMITED

(A JOINT VENTURE OF HPCL & GAIL)

BID DOCUMENT FOR

**Procurement of Smart Meter, RPD Meters and EVCs with all required
accessories for Industrial & Commercial Customers in Hyderabad**

UNDER OPEN DOMESTIC COMPETITIVE BIDDING

Bid Document No.: BGL/619/2024-25

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**SECTION 8
SPECIAL CONDITIONS OF CONTRACT (SCC)**

Section : 8

SPECIAL CONDITIONS OF CONTRACT (SCC)

1. GENERAL

- 1.1 Special Conditions of Contract shall be read in Conjunction with the General Conditions of Contract, Specification of work, Drawing and any other documents forming part of this Contract wherever the context so requires.
 - 1.2 Notwithstanding the sub-division of the documents 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 in the Contract so far as it may be practicable to do so.
 - 1.3 Where any portion of the General Conditions of Contract is repugnant to or at variance with any provisions of the Special Conditions of Contract, unless a different intention appears, the provisions of the Special Conditions of Contract shall be deemed to over-ride the provisions of the General Conditions of Contract and shall be the extent of such repugnancy, or variations, prevail.
 - 1.4 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 cost and the **Value of Contract** shall be deemed to have included cost of such performance and provisions, so mentioned.
 - 1.5 The materials, design, and workmanship shall satisfy the relevant Indian Standard, the Job Specifications contained herein and Codes referred to where the job specification stipulate requirements in addition to those contained in the standard codes and specifications, these additional requirements shall also be satisfied.
 - 1.6 In case of an irreconcilable conflict between Indian or other applicable standards, General Conditions of Contract, Special Conditions of Contract, Specification, Drawings or Schedule of Rates, the following shall prevail to the extent of such irreconcilable conflict in order of precedence:
 - i) Letter of Acceptance/ FOI along with Statement of Agreed Variations.
 - ii) Schedule of Rates as enclosures to Letter of Acceptance
 - iii) Special Conditions of Contract
 - iv) Drawings
 - v) Technical/ Material Specifications
 - vi) Instruction to Bidder
 - vii) General Conditions of Contract
 - viii) Indian Standards
 - ix) Other applicable standards
 - 1.7 It will be the Contractor's responsibility to bring to the notice of Engineer-in-charge any irreconcilable conflict in the contract documents before starting the work(s) or making the supply with reference which the conflict exists.
- Sign & Seal of Bidder

- 1.8 In the absence of any Specifications covering any material, design of work(s) the same shall be performed/ supplies/ executed in accordance with Standard Engineering Practice as per the instructions/ directions of the Engineer-in-charge, which will be binding on the Contractor.
- 1.9 The Bidder shall supply regulators, filters, CRV, SSV only from the approved list of manufacturers/make.
- 2.0 Weigh and measurement certificates and other relevant certificates must be submitted as per standard of Dept of Legal metrology standard, of Indian Government.

2.0 SCOPE OF SUPPLY

The Scope of SUPPLY shall be as set out at Material Requisition, Data Sheets and Technical Specifications given in Volume-II of tender document and supplemented by all stipulation in the total tender document.

Seller's scope shall include

- (a) manufacturing of mentioned items as per Material Requisition technical specifications;
- (b) preparation of Quality Assurance / Quality control programme;
- (c) obtaining Owner's approval;
- (d) arranging Inspection and Testing certification;
- (e) Inspection and obtaining Inspection Release Note;
- (f) obtaining dispatch clearance;
- (g) Packing;
- (h) Transit Insurance, loading on truck/trailer including loading and unloading of materials/ spare kits at Bhagyanagar Gas's store/site.

3.0 CONTRACT PRICE

The contract price shall be deemed to be firm and valid for the entire duration of the contract till the completion of work, and shall not be subject to any adjustment due to increase in price of materials, utilities, or any. other input for performance of work and the contract except for increase/decrease in taxes and duties on account of subsequent legislation.

4.0 DIVISION OF ORDER

BGL reserves the right to divide the quantity among more than one bidder at its sole discretion and as mentioned in BEC of Vol I of II.

5.0 QUALITY ASSURANCE/QUALITY CONTROL:

- 5.1. The Contractor shall "prepare a detailed quality assurance plan for the execution of Contract for various facilities, which will be mutually discussed and agreed to.
- 5.2. The Contractor shall establish document and maintain an effective quality assurance system outlined in recognized codes.
- 5.3. The Purchaser while agreeing to a quality assurance plan shall mark the stages where they would like to witness the tests; review any or all stages of work at shop/site as deemed necessary for quality assurance.

6.0 QUANTITY VARIATION

The tendered quantity may vary depending upon the project requirement. BGL reserves the right to decrease/ increase the quantity depending upon its requirement.



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7.0 DISPATCH INSTRUCTIONS

- 7.1 Seller shall obtain dispatch clearance from the Purchaser prior to each dispatch.
- 7.2. Copy of Inspection Release Certificate, Dispatch Clearance and statement showing the name of the Vessel/Trailers description and weight of material and shipping marks etc. to be submitted along with the documents.

8.0 INSPECTION

Final inspection of the pipe shall only be done by TPIA approved by BGL. All the charges towards all kinds of tests/TPIA cost shall be included in the quoted rates per unit. No additional payment to this effect will be made. The charges towards BGL's Inspection Agency, if engaged, shall be borne by Vendor.

9.0 REJECTION

- 9.1. Any materials/goods covered under scope of supply, which during the process of inspection by appointed third party, at any stage of manufacture/fabrication, and subsequent stages, prior to dispatch is found not conforming to the requirements/specifications of the Purchase Requisition /Order, shall be liable for immediate rejection.
- 9.2. 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 EMPLOYER

10.0 TERMS OF PAYMENTS

The Payment shall be made in the following manner subject to completion of all contractual requirements as per tender document.

The following shall be read in conjunction with Clauses of GCC (Goods)

- **100 % (Hundred percent) payment of the supplied portion along with freight including taxes & duties will be paid on receipt & acceptance of goods at FOT site after adjustment of PRS, if any along with submission of following documents: -**

- i) Original Invoice in triplicate in compliance with GST law in force
- ii) Inspection Release note by Owner or his appointed or approved agency.
- iii) Original GR / LR
- iv) Packing List
- v) Insurance cover note covering transit insurance
- vi) Performance Bank Guarantee(s) of 3% of Contract Value. If already submitted, a copy of the same.
- vii) Document related to Input Tax Credit (ITC) to be claimed by owner, if applicable.

-For FINAL BILL, following documents are to be provided:

- v) **No Claim &No due Certificate**
- vi) Statement of Completion



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ii. MODE OF PAYMENT

All payments payable in Indian rupees against the contract shall be released by Owner through online/RTGS/NEFT.

iii. DEDUCTION AT SOURCE

Purchaser will release the payment to the Seller after effecting deductions as per applicable law in force. Purchaser will release payments by F&A Dept, BGL to the Contractor after offsetting all dues to the Purchaser payable by the Contractor under the Contract.

11.0 COMPENSATION FOR DELAY (PRICE REDUCTION /LIQUIDATED DAMAGES)

In case of delay in delivery of materials beyond contractually agreed delivery schedule, price reduction schedule will be applicable @0.5% of material value for the unsupplied portion per week of delay or part thereof, subject to ceiling of 5% (FIVE PERCENT) of the total order value. For details, please refer relevant clause of GCC-Goods.

The value referred in PRS clause is excluding taxes & duties.

12.0 PERFORMANCE BANK GUARANTEE/ SECURITY DEPOSIT/CONTRACT PERFORMANCE SECURITY:

Vendor shall submit SD / CPBG @ 10% of Contract/Order value within 30 days of award or Initial deposit of SD / CPBG @ 5% of Contract/Order value within 30 days of award and balance to be deducted against each RA bills till balance 5% is deducted/for supply, it is to be deducted from the invoice. This deducted amount can be released/deduction can be stopped against submission of bank guarantee of equivalent amount. The contract performance bank guarantee shall be valid 03(three) months beyond the expiry of Warrantee/Guarantee period. The Performance Guarantee shall be in form of either Demand Draft or Banker's Cheque or irrevocable Bank Guarantee and shall be in the currency of Contract (issued by 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 Guarantee from banks other than the Nationalized Indian bank, the bank must be a commercial bank having net worth in excess of Rs. 100 Crores or equivalent US Dollars and a declaration to this effect should be made by such commercial bank either in the bank guarantee itself or separately on its letterhead.

BGL shall not be liable to pay any bank charges, commission or interest on the same.

Failure of the successful bidder to comply with the requirement of this clause shall constitute a breach of contract, cause for annulment of the award, forfeiture of the bid security and any such remedy the Owner may take under the Contract pursuant to GCC-Goods.

There is no exemption to MSEs including SSI units from submission of Security Deposit/ Contract Performance Bank Guarantee (CPBG).

13.0 REPEAT ORDER

BGL reserves the right to place a repeat order within Six (06) months from date of purchase order for upto 50% of order quantities on same rate, terms and conditions.



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14.0 DELIVERY

The delivery of the items location wise is as per the Material Requisition.

The Vendor to arrange transportation of these materials from the vendor shop to designated locations of BGL yard in respective cities. No extra payment shall be made for the transportation and deemed to be included in the quoted price.

Bidder to deliver the materials at all locations as per the quantity estimated.

15.0 DELIVERY SCHEDULE

Delivery of the total order quantity will be completed within 6-8 weeks for the supply of all materials as per SOR, from the date of receipt of LOI/PO from the date of Fax of Acceptance (FOA)/Purchase Order (PO).

16.0 PACKING, MARKING AND SHIPMENT

The Seller, wherever applicable shall after proper painting, pack and crate all goods for sea/air/road/rail transportation in a manner suitable to tropical humid climatic region in accordance with the internationally accepted practices and in such a manner so as to protect it from damage and deterioration, in transit by sea or air or road or rail and during storage at the storehouse. The Seller shall be held responsible for all damages due to improper packing. The Seller shall ensure sizing or packing of all oversized consignments in such a way that availability of carrier and/or road/rail route is properly taken into consideration.

For MARKING & PACKAGING of the Materials shall be as Section-IV of Vol I of I.

Seller shall comply with the Packing, Marking and Shipping Instructions and Special Packaging Requirement as per Vol I of II of this Bidding Document.

17.0 INDEPENDENT SELLER

It is expressly understood and agreed that Seller is an independent party and that neither the Seller/ its personnel are servants, agents or employees of Purchaser nor the Seller has any kind of interest in other sellers.

18.0 LIEN

Seller shall ensure that the Scope of Supply supplied under the Agreement shall be free from any claims of title/liens from any third party. In the event of such claims by any party, Seller shall at his own cost defend, indemnify and hold harmless Purchaser or its authorized representative from such disputes of title/liens, costs, consequences etc.

19.0 LIMITATION OF LIABILITY

Notwithstanding anything contrary contained herein, the aggregate total liability of Supplier under the Contract or otherwise shall be limited to 100% of contract value. However, neither party shall be liable to the other party for any indirect and consequential damages, loss of profits or loss of production.

20.0 GOVERNING LAW

Laws of India will govern the Agreement and Hyderabad courts will have exclusive jurisdiction on all matters related to Agreement.



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21.0 OWNER'S RIGHTS AND REMEDIES

Without prejudice to Owner's right and remedies under Agreement, if SUPPLIER fails to commence delivery as per agreed schedule and/or in reasonable opinion of the OWNER, CONTRACTOR is not in a position to make up the delay to meet the intended purpose, the OWNER may terminate the AGREEMENT in full or part at SUPPLIER's default and may get supplies from other sources at SUPPLIER's risk and cost.

22.0 TRANSIT INSURANCE (additional to Clause no. 16.0 of GCC)

Bidder shall arrange Transit Insurance and the cost of which shall be borne by bidder. Quoted price shall be inclusive of the same.

23.0 WARRANTY

If any trouble or defect, originating with the design, material, workmanship or operating characteristics of any materials, arises at any time prior to expiry of twelve(12) months from the date of commissioning of the equipment or prior to expiry of twenty four (24) months from the date of last shipment (particular delivery LOT for Groups) whichever is earlier, first expire, and the SELLER is notified thereof, SELLER 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 fulfill the foregoing guarantees.

24.0 General Conditions:

- (i) When the materials are dispatched to the consignee intimation must also be given to this effect. Reference to the supply order should invariably be given in all the relevant correspondence.
- (ii) The tender is liable to be rejected in case the tender does not comply with tender stipulations or the goods, works and services offered do not conform to the required specifications indicated there in.
- (iii) Any other terms and conditions offered by the firm and not included in the order/contract, are not acceptable to BGL.

25.0 Location/Site Information:

Location of site will be informed by BGL Engineer-In-charge OR as follows For Hyderabad

Location:

Bhagyanagar Gas Limited, Sy No. 1266, Mother Station,

CNG Gas Station, Opp. Nalsar University Adjacent to IPE Collage Shamirpet, Hyderabad-500078 Rangareddy, Telangana



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SECTION – 9

MATERIAL REQUISITION & TECHNICAL SPECIFICATIONS



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Material Requisition

Project : Procurement of Smart Meter, RPD Meters and EVCs with all required accessories for Industrial & Commercial Customers in Hyderabad.
Client : M/s Bhagyanagar Gas Limited
Items : Thermal Meter, RPD Meter, EVC & Regulator

Sl. No.	Material Descriptions	Q Max	Size (Flange)	Rating	Unit	Qty
1	Design, Engineering, Supply and delivery of items upto FOT Site, Hyderabad as per the Material Requisition and Scope of Supply in Bid Document for RPD Meters (Rotary Positive Displacement Meters)					
1.1	2" x 150# G-16 RPD Meter with accessories: Meter Oil, conical strainer, Restriction orifice, Gaskets, Meter bolts & Pressure kits.	25 m3/h	2" x 150#	G16	Nos	1
1.2	2" x 150# G-25 RPD Meter with accessories: Meter Oil, conical strainer, Restriction orifice, Gaskets, Meter bolts & Pressure kits.	40 m3/h	2" x 150#	G25	Nos	2
2	Design, Engineering, Supply and delivery of items up to FOT Site, Hyderabad as per the Material Requisition and Scope of Supply in Bid Document for EVCs (Electronic Volume Correctors)					
2.1	EVC with pressure range 0.5 bar to 10 bar and PTZ/T-corrector variants. LF/ HF pulse and GPRS/LTE configurable with RS485 (or 232 as option) communication portable.	-	-		Nos	3
3	Design, Engineering, Supply and delivery of items up to FOT Site, Hyderabad as per the Material Requisition and Scope of Supply in Bid Document for Smart Gas Meter/Thermal Meter				Nos	
3.1	G-10 Smart Meter/Thermal Meter with pressure range 0.50 Bar & capacity 16m3/hrs. with AMR & Automatic volume corrector with all required communication accessories like: cables, Pt, Tt & pulse reader.	-	-		Nos	1
3.2	G-25 Smart Meter/Thermal Meter with pressure range 0.50 Bar & capacity 40m3/hrs. with AMR & Automatic volume corrector with all required communication accessories like: cables, Pt, Tt & pulse reader.	-	-		Nos	3



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4	Design, Engineering, Supply and delivery of items up to FOT Site, Hyderabad as per the Material Requisition and Scope of Supply in Bid Document for Natural Gas Regulator				Nos	
4.1	30 SCMH with inbuilt SSV (UPSO-100mbar-OPSO- 750mbar) Regulator with pressure range 0.50-1.50 Bar & capacity 30m3/hrs. Inlet- 1” NPT & Outlet 1.5” NPT with union adopter connectors.	-	-		Nos	1
4.2	50 SCMH with inbuilt SSV (UPSO-100mbar-OPSO- 750mbar) Regulator with pressure range 0.50-1.50 Bar & capacity 30m3/hrs. Inlet- 1” NPT & Outlet 1.5” NPT with union adopter connectors.	-	-		Nos	2

1. Scope of Supply:

The successful Bidder (the “Supplier”) shall complete delivery of Goods along- with its incidental services (if any) as per Specification, Scope of Supply/Job within the period stated in Special Conditions of Contract.

Seller’s scope shall include (a) manufacturing of above-mentioned items as per Material Requisition technical specifications; (b) preparation of Quality Assurance / Quality control programme; (c) obtaining Owner’s approval; (d) arranging Inspection and Testing certification; (e) Inspection and obtaining Inspection Release Note; (f) obtaining dispatch clearance; (g) Packing; (h) Transit Insurance, loading on truck/trailer including and unloading of at Bhagyanagar Gas’s store/site.

Owner approval to be obtained after third party Inspection & Testing.

2. Technical Specifications

The technical specifications & drawings for the required items are plotted below. However, BGL will finalize the drawings of the item with the vendor after the placement of order:

**2.1 TECHNICAL SPECIFICATIONS – ROTARY POSITIVE DISPLACEMENT
METERS (RPD Meter) (FOR SOR SL. NO-1)**

(a) TECHNICAL SPECIFICATION (G16) RPD with separate EVC		
Connection (Flanged)	DN/PN16 ANSI 125FF	40 MM 2"
MAOP	(bar)	12
Flow Capacity	(m3 /h)	25
Rangeability* (up to 1:160 @ atmospheric condition, according to EN12480 & OIML R137/1 requirement)		1.16
Start Rate	(m3 /h)	0.056
Stop Rate	(m3 /h)	0.046
Differential @ 100% Flow	(mbar)	1.69
Instrument Drive Rate	(m3 /rev)	0.1
LF Pulser (Optional)	(m3 /pulse)	0.1

(b) TECHNICAL SPECIFICATION (G25) RPD with separate EVC		
Connection (Flanged)	DN/PN16 ANSI 125FF	40 MM or 50 MM 2"
MAOP	(bar)	12
Flow Capacity	(m3 /h)	40



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Rangeability* (up to 1:160 @ atmospheric condition, according to EN12480 & OIML R137/1 requirement)		1.16
Start Rate	(m ³ /h)	0.071
Stop Rate	(m ³ /h)	0.056
Differential @ 100% Flow	(mbar)	1.89
Instrument Drive Rate	(m ³ /rev)	0.1
LF Pulser (Optional)	(m ³ /pulse)	0.1

**2.2 TECHNICAL SPECIFICATIONS - ELECTRONIC VOLUME
CORRECTORs (FOR SOR SL. NO-2)**

ELECTRONIC VOLUME CORRECTOR	
Type	Pipe mountable
Model	NA
Input	High Frequency Pulse type input from Turbine / RPD Flowmeter
Output	Pulse Scalable
Key Board	6 Front Panel keys
Display	128x64 pixels, Graphics LCD
Power	12V DC (12V DC to 5V DC converter, to be mounted in safe area shall be provided by us. This converter is DIN rail mountable. Power cables and signal cables are excluded from our scope)
Purpose	To indicate Corrected Volume, Uncorrected Volume, Pressure and Temperature and to log the information on Hourly & daily basis.
Pressure Sensor	Digital pressure transducer included; Range: 0.8 to 10 bar (Abs)
Temp. Probe	Digital pressure transducer included; Range: -25 to +70 Deg C
Over All Accuracy	+/- 0.5%
Data Entry	Through keypad / Laptop computer
Serial	RS485 for data down load & configuration by connecting laptop. (RS485 to USB port cable is included in our scope)
Data Security	Unauthorized changes/ tampering is prevented by password
Calculation method	SGERG-88, AGA 8-G1, AGA 8-G2, AGA 8-DETAIL
Humidity	Up to 95% sustained, outdoor exposure
Storage Temp.	-40 ⁰ to +70 ⁰ C
Safety	ATEX certified for Zone 1
Enclosure	IP 66
Approvals	ATEX & MID
Dimensions	266 x 182 x 61 mm (w x h x d)
Weight	NA
Note	EVC Mounting Bracket included in our scope
AMR	Inbuilt

NATURAL GAS REGULATORS-COMMERCIAL REGULATORS (ITEM No.CR.1 to CR.5)

GENERAL	Service	Natural Gas
	Qty	As per SOR/ Material Requisition of Tender
	Design	Direct acting spring control pressure regulator with in-built two stage pressure reducing valve type balance regulating unit to ensure a constant outlet pressure having excess pressures lam shut device, in sufficient downstream pressures lam shut device & relief valve.
	Connections Orientation	Inline Inlet and Outlet connection
	Installation	Suitable for Outdoor Installation, Tamper proof and corrosion resistance for a life period of 20years.
	Installation position	Horizontal/ Vertical
FLOW, PRESSURE, TEMPERATURE	Capacity	30/50/ cum/hr (Actual)
	Inlet Pressure	0.5 to 6 bars(g)
	Design Pressure	6 bars(g)
	Outlet pressure set point	500 mbar(g) (Factory Set Point) (Bidder shall necessarily submit the performance curve and available spring range)
	Over pressure cut off point	750 mbar(g) (Bidder shall submit Spring Range)
	Under pressure cut off point	100 mbar(g) (Bidder shall submit Spring Range)
	Creep Relief Valve	700 mbar(g) (Bidder shall submit Spring Range) the position of the atmospheric venting shall not be towards vertically top to avoid entry off foreign material in to the regulator.
	Operating Temperature	0°C to 45°C, Design 60°C
BODY	Casing	Casing and Body of Die cast aluminum/ Ductile Iron/ steel conforming to ASTM A216 WCB and water-weatherproof IP 65 / corrosion resistant for outdoor installation.
	End Connections	1" NPT (Female loose nut with suitable washers) inlet and 1.5" NPT (Female loose nut with suitable washers) outlet confirming to ANSI B1.20.1 All the end connections/ fittings including loose nuts, etc. shall be of Brass material. In case of end connection size are differing bidder to provide suitable adaptors, fittings, etc. of Brass as per IS:319 of approved quality to meet the specified end connections.
	Fire Resistance	As applicable

INTERNAL	Diaphragm	Synthetic rubber
	Internals	Internal parts shall be Stainless steel, Brass seal of Nitrile rubber or aluminum.
	Filter	Essential (Inbuilt) (if not inbuilt same shall be supplied separately)
OTHERS	Accuracy Class (%)	AC 5/ RG 5 complying to EN 334 (or) Equivalent
	Closing (lockup) pressure	SG 10 complying to EN 334 (or) Equivalent
	Failure Position	Closed
	Type of Reset	Manual/ Auto (Vendor to confirm)
Notes:		
1.	The regulator body shall be indelibly and clearly marked with Max. Flow, Inlet & Outlet Pressure Range, Accuracy, Flow Direction, Manufacturer Name & Model, Serial No., Manufacturing Month & Year, etc.	
2.	Successful Vendor shall submit following documents during detail engineering/ supply of material a) Regulator data sheet with make & model number and technical literatures b) GA dimensional drawing with mounting details, model number, part list. c) Performance curve d) Testing and Inspection procedure e) Test, calibration and certificate from statutory bodies. f) Installation, Operation and Maintenance Instruction Manual.	
3.	SS tubing of appropriate size for impulse connection of regulator and slams hut valve to be supplied with suitable connectors wherever applicable.	
4.	End Connections shall be provided by Plastic Caps.	
5.	Flow capacity in SCMh shall be calculated considering Maximum Outlet Pressure & Operating Temperature	

**THERMAL NATURAL GAS METERS COMPATIBLE FOR SMART METERING
SYSTEM**

GENERAL	Service	Natural Gas
	Type	Thermal Gas Meter
	Reference	Thermal Meters- Compliance as per EN-1359:2006 (or latest), PNGRB regulatory, OIML R137-1&2
	Standard	As indicated in Clause4.0-Codesand Standards
	Make & Model No.	Vendor to specify
	Installation	Suitable for outdoor/ Indoor installation, tamper proof, corrosion resistant for life period of 15 years
	Mounting	Wall/ Pole mounted.
	Mounting Accessories	Required. Shall be provided with the meter
PROCESSCONDITIONS	Flow/ Service (For B.1)	G4:Qmax: 6m ³ /hr, Qmin:0.04m ³ /hr, Qty.: As per MR
	Flow/ Service (For B.2)	G6:Qmax: 10m ³ /hr, Qmin:0.06m ³ /hr, Qty.: As per MR
	Flow/ Service (For B.3)	G10:Qmax: 16m ³ /hr, Qmin:0.10m ³ /hr, Qty.: As per MR
	Flow/ Service (For B.4)	G16:Qmax: 25m ³ /hr, Qmin:0.16m ³ /hr, Qty.: As per MR
	Flow/ Service (For B.5)	G25:Qmax: 40m ³ /hr, Qmin:0.25m ³ /hr, Qty.: As per MR
	Accuracy	Class1.5 [Qmin to 0.1Qmax±3%, 0.1 Qmax to Qmax±1.5%]
	Rangeability	160:1 or better
	Cyclic Volume	Minimum (Vender to specify)
	Normal Working Pressure	0.3 bar(g)
	Max. Working Pressure	0.5 bar(g)
	Design Pressure	0.5 bar(g)
	Max. Allow able pressure drop	3 mbar or as per EN-1359:2006 (or latest)
	Density Kg/ Sm ³	0.73
BODY	Operating Temperature	0°C to 45°C Design 60°C
	Flow Direction	As per MR and to be marked on meter body.
	Case work/ Body	Suitable for outdoor/ Indoor Installation, tamper proof and corrosion resistant powder coated steel casing
	Corrosion protection	Suitable coating on inside and outside of casing.
	End Connections (Two-pipe version)	1½"NPT (M) inlet and out let confirming to ANSI B1.20.1 (In case the end Connection size are differing, bidder to provide suitable adapters of Brass to meet the specified end connections)
	Fire resistance	Asper EN 1359/ equivalent

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INDEX	Max. Index reading	9-10 Digits with auto reset facility/Digital Display
	Unit	CM (Cubic meter) & SCM (Standard Cubic Meter)
	Ingress protection	IP 65 or better
	Facility	Meter should be provided with either inbuilt AMR / MIU or external AMR/MIU.
	Pulse output type	Inductive/ Magnetic
INTERNALS	Battery Life	15 Years
	Valve between inlet and outlet	NA
	Power supply to valve	NA
	Centre to center distance between inlet and outlet connections	To be specified by vendor
	Other internals	All meter internals shall be non-metallic to prevent from tampering with magnet
OTHERS	Leak Testing	Meter pressurized with air at 1.5 MAOP of the meter, immersed in water for observation of leakage
	Sealing arrangement	Provision to be made by vendor
	Marking on the meter	Required
	EN/ MID marking on the meter	Required
	Reverse flow deterrents	Reverse flow restrictor to be provided. Reverse rotation of index is not allowed

COMMERCIAL NATURAL GAS METERS COMPATIBLE FOR SMART METERING SYSTEM

GENERAL	Service	Natural Gas
	Type	Smart Diaphragm meter suitable for commercial metering
	Reference	Smart Diaphragm meters- Compliance as per EN-1359:2006 (or latest), PNGRB regulatory, OIML R137-1&2
	Standard	As indicated in Clause 4.0-Codes and Standards
	Make & Model No.	Vendor to specify
	Installation	Suitable for outdoor/ Indoor installation, tamper proof, corrosion resistant for life period of 20 years

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	Mounting	Wall/ Pole mounted.
	Mounting Accessories	Required. Shall be provided with the meter
PROCESS CONDITIONS	Flow/ Service (For B.1)	G4:Qmax: 6m ³ /hr, Qmin:0.04m ³ /hr, Qty.: As per MR
	Flow/ Service (For B.2)	G6:Qmax: 10m ³ /hr, Qmin:0.06m ³ /hr, Qty. :As per MR
	Flow/ Service (For B.3)	G10:Qmax: 16m ³ /hr, Qmin:0.10m ³ /hr, Qty.: As per MR
	Flow/ Service (For B.4)	G16:Qmax: 25m ³ /hr, Qmin:0.16m ³ /hr, Qty.: As per MR
	Flow/ Service (For B.5)	G25:Qmax: 40m ³ /hr, Qmin:0.25m ³ /hr, Qty.: As per MR
	Accuracy	Class1.5 [Qmin to 0.1Qmax±3%, 0.1 Qmax to Qmax±1.5%]
	Rangeability	150:1 or better
	Cyclic Volume	Minimum (Vender to specify)
	Normal Working Pressure	0.3 bar(g)
	Max. Working Pressure	0.5 bar(g)
	Design Pressure	0.5 bar(g)
	Max. Allow able pressure drop	3 mbar or as per EN-1359:2006 (or latest)
	Density Kg/ Sm ³	0.73
	Operating Temperature	0°C to 45°C Design 60°C
	Flow Direction	As per MR and to be marked on meter body.
BODY	Case work/ Body	Suitable for outdoor/ Indoor Installation, tamper proof and corrosion resistant powder coated steel casing
	Corrosion protection	Suitable coating on inside and outside of casing.
	End Connections (Two-pipe version)	1½"NPT (M) inlet and out let confirming to ANSI B1.20.1 (In case the end Connection size are differing, bidder to provide suitable adapters of Brass to meet the specified end connections)
	Fire resistance	Asper EN 1359/ equivalent
INDEX	Max. Index reading	9 Digits with auto reset facility/Electronic index for smart meters
	Unit	CM (Cubic meter) & SCM (Standard Cubic Meter)
	Ingress protection	IP 65 or better
	Facility	Index should be compatible for installing AMR / MIU of any manufacturer and implementing smart metering system
	Pulse output type	Diaphragm Meters: Inductive/ Magnetic
INT	Diaphragm	Diaphragm Meter: Polyester fabric coated with rubber on either side of equipment for an endurance life cycle of 80,000 cum.
	Valve between inlet and	NA

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	outlet	
	Power supply to Metrology	1xLithium Battery (Battery Life>10Years)
	Centre to center distance between inlet and outlet connections	To be specified by vendor
	Other internals	All meter internals shall be non-metallic to prevent from tampering with magnet
OTHERS	Leak Testing	Meter pressurized with air at 1.5 MAOP of the meter, immersed in water for observance of leakage
	Sealing arrangement	Provision to be made by vendor
	Marking on the meter	Required
	EN/ MID marking on the meter	Required
	Reverse flow deterrents	Reverse cot restrictor to be provided. Reverse rotation of index is not allowed
EVC	Standard	EN12405, MID
	Display	Alphanumeric Multisegmented LCD with icons
	Communication interface	Optical Interface (IEC 62056-21), Modem GPRS or LTE-Cat 1 or LTE- Cat NB
	Digital outputs	1 Digital output – pulse/binary
	Battery Power Supply (Modem)	1xLithium Battery (Battery Life>5Years)



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SECTION: 10
SCHEDULE OF RATES



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Bhagyanagar Gas Limited											
SCHEDULE OF RATES (SOR)											
Financial Bid / Priced Bid											
Bid Document ref: BGL/619/2024-25 Dated 10.06.2024											
PROCUREMENT OF SMART METER ,RPD METERS AND EVCS WITH ALL REQUIRED ACCESSORIES FOR INDUSTRIAL & COMMERCIAL CUSTOMERS IN HYDERABAD											
Name of Bidder:											
Item Nos.	DESCRIPTION	HSN/SAC Code	Unit	QTY	Unit Price (INR)					Total Price up to FOR site incl. of all taxes & duties, incl. GST	Total Price up to FOR site incl. of all taxes & duties, incl. GST
					Unit Price up to FOR site incl. of all taxes & duties, excl. GST	Unit Price up to FOR site incl. of all taxes & duties, excl. GST (INR)	GST		Total Unit Price		
					(INR) (figures)	(INR) (words)	%	(INR)	Amount (INR)	(INR) (figures)	(INR) (words)
1	2	3	4	5	6	6a	7	7a = 7* 6	8 = 6+ 7a	8a = 8*5	8b
1	Design, Engineering, Supply and delivery of items up to FOT Site, Hyderabad as per the Material Requisition and Scope of Supply in Bid Document for RPD Meters (Rotary Positive Displacement Meters)										
1.1	2" x 150# G-16 RPD Meter with accessories: Meter Oil, conical strainer, Restriction			1							

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	orifice, Gaskets, Meter bolts & Pressure kits.									
1.2	2" x 150# G-25 RPD Meter with accessories: Meter Oil, conical strainer, Restriction orifice, Gaskets, Meter bolts & Pressure kits.		Nos	2						
2	Design, Engineering, Supply and delivery of items up to FOT Site, Hyderabad as per the Material Requisition and Scope of Supply in Bid Document for EVCs (Electronic Volume Correctors)									
2.1	EVC with pressure range 0.5 bar to 10 bar and PTZ/T-corrector variants. LF/ HF pulse and GPRS/LTE configurable with RS485 (or 232 as option) communication portable.		Nos	3						
3	Design, Engineering, Supply and delivery of items up to FOT Site, Hyderabad as per the Material Requisition and Scope of Supply in Bid Document for Smart Gas Meter/Thermal Meter									
3.1	G-10 Smart Meter/Thermal Meter with pressure range 0.50 Bar & capacity 16m3/hrs. with AMR & Automatic volume corrector with all		Nos	1						

	required communication accessories like: cables, Pt, Tt & pulse reader.									
3.2	G-25 Smart Meter/Thermal Meter with pressure range 0.50 Bar & capacity 40m3/hrs. with AMR & Automatic volume corrector with all required communication accessories like: cables, Pt, Tt & pulse reader.		Nos	3						
4	Design, Engineering, Supply and delivery of items up to FOT Site, Hyderabad as per the Material Requisition and Scope of Supply in Bid Document for Natural Gas Regulator									
4.1	30 SCMH with inbuilt SSV (UPSO-100mbar-OPSO- 750mbar) Regulator with pressure range 0.50-1.50 Bar & capacity 30m3/hrs. Inlet- 1" NPT & Outlet 1.5" NPT with union adopter connectors.		Nos	1						



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4.2	50 SCMH with inbuilt SSV (UPSO-100mbar- OPSO- 750mbar) Regulator with pressure range 0.50-1.50 Bar & capacity 30m3/hrs. Inlet- 1” NPT & Outlet 1.5” NPT with union adopter connectors.		Nos	2					
Total amount inclusive of all applicable taxes & duties in Rs.									