



Bhagyanagar  
Gas Limited

**Annual rate contract for Testing and Calibration of Pressure  
Gauges, Temperature Gauges, Safety Valves, Pressure /  
Temperature Transmitters of BGL in Hyderabad, Vijayawada,  
and Kakinada**

Volume  
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**Bid Document No: BGL/601/2023-24**



**BHAGYANAGAR GAS LIMITED**

(A JOINT VENTURE OF HPCL & GAIL)

## **BID DOCUMENT FOR**

**Annual rate contract for Testing and Calibration of Pressure  
Gauges, Temperature Gauges, Safety Valves, Pressure /  
Temperature Transmitters of BGL in Hyderabad, Vijayawada,  
and Kakinada**

**UNDER OPEN DOMESTIC  
COMPETITIVE BIDDING**

**Bid Document No.: BGL/600/2023-24**

**VOLUME-II of II**



Bhagyanagar Gas Ltd.  
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## **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 & CityGas 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 and PSV's installed in various equipment's in CNG stations/ PRS/ DRS/ MRS/ SV's 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 and PSV's for CNG Dispensers, Cascade and Compressor Packages, PRS/ DRS/ MRS/ SV's In Hyderabad, Vijayawada and Kakinada.**

**Locations of CNG Stations in Hyderabad are mentioned below :**

Sr. No	Station Name	Location	Retail Outlet	Type of RO
1	M/s. Bhagyanagar Gas Limited – 1	Shamirpet	CGS CUM M/S.	Online
2	M/s. Bhagyanagar Gas Limited – 2	Medchal	Tsrtc Depot	Online
3	M/s. Bhagyanagar Gas Limited – 3	Hakimpet	Tsrtc Depot	DBS
4	M/s. Bhagyanagar Gas Limited – 5	Saroornagar	COCO	DBS
5	M/s. Lalitha Devi Petrol Pump	R.P Road	HPCL	DBS
6	M/s. Sapthagari Filling Station	Meerpet	HPCL	DBS
7	M/s. Chakra Filling Station	Nampally	HPCL	DBS
8	M/s. KVS Service Station	Bowenpally	HPCL	DBS
9	M/s. Auto Prime	Chadarghat	HPCL	DBS
10	M/s. Sri Radha Raman Service Station	Narayanaguda	HPCL	DBS
11	M/s. Ramesh Fuel Point	Dhoolpet	HPCL	DBS
12	M/s. Habeeb Service Station	Langer House	HPCL	DBS
13	M/s. Hytech Fuel Station	Kishanbagh	HPCL	DBS
14	M/s. Rajashree Service Station	Bahadurpura	HPCL	DBS
15	M/s. Pendhota Brothers Filling Station	Katedan	HPCL	DBS
16	M/s. Sri Balaji Kailash Filling station	Hasthinapuram	IOCL	DBS
17	M/s. Sri Mallikarjuna Service Station	R.C.Puram	HPCL	DBS
18	M/s. Sidharth Filling Station	Bahadurpally	HPCL	DBS
19	M/s. Sri Sai Narsimha Fuels	Chandrayana gutta	IOCL	DBS
20	M/s. Sri Venkateswara Filling Station	Balanagar	HPCL	Online
21	M/s. GMR Filling Station	Mailardevpally	IOCL	DBS
22	M/s. Hi Tech Filling Station	Hafeezpet - 1	BPCL	Online
23	M/s. Sri SSV Petroleum Corporation	Peerzadiguda	HPCL	DBS
24	M/s. Sainath Service Station	Vanasthalipuram	IOCL	DBS
25	M/s. Hayath Filling Station	Hayathnagar	HPCL	DBS
26	M/s. Sai Ram Filling Station	Chintal	HPCL	Online
27	M/s. Star Quality fuel Station	Pet-basheerbagh	IOCL	Online
28	M/s. Sainath Filling Station	Attapur	HPCL	DBS
29	M/s. Shakti Nagar Filling Station	Shaktinagar	HPCL	DBS
30	M/s. Venkatgoud petromart adhoc	Uppal	BPCL	DBS
31	M/s. Janata Service Station	Hassan Nagar	HPCL	DBS
32	M/s. Bhargavi Filling Station	Nagaram - 1	HPCL	DBS
33	M/s. Nacharm Filling Station	Nacharam	IOCL	DBS
34	M/s. Sai Nikhil Service Station	Champapet - 1	HPCL	DBS
35	M/s. Ramanthapur Filling Station	Ramanthapur	BPCL	DBS
36	M/s. Sri Siddhi Vinayaka Filling Station	Parvathapuram	HPCL	DS
37	M/s. Highway Nine	Chaithanyapuri	HPCL	DBS
38	M/s. PBH Petro Hub	Narapally	HPCL	DBS
39	M/s. Madannapet Filling Station	Madannapet	BPCL	DBS

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40	M/s. Ramaram Filling Station	Gajularamaram	HPCL	DBS
41	M/s. Rayyan Fuels	Moinbagh	HPCL	DBS
42	M/s. JMR Filling Station	Mansoorabad	HPCL	DBS
43	M/s. Kailash Filling Station	Alkapuri / Nagole	IOCL	DBS
44	M/s. Sri Venkateswara Filling Station	Nagaram - 2	BPCL	DS
45	M/s. Shri Bhavani Ganesh Service Station	Patancheru	BPCL	DS
46	M/s. Sri Laxmi Filling Station	Bachupally - 1	BPCL	DBS
47	M/s. Srikanth Filling Station	Yapral	IOCL	DBS
48	M/s. My Nation Filling Station	Cherlapally	IOCL	DBS
49	M/s. MG Service Station	Ghatkesar	HPCL	DBS
50	M/s. Neha Filling Station	Keesara	HPCL	DS
51	M/s. Sai Priya Filling Station	RTC X Road	BPCL	DBS
52	M/s. TS Civil Supplies Corp. Ltd.	Hafeezpet - 2	IOCL	Online
53	M/s. Onus Petro Services	Alwin X Road	IOCL	Online
54	M/s. Yogitha Filling Station	Bachupally - 2	HPCL	DBS
55	M/s. Metro Filling Point	Shaheen Nagar	IOCL	DBS
56	M/s. SV Goud Fuel Point	Balapur X Road	BPCL	DBS
57	M/s. Tas Filling Station	Jillelaguda	BPCL	DS
58	M/s. Balaji Filling Station	IDA Bollaram	BPCL	DS
59	M/s. Nikhil Fuel Point	Dhoolapally	BPCL	DS
60	M/s. Medchal Filling Station	Medchal - 2	HPCL	DS
61	M/s. Avinash Enterprises	Serilingampalli	IOCL	DS
62	M/s. Sri Laxmi Filling Station	Raja Bollaram	HPCL	DS
63	M/s. Krishna Filling Station	Thummukunta	IOCL	DS
64	M/s. Sri Vijaya Service Station	Satamrai	HPCL	DBS
65	M/s. Mahmood Filling Station	Yousufguda	BPCL	DBS
66	M/s. Isnapur Filling Station	Isnapur	HPCL	DS
67	M/s. Auto Supplies	Champaet - 2	HPCL	DS
68	M/s. Adhoc MSA Auto Services	Nanakramguda	IOCL	DBS
69	M/s. Krishna Service Station	R.C Puram - 2	IOCL	DS
70	M/s. Vaishnodevi Filling Station	Bachupally - 3	IOCL	DS
71	M/s. Malakpet Service Station	Pedda Amberpet	IOCL	DS
72	M/s. Cyber Filling Station	Madinaguda	IOCL	Online
73	M/s. Aaradya Filling Station	Batasingaram	IOCL	DS
74	M/s. Gandimaisamma Filling Station	Bahadurpally-2	IOCL	DS
75	M/s. DK & Company	Rudramam	BPCL	DS
76	M/s. HP Auto Care Center Osmania	Tarnaka	HPCL	DBS
77	M/s. Vara Siddi Vinayaka Filling Station	Patancheru-2	IOCL	DBS
78	M/s. COCO Hitech City IOC Petrol Bunk	Madhapur	IOCL	DBS
79	M/s. Thumu Venkat Rao Filling Station	Moosapet	BPCL	Online
80	M/s. RK Anuraga Fuel Mart	Kharmanghat	HPCL	DBS
81	M/s. Maruthi Fill Well	Uppal-2	HPCL	DBS

**Locations of CNG stations in Vijayawada are mentioned below**

Sr. No	Station Name	Location	Retail Outlet	Type of RO
1	M/s. BGL Mother Station	Vidhyadharapuram	CGS	Online
2	M/s. Ravindra Oil Company	Bhabanipuram	HPCL	DBS
3	M/s. Basaweswara Filling station	Ajitsingh Nagar	HPCL	Online
4	M/s. Radha Krishna Service Station	Tadiapally	HPCL	DBS
5	M/s. APSRTC Depot	VDPM	APSRTC	Online
6	M/s. APSRTC Depot	GVPT	APSRTC	Online
7	M/s. APSRTC Depot	IBM	APSRTC	DBS
8	M/s. G.S.R.Vanadurga Filling Station	Gollapudi	BPCL	Online
9	M/s. Prakash Fuel Point	Auto Nagar	HPCL	Online
10	M/s. SOUTH CENTRAL RAILWAY	Diesel loco shed	SCR	DBS
11	M/s. Nava Bhargava Filling Station	Ibrahimpattanam	IOCL	DBS
12	M/s. The Andhra Engineering Company (P) Limited	Bhavanipuram	IOCL	DBS
13	M/s. Ravi Service Station-HPCL	Ibrahimpattanam	HPCL	DS
14	M/s. Sai Krishna Fuel filling Station	Payakapuram	BPCL	DBS
15	M/s. Sri Srinivasa Filling Station	Prasadampadu	HPCL	Online
16	M/s. Vijayalakshmi Oil & Co.	Nidamanuru	HPCL	DBS
17	M/s. JNR & Son Filling Station	Bavanipuram	BPCL	DBS
18	M/s. Radha Krishna Service Station Adhoc	Kandrika	HPCL	DBS
19	M/s. Jay Ramajuneya Service Station	Penamaluru	BPCL	Online
20	M/s. Siri Sri Fuels ADHOC	Ambapuram	HPCL	DBS
21	M/s. S V K Fuel & Retail Store	Ambapuram	HPCL	DBS
22	M/s. K Ramohan Rao & Co.	Auto Nagar	IOCL	Online
23	M/s. District Jail	Gandhi Nagar	HPCL	Online
24	M/s. Ravi Kiran Filling Station	Enikepadu	HPCL	DBS
25	M/s. Bharathi Raghava Fuel Station	Ambapuram	IOCL	DS
26	M/s. Siva Parvathi Filling Station	Prasadampadu	IOCL	DS
27	M/s. Chenniupati Vinay Filling Station	Auto Nagar	HPCL	DBS
28	M/s. Ramalingeshwara Fuels	Yanamalakudhuru	IOCL	DBS

**Locations of CNG stations in Kakinada are mentioned below**

Sr. No	Station Name	Location	Retail Outlet	Type of RO
1	BGL -CGS cum MS	Vakalapudi	BGL	CGS Cum MS
2	JP Fuel Station	Cinema Road	HPCL	DBS
3	Vivekananda Agencies	Sarpavaram	IOCL	Online
4	Swamy Auto care	Nadakuduru	IOCL	DBS
5	Tirumala Agencies	Peddapuram	IOCL	DBS

6	Ram Tulsi Agencies	Gollaprolu	IOCL	DS
7	Ujwala filling point	Achampeta	HPCL	DS
8	Sri lakshmi ganapathi agencies	Pithapuram	HPCL	DS
9	Raja filling station	Turangi	BPCL	DS
10	TSN Reddy Agency	Uppalanka	IOCL	DS
11	Ambica Fuels	Samalkot	HPCL	DS
12	Sri lakshmi Srinivasa agencies	Vetlapalem	IOCL	DS
13	Naga Jyothi Filling Station	Samalkota	IOCL	DS

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 calibrated from any reputed agency like NABL accredited laboratory / ETDC / FCRI and certificates should be valid during execution of work. Bidder will have to provide sticker with testing date and due date on calibrated instruments.

### **3.0 Contract validity Period:**

02 years from the date of FOA/Work Order. Contract may be extended for one year upon satisfactory performance by the vendor.

### **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 furnish 7.5% of one year contract value within 30 days of award of FOA/VO/PO or 5% of Annualized contract /order value within 30 days of award and balance to be deducted in each RA bills till balance 2.5% amount is achieved. The deducted amount can be released/ deduction can be stopped against submission of Bank Guarantee of equivalent amount. PBG shall be 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  $\frac{1}{2}$  % 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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**SECTION -8**  
**SCOPE OF WORK**



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**Detailed Scope of Work: (Part-I)**

**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.



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**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 install 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 thermos 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



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**Annexure-I.**

**F. Work Instruction For Calibration of Temperature Transmitter:**

- 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.



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**Annexure - I**

**Bhagyanagar Gas Limited**

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

**Calibration of PSV**

<b>Maintenance Base:</b>	<b>Date:</b>
--------------------------	--------------

**Instrument Details:**

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

**Calibration Data:**

<b>Repetition</b>	<b>Activity</b>	<b>Desired</b>	<b>Before</b>	<b>After</b>
1	Set			
	Reset			
2	Set			
	Reset			
3	Set			
	Reset			
4	Set			
	Reset			
<b>Remarks:</b>				

**Masters used for calibration**

<b>SI No</b>	<b>Name of the Masters</b>	<b>Tag Number</b>	<b>Calibration validity Date</b>

**Performed By:**

<b>Signature:</b>
<b>Name:</b>
<b>Designation:</b>



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Format

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No. 00

**Calibration of Switches (Pressure)**

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

**Calibration Data:**

Repetition	Activity	Desired	Before	After
1	Set			
	Reset			
2	Set			
	Reset			
3	Set			
	Reset			
4	Set			
	Reset			
<b>Remarks:</b>				

**Masters used for calibration**

SI No	Name of the Masters	Tag Number	Calibration validity Date

**Performed By:**

<b>Signature:</b>
<b>Name:</b>
<b>Designation:</b>

## **Detailed Scope of Work: (Part-II)**

### **Service Requisition**

PSV Calibration at CGS cum Mother Stations/ PRS/ DRS/ MRS/ CNG Station's in Hyderabad, Vijayawada and Kakinada.

### **Reference Standards and documents:**

ASME Sec VIII  
API 520  
API RP 527  
API RP 521  
API 581  
API RP 527  
ASME 31.8  
OISD 226  
PNGRB T4S etc.,

## **1.0 SCOPE OF WORK**

Inspection/Service/Testing & Calibration: Testing & calibration of Pressure Safety Valves (PSV) to be performed with a suitable Test bench using Air/ nitrogen at the locations of BGL in Hyderabad, Vijayawada and Kakinada. Test bench shall be hydro tested as per frequency defined in SMPV rules & certified by appropriate third party. The certification by third party shall include inspection / calibration of test benches & accessories (like pipe, dead weight tester, flexible hose, pressure gauges, etc.). All Pressure gauges to be tested with dead weight tester at BGL site. Certificate to be submitted to by contractor prior to start of work.

### **1.1 The scope includes the following:**

- a. Dismantling of Safety Valves from the pipeline/ Regulating/ metering skid after getting clearance from the Engineer-in-charge or his nominee.
- b. After dismantling of PSV the joint to be closed with blind or plug as per the requirement from where the safety valve was removed.
- c. Shifting the safety valves from the site to the testing place (or) All testing equipment needed for testing & calibration to be brought at site.
- d. Inspection of the PSV prior to testing, the PSV should be inspected to ensure that it is properly installed, in good condition, and free from any physical damages. Inspection as per the API RP 576.
- e. As per the inspection the service and replacement of the spares to be done all spare should be equivalent or above to replacing spare. The same will be paid at extra as per respective SOR item.
- f. Test pressure determination should be based on the set pressure of the PSV and the operating pressure of the system. The test pressure should not exceed the maximum allowable working pressure (MAWP) of the PSV.
- g. PSV should be bench tested to ensure that it operates correctly and within the required tolerance. Which includes opening and closing pressure of the PSV's, blowdown, and seat leakage.
- h. After replacing the PSV in original position/ in situ PSV to ensure that it operated correctly in actual pipeline/ skid. Also verify the PSV response time and verify that opening and closing correctly in system.



- i. All test results should be documented and recorded for reports which includes any deviations or issues. Documents should be as per the compliance with the regulatory requirements.
- j. PSV pop up tolerance within +/- 3% of its set pressure or as per the international standard or manufacture recommendations.
- k. The valve reseats within +/- 2.5% of the set pressure or as per the API standard or manufactures recommendations.
- l. If initial pop test is above 103% or less than the 97% of set pressure, termed as test failed.
- m. After the testing the pressure relieving or depressurizing as per the API RP 521.
- n. Complete dismantling, testing and erection all activities to be carried out with reference to API RP 576.
- o. All activities to be carried out witnessed by the Engineer-in-charge / site-in-charge or his nominee
- p. The seat tightness of pressure safety valve shall be carried out as per API standard 527 and shall be witnessed by the Engineer-in-charge / site-in-charge or his nominee.
- q. After completion of tests and inspection, the final setting of blow down ring shall be carried on the data provided by M/S BGL/ as per the system pressure data and the safety valves shall be sealed and tagged indicating tag no. and date of calibration in presence of an authorized representative of M/S Bhagyanagar Gas Ltd.
- r. The calibration certificates each PSV/PRV shall be prepared in approved format by the contractor and submitted to EIC.
- s. If any leakage/defect is observed at the time of installation within defect liability period, the contractor will rectify the same free of cost within 7 working days of receipt of information failing which BGL will get the job done by any other agency at the risk and cost of the contractor.
- t. After calibration and certification, safety valve to be shifted to its installed location in the plant.
- u. The blind flanges to be removed, pipe flanges and inlet-outlet flanges to be cleaned thoroughly and safety valve to be installed in line with new suitable gaskets.
- v. After lining up of the safety valve, leakages of any kind, to be attended and rectified in consultation with Engineer-in-charge.
- w. After testing, the PSV's will be tagged with stamping/ sealing. (In the scope of the party).

## **1.2 CONTRACTOR'S SCOPE OF SUPPLY:**

- a) The contractor shall be required to mobilize sufficient skilled and trained manpower (Engineer, supervisor, Technician, helper, etc.) for handling the safety valve according to the quantum of job mentioned in scope of work. The same should be augmented depending upon the quantum and necessity of job.
- b) Safety equipment's for their personnel, tools & Tackles, Teflon tapes, lapping compound, lapping blocks, fixtures, chain pulley, Tri-pod, scaffolding / hoisting arrangements, dead weight tester, pressure gauges with twice the testing pressure, if required to take up job shall be arranged by the contractor.
- c) Test bench: Test bench which can accommodate valves having inlet size from 1/2" to 6" and having capacity to withstand pressure of up to 5000 psig in nitrogen/air, approved and certified by a competent authority, shall be in the scope of the contractor. Test Bench should be hydro tested as per frequency defined in SMPV Rules/ at least in five years. A valid certificate from Third party for Certification/Inspection/ Calibration of test bench and accessories like pipe, flexible hose, pressure gauges shall be submitted by the contractor before starting the Job.
- d) Nitrogen required for testing of safety valves shall be in the scope of contractor. Transportation facility for collecting and installing PSVs/PRVs in networks (if required) shall be in the scope of contractor.
- e) Transportation facility/vehicle shall be in the scope of contractor for collecting the Pressure Safety Valves from metering skids located at different places (and to reinstall them back after completing



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testing, servicing, and calibration job) in city gas network and nearby areas of the Network.

- f) Any test pressure gauges required for carrying out the job shall be in the SCOPE of Contractor. A third-party Calibration test certificate of the suitable pressure gauge shall be submitted by the contractor prior to start of work. Calibration due date of pressure gauge shall not be beyond six months. The contractor shall submit all the necessary documents as per above (test bench certification, pressure gauge test certificates, training/experience records of technician deployed etc.
- g) Contractor must shall supply spare parts, metallic gaskets ASME B16.20, required for attending the safety valve



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## **SECTION - 9**

### **SCHEDULE OF RATES (SOR)**



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**Bid Document No: BGL/601/2023-24**

Bhagyanagar Gas Limited					
SCHEDULE OF RATES (SOR)					
Financial Bid / Priced Bid					
Bid Document ref: BGL/601/2023-24, dtd. 23.01.2024					
Item: Part- I - Testing and Calibration of Pressure Gauges, Temperature Gauges, Safety Valves, Pressure & Transmitters and Temperature Transmitters					
Name of Bidder					
IA – Hyderabad					
S. No	Description	Unit	Qty	Unit Rate in Rs.	Total Amount in Rs.
1	Testing and calibration of pressure gauges up to 420 kg/cm2	No's	1402		
2	Testing and calibration of Temperature gauges up to 200°C	No's	358		
3	Testing and calibration of Safety Valves up to 3/4 inches & 300 kg/cm2	No's	902		
4	Testing and calibration of pressure Switch up to 400 kg/cm2	No's	10		
5	Testing and calibration of Pressure Transmitters up to 400 kg/cm2	No's	151		
6	Testing and calibration of Temperature Transmitters / RTD sensors up to 100°c	No's	10		
	Sub Total				
	GST@.....%				
	Sub Total (Rs.)				
IB – Vijayawada					
1	Testing and calibration of pressure gauges up to 420 kg/cm2	No's	406		
2	Testing and calibration of Temperature gauges up to 200°C	No's	110		
3	Testing and calibration of Safety Valves up to 3/4 inches & 300 kg/cm2	No's	355		
4	Testing and calibration of pressure Switch up to 400 kg/cm2	No's	5		
5	Testing and calibration of Pressure Transmitters up to 400 kg/cm2	No's	67		
6	Testing and calibration of Temperature Transmitters / RTD sensors up to 100°c	No's	10		
	Sub Total				
	GST@.....%				
	Sub Total (Rs.)				
IC – Kakinada					



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Gauges, Temperature Gauges, Safety Valves, Pressure /  
Temperature Transmitters of BGL in Hyderabad, Vijayawada,  
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**Bid Document No: BGL/601/2023-24**

1	Testing and calibration of pressure gauges up to 420 kg/cm <sup>2</sup>	No's	233		
2	Testing and calibration of Temperature gauges up to 200°C	No's	70		
3	Testing and calibration of Safety Valves up to 3/4 inches & 300 kg/cm <sup>2</sup>	No's	144		
4	Testing and calibration of pressure Switch up to 400 kg/cm <sup>2</sup>	No's	5		
5	Testing and calibration of Pressure Transmitters up to 400 kg/cm <sup>2</sup>	No's	43		
6	Testing and calibration of Temperature Transmitters / RTD sensors up to 100°C	No's	5		
				Sub Total	
				<a href="#">GST@....%</a>	
				Sub Total (Rs.)	
				<b>Total (IA+IB+IC) Inclusive of All Taxes and Duties. Rs.</b>	
				<b>Note:</b>	
Evaluation of bidder will be made on part-wise overall lowest cost for the award of work.					
All SOR items must be quoted by the bidder, else the bid will be rejected.					
Vendor to include other cost if any under respective item to execute it successfully, no additional Payment will be paid other than the above SOR items.					
For items under II, the quantities are indicative only. Payment will be made on actual Nos. executed.					
Above SOR is inclusive of Mobilization Charges with all necessary Equipment.					
Travelling, Transportation, Boarding & Lodging etc will be in the bidder's scope.					

Name of the Bidder :

Signature & Seal of the Bidder :



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**Bid Document No: BGL/601/2023-24**

Bhagyanagar Gas Limited					
SCHEDULE OF RATES (SOR)					
Financial Bid / Priced Bid					
Bid Document ref: BGL/601/2023-24, dtd. 23.01.2024					
Item: Part- II - Calibration & Certification of Pressure Safety Valves at BGL					
Name of Bidder					
IIA – Hyderabad					
Sr. No.	Description	UoM	Qty.	Unit Rate in Rs.	Total Amount in Rs.
I	CALIBRATION AND CERTIFICATION OF PRESSURE SAFETY VALVES AT BGL, HYDERABAD AS PER SOW				
1	4" 600# x 6"150#	Nos.	6		
2	4" 300# x 6"150	Nos.	6		
3	1" 600#	Nos.	10		
4	1" 300 #	Nos.	16		
II	REPAIRING OF SAFETY VALVES WITH SPARES (IF REQUIRED)				
1	4" 600# x 6"150#	Nos.	2		
2	4" 300# x 6"150	Nos.	2		
3	1" 600#	Nos.	2		
4	1" 300 #	Nos.	2		
	Sub Total				
	GST@....%				
	Sub Total (Rs.)				
IIB – Vijayawada					
I	CALIBRATION AND CERTIFICATION OF PRESSURE SAFETY VALVES AT BGL, VIJAYAWADA AS PER SOW				
1	1" 300 #	Nos.	20		
II	REPAIRING OF SAFETY VALVES WITH SPARES (IF REQUIRED)				
1	1" 300 #	Nos.	4		
	Sub Total				
	GST@.....%				
	Sub Total (Rs.)				
IIC – Kakinada					
I	CALIBRATION AND CERTIFICATION OF PRESSURE SAFETY VALVES AT BGL, KAKINADA AS PER SOW				
1	4" 600# x 6"150#	Nos.	4		



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2	1" 300 #	Nos.	10		
3	1/2" 300 #	Nos.	12		
II	REPAIRING OF SAFETY VALVES WITH SPARES (IF REQUIRED)				
1	4" 600# x 6"150#	Nos.	2		
2	1" 300 #	Nos.	2		
3	1/2" 300 #	Nos.	2		
	Sub Total				
	<a href="#">GST@.....%</a>				
	Sub Total (Rs.)				
	<b>Total (IIA+IIB+IIC) Inclusive of All Taxes and Duties. Rs.</b>				
	<b>Note:</b>				
	Evaluation of bidder will be made on part-wise overall lowest cost for the award of work.				
	All SOR items must be quoted by the bidder, else the bid will be rejected.				
	Vendor to include other cost if any under respective item to execute it successfully, no additional Payment will be paid other than the above SOR items.				
	For items under II, the quantities are indicative only. Payment will be made on actual Nos. executed.				
	Above SOR is inclusive of Mobilization Charges with all necessary Equipment.				
	Travelling, Transportation, Boarding & Lodging etc will be in the bidder's scope.				

Name of the Bidder :

Signature & Seal of the Bidder :