



Bhagyanagar Gas Ltd.
BHAGYANAGAR
GAS LIMITED

**Tender for Testing and Calibration of Pressure Gauges,
Temperature Gauges, Safety Valves, Pressure / Temperature
Transmitters of BGL at Hyderabad, Vijayawada and Kakinada.**

Bid Document No. BGL/519/2021-22

VOLUME
II OF II



Bhagyanagar Gas Ltd.

BHAGYANAGAR GAS LIMITED

(A JOINT VENTURE OF HPCL & GAIL)

BID DOCUMENT FOR

**Tender for Testing and Calibration of Pressure Gauges,
Temperature Gauges, Safety Valves, Pressure / Temperature
Transmitters of BGL at Hyderabad, Vijayawada and Kakinada.**

UNDER OPEN DOMESTIC COMPETITIVE BIDDING

Bid Document No.: BGL/519/2021-22

VOLUME-II of II

CONTENTS

VOLUMEN II OF II

SECTION 7 - SPECIAL CONDITIONS OF CONTRACT

SECTION 8 - SCOPE OF WORK

SECTION 9 - SCHEDULE OF RATES



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Bid Document No. BGL/519/2021-22

VOLUME
II OF II

SECTION - 7

SPECIAL CONDITIONS OF CONTRACT

1.0 Introduction

Bhagyanagar Gas Limited (BGL) is a joint venture of M/s. Hindustan Petroleum Corporation Limited (HPCL) and GAIL (India) Limited operating CNG & City Gas distribution in the state of Andhra Pradesh & Telangana. This tender deals with Rate Contract for Testing and calibration of Pressure Gauges, Temperature Gauges, Safety Valves, Pressure Transmitters, Temperature Transmitters installed in various equipment's in CNG stations at various locations of BGL in Hyderabad, Vijayawada and Kakinada.

The special conditions of contract shall be read in conjunction with general condition of contract(GCC), Schedule of rates, scope of work and any other document forming part of contract, wherever Context so Requires. In case of any contradictions the Decision of the Engineer-I In-Charge will be final and binding on the Contractor.

In case of contradiction between Indian or other applicable Standards, General Conditions of Contract, Special Conditions of Contract, Specifications, drawings, Schedule of Rates, the following shall prevail in order of precedence:

- i) Letter of acceptance along with statement of Agreed variations.
- ii) Fax / Letter of Intent / Fax of Acceptance
- iii) Schedule of Rates as enclosures to letter of acceptance
- iv) Job / Particular Specifications
- v) Drawings
- vi) Technical / Material Specifications
- vii) Special Conditions of Contract.
- viii) Indian Standards
- ix) Other Applicable Standards

It will be contractor's responsibility to bring to the notice of Engineer-in-charge any irreconcilable conflict in the contract documents before starting the work(s) of making the supply with reference which the conflict exists.

In the absence of any specifications covering any material, design of work(s) in the same shall be performed / supplies / executed in accordance with Standards Engineering Practice as per the instructions / directions of the Engineer-in-charge, which will be binding on the Contractor.

2.0 Scope of Work:

Tender for Testing and Calibration of Pressure Gauges, Temperature Gauges, Safety Valves, Pressure / Temperature Transmitters for CNG Dispensers and Compressor Packages In Hyderabad, Vijayawada and Kakinada.

Locations of CNG stations in Hyderabad are mentioned below :

Sr. No.	Outlet details	Location
1	M/s. Bhagyanagar Gas Limited	Shamirpet
2	M/s. Bhagyanagar Gas Limited	Medchal
3	M/s. Bhagyanagar Gas Limited	Hakimpet

4	M/s. Bhagyanagar Gas Limited	Cantonment
5	M/s. Bhagyanagar Gas Limited	Saroornagar
6	M/s. Sapthagari Filling Station	Meerpet
7	M/s. Lalitha Devi Petrol Pump	R.P Road
8	M/s. Chakra Filling Station	Nampally
9	M/s. KVS Service Station	Bowenpally
10	M/s. Auto Prime	Chadarghat
11	M/s. Sri Radha Raman Service Station	Narayanaguda
12	M/s. Ramesh Fuel Point	Dhoolpet
13	M/s. Sree Habeeb Service Station	Langer House
14	M/s. Hytech Fuel Station	Kishanbagh
15	M/s. Rajashree Service Station	Bahadurpura
16	M/s. Pendhota Brothers Filling Staion	Katedan
17	M/s. Sri Balaji Kailash Filling station	Hasthinapuram
18	M/s. Sri Mallikarjuna Service Station	R.C.Puram
19	M/s. Sidharth Filling Station	Bahadurpally
20	M/s. Sri Sai Narsimha Fuels	Chandrayana gutta
21	M/s. Sri Venkateswara Filling Station	Balanagar
22	M/s. GMR Filling Station	Mailardevpally
23	M/s. Hi Tech Filling Station	Hafeezpet
24	M/s. Sri SSV Petroleum Corporation	Peerzadiguda
25	M/s. Sainath Filling Station	Vansthalipuram
26	M/s. Hayath Filling Staion	Hayathnagar
27	M/s. Sai Ram Filling Station	Chintal
28	M/s. Star Quality Fuels	Pet-basheerbagh
29	M/s. Shaktinagar Filling station	Shaktinagar
30	M/s.Sainath Filling station	Attapur
31	M/s.Jayaleela Filling station	Uppal
32	M/s. Janatha Service station	Hassanagar

Locations of CNG stations in Vijayawada are mentioned below

Sr. No	Outlet details	Location
1	M/s Bhagyanagar Gas Ltd.	Vidhyadharapuram
2	M/s. APSRTC Depot	Vidhyadharapuram
3	M/s.APSRTC Depot	Near Old Bus Stand, Governorpet
4	M/s. APSRTC Depot	Ibrahimpattam
5	M/s. Pavan Siva Sai Filling Station	Kandrika

6	M/s.Vijayalakshmi Oil Company	Nidamanuru
7	M/s.Navabhargava Filling Station	Ibrahimpattanam
8	M/s.SCR Diesel Loco Shed	Vijayawada
9	M/s.Ravindra Oil Company	Bhavanipuram
10	M/s.GSRVanadurga Filling Station	Gollapudi
11	M/s.Prakash Fuel Point	Autonagar
12	M/s.JayRamanjaneya Filling Station	Kanuru
13	M/s.K.Ram Mohan Rao Filling Station	Autonagar
14	M/s.Ravi Servive Station	Ibrahimpattanam

Locations of CNG stations in Kakinada are mentioned below

Sr. No	Outlet details	Location
1	M/s. BHAGYANAGAR GAS LIMITED	KAKINADA
2	M/s. JP FUEL STATION	KAKINADA
3	M/s.Vivekananda Agencies	KAKINADA
4	M/s.Swamy Auto care	Nadakuduru
5	M/s.Tirumala Agencies	Peddapuram
6	M/s. Tirumala Agencies	Gollaprolu
7	M/s. Ujwala Filling Point	KAKINADA
8	M/s. Sri Lakshmi Ganapathi Agencies	Pithapuram
9	M/s.Raja Filling Point	TURANGI
10	M/s.Sri Lakshmi Agencies	Vetalapalem

After Calibration bidder has to provide Calibration Certificate for all Calibrated instruments. Bidder has to work as per the instructions of BGL's Site Engineer as when required. Travelling, Transportation, Boarding & Lodging etc will be in the bidder's scope. In addition to the above locations, bidder has to work as per the requirements of BGL's Site Engineer as and when required.

Bidder will have to provide the certificate of Master Meter which should have been be calibrated from any reputed agency like NABL accredited laboratory/ETDC/FCRI and certificates should be valid during execution of work not be of before six months. Bidder will have to provide sticker with testing date and due date on calibrated instruments.

3.0 Contract validity Period:

2 year from the date of Work Order.

4.0 Completion Period :

The work against each lot should be completed within 15 days from the date of intimation from BGL Engineer.

5.0 Payment Terms:

100% payment will be done within 15 days after receiving the bill in finance department and after providing all related certificates/ documentations and certified by Engineer- In – Charge (EIC).

In SOR Sl. Nos, the indicated quantities shall be considered as tentative. Successful bidder(s) shall comply with the actual requirement (increase/ decrease) of the owner's requirement without any restriction in the same cities and Payment shall be made for the actual executed quantities.

6.0 Contract Performance Guarantee(CPBG) / Performance Security:

The CONTRACTOR shall initially furnish to the EMPLOYER, within 30 days from the date of notification of award, a security in the sum of 3 % of the accepted ANNUALIZED CONTRACT VALUE of the tender or the actual value of work to be done whichever is applicable due to any additional work or any other reasons, in the form of a Bank draft/Banker's cheque or Bank Guarantee or irrevocable Letter of credit (as per proforma in bid document) as Contract Performance Security or RTGS payment, with the EMPLOYER.

7.0 Defect Liability Period (DLP):

CONTRACTOR can furnish the Contract Performance Security in the form of Demand Draft or through a Bank Guarantee or through an irrevocable Letter of Credit 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, other than the Nationalized Indian Banks, the banks whose BGs are furnished, must be commercial banks 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 a letter head. The bank guarantee or the Letter of Credit shall be submitted in the prescribed format.

Defect Liability Period be one month from the date of completion of work and acceptance of EIC.

8.0 Price Reduction Schedule:

In case the CONTRACTOR fails to complete the WORK within the stipulated period, then, unless such failure is due to Force Majeure as defined in Force Majeure Clause here above or due to EMPLOYER's defaults, the Total Contract price shall be reduced by ½ % of the total Contract Price per complete week of delay or part thereof subject to a maximum of 5 % of the Total Contract Price, by way of reduction in price for delay and not as penalty, as per the intimation of EIC for a particular lot. The said amount will be recovered from amount due to the Contractor/ Contractor's Contract Performance Security payable on demand. The decision of the ENGINEER-IN-CHARGE in regard to applicability of Price Reduction Schedule shall be final and binding on the CONTRACTOR.

9.0 Warranty / Guaranty:

Not Applicable.



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Bid Document No. BGL/519/2021-22

VOLUME
II OF II

SECTION -8

SCOPE OF WORK

1.0 Scope of Work:

Detailed Scope of Work:

A. Work Instruction For Calibration of Pressure Gauges:

- 1. Purpose:** To provide instructions for calibration of Pressure Gauges.
- 2. Resources Required:** Pressure Calibrator or Dead Weight Tester.
- 3. Instructions:**
 - a) Isolate and remove the PG from process line.
 - b) Bidder has to arrange the necessary connectors required to calibrate the instruments.
 - c) Connect the gauge with dead weight tester / calibrator.
 - d) Slowly increase the pressure, note the pressure shown in gauge under calibration and corresponding reading of standard pressure gauge / calibrator. Note down the reading for 25%, 50%, 75% and 100% of full scale.
 - e) Adjust if any error.
 - f) Reinstall and put it in line, open the isolation valve, with closing isolation plug/ drain.
- 4. Records:**

Test reports have to be prepared and submitted as per the format enclosed at **Annexure – I**.

B. Work Instruction for Calibration of Pressure Transmitters/ Differential Pressure Transmitters:

- 1. Purpose:** To lay down the instructions for Calibration of Pressure Transmitters/ Differential Pressure Transmitters.
- 2. Resources Required:** Digital Multi-Meter and Pressure Calibrator or Dead Weight Tester – in house or out sourced.
- 3. Instructions:**
 - a) Remove the transmitter from line and connect pressure source in HP side.
 - b) Connect the 24 V DC power supply to the transmitter and a multi-meter in series.
 - c) Record the reading corresponding to 0%, 25%, 50%, 75% and 100% of the full scale range of the transmitter before calibration.
 - d) Check the output of the Pressure Transmitter with no pressure (or equal to the low calibration range). The output should be 4 mA. If required the zero potentiometer / through Hart communicator for smart PT / DPT to get an output of 4mA / calculated current.
 - e) Apply full scale range pressure to the transmitter and note the output. It should be 20 mA. If required, the span potentiometer / through HART communicator for smart PT / DPT to get an output of 20 mA calculated current. Repeat the steps 5 & 6 till the outputs are within the tolerance limits.
 - f) Record the reading corresponding to 0%, 25%, 50%, 75% and 100% of the full scale range of the transmitter after calibration.
 - g) Remove the transmitter from the calibration setup and install it in its location.
 - h) Open the impulse line valve. Check for any leakage in impulse line. If any leak observed isolate transmitter and attend the leak (for DPT keep equalizer open and then open impulse line).

4. Records:

Test reports have to be prepared and submitted as per the format enclosed at **Annexure – I.**

C. Work Instruction for Calibration of Pressure Safety Valves:

1. Purpose: To provide instructions for calibration of Pressure Safety Valves.

2. Resources Required: Safety Valve test bench either in house or out sourced.

3. Instructions:

- a) Remove the Pressure Safety Valve from the location.
- b) Install the same on test-Zig.
- c) Apply the required pressure through hydraulic pump / regulator.
- d) Note the readings of pop up pressure.
- e) Also record the readings for reset pressure.
- f) Adjust the settings, if the pop up of Pressure safety valve is below or above the set point.
- g) Remove from the pressure safety valve from test-zig& install at its original location and connect it with the process.
- h) There should not be any leakage from the vent port of pressure safety valve.

4. Records:

Test reports have to be prepared and submitted as per the format enclosed at **Annexure – I.**

D. Pressure Switches:

1. PURPOSE: To provide work instruction for Calibration of Pressure Switches.

2. REQUIRED: Pressure Calibrator or Dead Weight Tester, Multi-meter.

3.INSTRUCTIONS:

- a) Remove the instrument from impulse line.
- b) Mount the instrument on dead weight tester/other calibrator and connect it with pressure source.
- c) Connect multi-meter at switch terminal for checking contact change over.
- d) Slowly pressurize/ depressurize the instrument sensor up to set pressure.
- e) Note the pressure at which contact change over is made & repeat the process.
- f) Any deviation from set pressure may be adjusted by nut/screw provided in switch.
- g) Remove the pressure switches from calibration set up and installed it in its location and connect the impulse line.

4. RECORDS: Test reports have to be prepared and submitted as per the format enclosed at **Annexure – I.**

E. Work Instruction For Calibration of RTD / TG:

1. PURPOSE: To provide instructions for Calibration of RTD and Temperature Gauge.

2. RESOURCES REQUIRED: Dry Temperature Bath - in house or out sourced.

3. INSTRUCTIONS :

Open terminal box of respective RTD.

Connect decade resistance box terminals to the signal cable going to control room. Simulate signal for 0°C (100 ohm), 50°C (119 ohm), 100°C (138 ohm) for Pt-100. Note resistance fed and temperature shown in control room.

Connect signal cable at respective terminals and put the RTD terminal cover tightly. Remove temp gauge from thermo well & put the sensor inside Temperature bath with thermometer. Open front cover adjust zero, by setting the temp at zero, if required. Slowly increase the temperature by step and note the temperature shown in gauge under calibration and corresponding reading of thermometer. Note down the reading for 0%, 25%, 50%, 75% and 100% of full scale & calculate error from recorded reading and adjusted if any.

Remove the temperature gauge from calibration setup and install it at its location.

4. **RECORDS:** Test reports have to be prepared and submitted as per the format enclosed at **Annexure-I**.

F. Work Instruction For Calibration of TT:

1. **PURPOSE:** To lay down the instructions for calibration of TT.
2. **RESOURCES REQUIRED:** Dry temperature bath, digital multi-meter, resistance source – in house or out sourced.
3. **INSTRUCTIONS:**
 - a) Remove the instrument from line and connect the 24 V DC power supply source to the transmitter and a multi-meter in series.
 - b) Check the output of the Transmitter with no signal (or equal to the low calibration range). The output should be 4 mA. If required, set the zero potentiometer / through HART communicator for smart Transmitter to get an output of 4 mA/ calculated current.
 - c) Apply full-scale range to the transmitter and note the output. It should be 20 mA. If required, set the span potentiometer/through HART communicator for smart transmitter to get an output of 20 mA/calculated current. Repeat the steps till the outputs are within the tolerance limits.
 - d) Record the reading corresponding to 25%, 50%, 75% and 100% of the full-scale range of the transmitter.
 - e) Remove the transmitter from the calibration setup and install it in its location.
4. **RECORDS:** Test reports have to be prepared and submitted as per the format enclosed at **Annexure -I**.

Annexure - I

Bhagyanagar Gas Limited
Format No.:BGL/ INS/FRM-01
Rev. No. 00

Calibration of PSV

Maintenance Base:	Date:
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Instrument Details:

Tag Number:	SI No.:
Service/Location:	Model No.:
Date of Last Calibration:	Calibration Rangibility:
Set Point:	
Type of valve(PSV):	

Calibration Data:

Repetition	Activity	Desired	Before	After
1	Set			
	Reset			
2	Set			
	Reset			
3	Set			
	Reset			
4	Set			
	Reset			

Remarks:

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Masters used for calibration

SI No	Name of the Masters	Tag Number	Calibration validity Date

Performed By:

<p>Signature:</p> <p>Name:</p> <p>Designation:</p>

Bhagyanagar Gas Limited

Format No.: BGL/INS/FRM-02

Rev. No. : 00

Calibration/Testing of PT / DPT / TT / LT / PG / TG / DPG

Maintenance Base:	Date:
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Instrument Details:

Tag Number:	SI No.:
Service/Location:	Model No.:
Date of Last Calibration:	Calibration Rangibility:
Calibration Range:	
Type of Instrument(PT/DPT/TT/LT/PG/TG/DPG):	

<u>Calibration data</u>		Calibrator reading		Measure reading		
Percentage	Value	Action	Before adj.	After adj.	Before adj.	After adj.
0		Upward				
		Downward				
25		Upward				
		Downward				
50						
75						
100						
Remarks:						

Masters used for calibration

SI No	Name of the Masters	Tag Number	Calibration validity date

Performed By:

Signature:
Name:
Designation:

Bhagyanagar Gas Limited
Format No.:BGL/INS/FRM-03
Rev. No. 00

Calibration of Switches (Pressure)

Maintenance Base:	Date:
Instrument Details:	
Tag Number:	SI No.:
Service/Location:	Model No.:
Date of Last Calibration:	Calibration Rangibility:
Set Point:	
Type of Switch (LOW/HIGH):	

Calibration Data:

Repetition	Activity	Desired	Before	After
1	Set			
	Reset			
2	Set			
	Reset			
3	Set			
	Reset			
4	Set			
	Reset			
Remarks:				

Masters used for calibration

SI No	Name of the Masters	Tag Number	Calibration validity Date

Performed By:

Signature:
Name:
Designation:



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Temperature Gauges, Safety Valves, Pressure / Temperature
Transmitters of BGL at Hyderabad, Vijayawada and Kakinada.**

VOLUME
II OF II

Bid Document No. BGL/519/2021-22

SECTION - 9

SCHEDULE OF RATES (SOR)



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GAS LIMITED

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Temperature Gauges, Safety Valves, Pressure / Temperature
Transmitters of BGL at Hyderabad, Vijayawada and Kakinada.**

Bid Document No. BGL/519/2021-22

VOLUME
II OF II

Schedule of Rates (SOR)

SOR						
Testing and Calibration of Pressure Gauges, Temperature Gauges, Safety Valves, Pressure / Temperature Transmitters of BGL at Hyderabad, Vijayawada and Kakinada.						
PART-A(Hyderabad)						
Sr. No.	Description	Quantity				HSN/SAC Code
		UOM	Qty.	Unit Rate excl. GST	total Amount excl. GST	
1	2	3	4	5	6= 4 x 5	7
	Tender for Testing and calibration of pressure gauges Temperature gauges, Safety Valves, Pressure / Temperature Transmitters for CNG Dispensers and Compressor Packages in Hyderabad.					
1	Testing and calibration of pressure gauges up to 400 kg/cm2	No's	600			
2	Testing and calibration of Temperature gauges up to 200~C	No's	200			
3	Testing and calibration of Safety Valves up to 3/4 inches & 300 kg/cm2	No's	450			
4	Testing and calibration of pressure Switch up to 400 kg/cm2	No's	30			
5	Testing and calibration of Pressure Transmitters up to 400 kg/cm2	No's	300			
6	Testing and calibration of Temperature Transmitters / RTD sensors up to 100~c	No's	80			
Sub Total: (in Rs.) exclusive of all Taxes and Duties-A1						
GST @%-B1						
Grand Total inclusive of all Taxes and Duties: (in Rs)C1 = A1+B1						
Grand Total inclusive of all Taxes and Duties: (in Rs, in Words)						

PART-B(Vijayawada)

Sr. No.	Description	Quantity			Sub total Amount excl. GST	HSN/SAC Code
		UOM	Qty.	Unit Rate excl. GST		
1	2	3	4	5	6	7
	Tender for Testing and calibration of pressure gauges Temperature gauges, Safety Valves, Pressure / Temperature Transmitters for CNG Dispensers and Compressor Packages in Vijayawada					
1	Testing and calibration of pressure gauges up to 400 kg/cm ²	No's	400			
2	Testing and calibration of Temperature gauges up to 200~C	No's	60			
3	Testing and calibration of Safety Valves up to 3/4 inches & 300 kg/cm ²	No's	300			
4	Testing and calibration of pressure Switch up to 400 kg/cm ²	No's	60			
5	Testing and calibration of Pressure Transmitters up to 400 kg/cm ²	No's	100			
6	Testing and calibration of Temperature Transmitters / RTD sensors up to 100~c	No's	100			
Sub Total: (in Rs.) incl all Taxes and Duties exclusive of GST-A2						
GST @%-B2						
Grand Total inclusive of all Taxes and Duties: (in Rs) C2=A2+B2						
Grand Total inclusive of all Taxes and Duties: (in Rs, in Words)						

PART-C (Kakinada)

Sr. No.	Description	Quantity				HSN/SAC Code
		UOM	Qty.	Unit Rate excl. GST	total Amount excl. GST	
1	2	3	4	5	6	7
	Tender for Testing and calibration of pressure gauges Temperature gauges, Safety Valves, Pressure / Temperature Transmitters for CNG Dispensers and Compressor Packages in Kakinada					
1	Testing and calibration of pressure gauges up to 400 kg/cm ²	No's	400			
2	Testing and calibration of Temperature gauges up to 200~C	No's	120			
3	Testing and calibration of Safety Valves up to 3/4 inches & 300 kg/cm ²	No's	260			
4	Testing and calibration of pressure Switch up to 400 kg/cm ²	No's	40			
5	Testing and calibration of Pressure Transmitters up to 400 kg/cm ²	No's	200			
6	Testing and calibration of Temperature Transmitters / RTD sensors up to 100~c	No's	30			
Sub Total: (in Rs.) incl all Taxes and Duties exclusive of GST-A3						
GST @%-B3						
Grand Total inclusive of all Taxes and Duties: (in Rs)C3=A3+B3						
Grand Total inclusive of all Taxes and Duties: (in Rs) D=C1+C2+C3						
Grand Total inclusive of all Taxes and Duties: (in Rs, in Words)						

Note: Travelling, Transportation, Boarding & Lodging etc will be in the bidder's scope.

Name of the Bidder :

Signature & Seal of the Bidder :