



BHAGYANAGAR GAS LIMITED

(A JOINT VENTURE OF HPCL & GAIL)

BID DOCUMENT FOR

**Inspection, Testing and Refurbishment of CNG
Cascades at Hyderabad, Vijayawada & Kakinada**

**UNDER OPEN DOMESTIC
COMPETITIVE BIDDING**

Bid Document No.: BGL/404/2017-18

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SECTION – 7

BRIEF SCOPE OF WORK

SCOPE OF WORK

1. The bidder shall arrange for removal of CNG cascade from station/location of its installation.
2. All the tubing work necessary for removal of cascade from station is in bidder's scope. After removal of cascade, tubing necessary for operation of station is also in bidder's scope. Tubing and fittings required for the purpose will be provided by BGL. The bidder shall have to use same material at all the stations. Bidder has to obtain BGL authorization and Permit to Work (to isolate & remove cascade(s) from current location, arrange crane of appropriate capacity and LCV / Truck for unloading and transportation of the cascades at given CNG outlet as per the BGL Cascade replacement schedule. Hydra/Crain/Vehicle driver shall possess the Valid transport License (Heavy / Transport). Hydra shall have Valid Form NO 12. Safety latch shall be available on crane hook. Crane shall have valid Testing Certificate of Slings (Neoprene / Wire Rope). Crane shall have valid Testing Certificate of D-Shackles Crane shall have Wooden Wheel Stoppers (4 Nos). Every personal involved in unloading, transportation & cascade tubing work shall wear PPE's i.e. Safety shoes, helmets, safety jackets. Load the cascade on the LCV / Truck and provide proper support to avoid any damage during transportation to the place of work, and unload safely at the place of work. Transportation of the cascade shall be carried out as per PESO guidelines. Venting of the gas from the cascade cylinders shall be carried out through PESO approved venting facility at a work place.
3. The cascades are installed in CNG stations at different locations. The bidder shall remove these cascades from the original locations. The necessary services required for lifting & installation viz crane, rigger gang etc will be in bidder's scope.
4. The hydra/crane/vehicle driver shall possess the valid statutory license.
5. In case of locations where removal of cascade by crane is not possible or arrangement of suitable crane is difficult, BGL may allow for removal of fencing made up of weld mesh structural steel along with restoration, grouting & associated civil works on case-to-case basis. In such cases removal & re-fitting to its original condition will be in bidder's scope. All material, work force and other resources required for such work will be in bidder's scope. BGL will not make any arrangement in this regard. Delay in completion of work will lead to penalty as per the relevant clause.
6. The bidder shall carry out lifting and installation in daytime as per BGL schedule .BGL normally allows work on Saturday and Sunday. However, this will not deter BGL in requesting work in nighttime and in weekdays. The completion of work should be in accordance with BGL. All safety precautions & standards as prescribed by BGL are to be followed by members of bidder at the time of execution. This includes taking of necessary permits from respective BGL control room, its resubmission after completion of work and using personal protective equipment's.
7. The cascades are installed with top roof and other accessories, removal of these from cascade and their reinstalling after cascade testing is in bidder's scope. Damage of items during work will require their replacement by bidder on free of cost basis.

8. The transportation of cascades from BGL station to bidder's workplace is in bidder's scope.
9. The Bidder shall carry out ultrasonic Flaw detection testing of cylinders as per IS 8451: 2009 amendment no 1st May 2013.
10. Bidder shall ensure all the cylinders are empty before dismantling. Bidder shall dismantle the cylinders, manifold tubing and fittings from the existing frame and has to note down all the cylinder numbers for each specific cascade. Remove the cylinder valve by using proper tools (Do not use adjustable spanner) Plug the cylinder to avoid any dust particle entering inside cylinder.
11. The bidder shall carry out cascade hydro-stretch testing, as per the gas cylinder rule 2004 and subsequent amendment. Hydro-stretch testing job has to be completed as per IS 5844 with future amendment.
12. The Bidder must have all the required instruments, i.e. high pressure pump, drying unit, ultrasonic thickness measuring instruments, oxygen analyzer & other required instruments to carry out the jobs. The bidder shall submit list of such tools as part of bid.
13. The normal operating pressure of CNG cylinders is 255 kgf/cm² and testing is 435 kgf/cm². The bidder shall check same from cylinder and carry out testing accordingly.
14. Bidder shall calibrate SRV, PG's, TG's of the cascades as per the standards with Master traceable to National or International standards and submit the calibration certificate.
15. The Bidder shall repair cascade frame as per the requirement. Payment for the repair work will be made as per the SOR. The cascade repair will include repair / replacement of structure.
16. The bidder shall arrange for replacement of defective tubing and fitting as per the requirement. BGL will provide tubing and fittings on request.
17. The bidder must have trained work force to do the SS double ferrule connections, joints etc. The training has to be imparted by M/s Swagelok or M/s Parker Hannifin, Mumbai..
18. The Bidder shall paint the cylinders after priming and surface preparation by sand blasting/automatic wire brushing as per the industry practice. The Bidder shall also paint the structure of cascade as per the industry painting standards. The paint done on cylinder and structure should be of good quality and fit for 3 years period. Any defect in painting will be repaired by bidder on free of cost basis else will lead to penalty. Any cost associated with rework of painting viz transportation, dismantling & assembling of cascade etc will be in bidder's scope and BGL will not pay any amount against this. Delay in completion of testing work will lead to penalty as per the penalty clause.
19. The Bidder shall reassemble cascade (CNG Cylinders, PRDs, Valves, SS Tubing, Frame, Manifold etc.) as per the original configuration of the cylinders. The bidder shall provide and replace packing of cascade for ensuring no metal to metal contact between cylinder and cascade structure. Bidder should replace defective parts with new ones. Providing of new packing material, cylinder clamps, studs, gland nuts, Teflon washer for gland nuts etc., for replacement of old parts shall be in bidder scope. The bidder shall use spring washers for clamping of cylinder on structure. However payment for spares & services as mentioned in SOR PART-II shall on actual basis and submission of material reconciliation and handing over of removed defective spares/ parts to BGL for each cascade.

20. The bidder shall replace defective cylinder valves after confirmation by BGL. Payment for replacement of valves will be made as per the SOR. The valve used for the purpose shall be as per the IS 3224 and shall meet all necessary statutory requirements including approval from BGL.
21. The bidder shall replace Pressure Rupture Discs(PRD)s/Burst Discs along with fusible plug as per the instructions of BGL. For the purpose, BGL will provide PRD & fusible plug to bidder. The bidder shall arrange for replacement of these in cascades. The bidder shall prepare reconciliation statement and shall return used spares to BGL.
22. The bidder shall transport the cascade back to the same CNG station from where the cascade was removed and shall ensure its re-installation at same location. The reinstallation work shall have to be necessarily carried out in daytime. Required services viz tempo, crane, rigger etc will be in bidders scope.
23. Reinstallation of cascade in original position is necessary except otherwise required by BGL. Deviation in this will be considered as defect in service and will lead to penalty. Also, the bidder shall have to rectify the same at its cost and risk.
24. The bidder shall ensure proper anchoring of the cascade on the base and shall connect earthing strip with the cascade. The bidder shall also carry out necessary tubing to connect the cascade with station.
25. After connection of the tubing, performance / leak testing of the cascades is to be carried out at full pressure for 4 Hrs, by the Bidder's personnel in presence of BGL Engineer / Technician. Any repairing / replacement required at the time of testing, have to be carried out by the Bidder, free of cost.
26. Testing Certificates, as per Gas Cylinder Rules 2004, for each cylinder shall be submitted within 7 days of testing & erection. The certificates shall be given in one set as original & one set in pdf format.
27. The bidder shall test cascade tubing with pressure for leakage in its workshop.
28. The bidder to ensure strict adherence of BGL schedule for cascade lifting from station, cascade testing , cascade unloading in station, cascade testing in station, defect repair etc. Deviation in date of lifting of cascade from schedule will be treated as defect in service and penalty will be levied on the bidder.
29. All the cascades of BGL are to be tested as per the statutory requirement and any selective testing of cascade will not be accepted and will lead to penalty.
30. Cascade requiring shifting, installation and commissioning for reasons other that cascade hydro testing are also covered in scope of contract. A separate item for loading, unloading, transportation & commissioning of cascade is mentioned in SOR and will be applicable for such shifting work.
31. Rejected Cylinder shall be handled according to Gas Cylinder rules and CCOE Regulation from time to time. Rejected Cylinders should be handed over to BGL.

Other Terms & Conditions :

1. The Bidder shall ensure strict adherence of all safety rules and regulations of BGL.
2. The Bidder must have valid authorization for testing of CNG cylinders from Chief Controller of Explosives, Nagpur. A copy of the valid authorization has to be submitted along with the offer. The authorization should be valid throughout the tenure of the contract. Offers without the copy of valid authorization from CCOE shall be rejected.
3. BGL reserves the right to check the certificate at any time during the contract period.
4. BGL Engineers will inspect testing at Bidder's site on regular basis. BGL may ask for dispatch of cascade after verification of BGL engineer.
5. 2-way valves, 3-way valves & Pressure Gauges, if required to be replaced, shall be provided by BGL.
6. Appropriate marking showing date of testing shall be provided on each cylinder, as per Gas Cylinder Rules, 2004.
7. The bidder shall fix a plate on cascade with all necessary details including testing date, Due date, testing agency, cascade manufacturing year, cylinder serial numbers included etc. The information plate shall be approved by BGL prior to fixing.
8. The bidder shall submit certificate in hard as well as in soft format as pdf file.
9. The Bidder shall have a valid E Mail ID for day to day communication.
10. The Bidder is required to carry out all services as mentioned in the Scope of Services and Schedule of Rates on all the 365 days including Sundays and all Holidays.
11. The Bidder shall allow weekly rest to his workmen and daily working hours will be fixed as per the relevant Act/Law/and Rule made there under. However, no work shall be left incomplete/unattended on any holiday/weekly rest. The Bidder or his authorized representative shall interact with Engineer-in-charge on regular basis.
12. The Bidder shall provide all statutory /legal facilities to its workmen/employee as per the relevant Act/Law/and Rule including applicable rules and laws of the state.
13. The Bidder agrees to indemnify BGL directly or indirectly any loss or injury caused to BGL employee/agent/customer/public due to careless, negligent, inexperienced act or default of the Bidder, his/her agents, representatives or employees. BGL shall be the sole judge as regards the quantum of loss or damage and it shall be entitled to deduct from the amounts payable hereunder to the bidder, the cost of repairs or the amount of loss or damages.
14. Regarding work completion, the decision of the Engineer-in-Charge will be final and binding.
15. All personnel of the Bidder entering on work premises shall be properly and neatly dressed and shall wear cotton uniform, safety shoes, badges, (identity card) while working on premises of the company including work sites.
16. Bidder shall maintain all statutory records like attendance register, wage register, copies of PF &ESI return etc. Bidder shall submit records to BGL for verification along with the invoices.

17. The Bidder's representative/supervisor shall report daily to the Shift-in-Charge in the control rooms for day-to-day working, during execution of work at BGL sites.
18. The Bidder will strictly adhere to all the safety rules and regulations prevailing and applicable from time to time at the installations as directed by BGL.
19. The rates quoted /agreed by the bidder are inclusive of all the taxes, duties.
20. It will be the responsibility of the bidder to pay as per the minimum wages of the appropriate government rules applicable under the Minimum Wage Act. Bidder shall submit records to BGL for verification along with the invoices.
21. The Bidders shall provide proof in respect of separate PF Code/No of the concerned RPF Commissioner / Authority.
22. Vendor has to consider, within this scope any additional test or requirements, arising out of any revision in statutory notification related to gas cylinder rules.
23. Quantities of cascade as per SOR are tentative and may change as per actual requirement. BGL does not guarantee for quantity of work awarded.

COMPLIANCE CLAUSE: Bidder undertakes to comply with all laws/rules/regulations applicable to his business and on enquiry of the same shall furnish information/documents to BGL within 7 days for such enquiry with BGL.

SCOPE OF WORK AT CCOE APPROVED WORK PREMISES-

1. Contractor shall carry out testing of CNG cascade cylinders at PESO approved testing facility as per Standard IS 5844, IS 8451 (Latest Amendments) and Gas Cylinder Rules 2004.
2. Contractor shall carry out following activities at his works:
3. Unloading of CNG cascade by crane/hydra.
4. Dismantling all fittings, tubes and cylinders.
5. Opening valves and De-gassing the cylinders by Nitrogen gas.
6. Cleaning the cylinders from inside with wire brush.
7. Weighing the cylinder.
8. External inspection (thickness, bulge, burn, dents, dig etc.).
9. Wall thickness measurement with ultrasonic.
10. Internal inspection Ultrasonic thickness test including Boroscopy and External Inspection in Thickness test including Ultrasonic.
11. Hydrostatic stretch test as per IS 5844 and Gas Cylinder Rules – 2004 in Jacketed method.
12. Steam and vacuum cleaning of cylinders.
13. Drying of Cylinders from inside by Hot air.
14. External sand blasting of cylinders and frame structures.
15. Ultrasonic Flaw detection test
16. Fixing of valves, pneumatic testing.
17. Deshaping of unserviceable cylinders.

18. Cascade painting and marking as per IS 5844, Gas Cylinder Rules 2004.
19. Check the good working condition of valve, threading, burst disc, tubings and fittings.
20. After testing of cylinders, contractor shall carry out loading and fixing of cylinders on cascade frame.
21. Contractor shall carry out refitting and assembling tubes, valves and fittings etc.
22. Bidder shall fix a plate on cascade with all necessary details including test date, due date, testing agency, cascade manufacturing year, cylinder serial numbers etc. The information plate shall be approved by BGL prior to fixing.
23. Testing of CNG Cylinder Valves Should be carried out by Hydraulic Pressure at 300 Bar.
24. To replace all Rupture Burst Disc of CNG Cascade Cylinders as mentioned in SOR.



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SECTION – 8

SPECIFICATION OF WORK

SPECIFICATION OF WORK:

Work shall be carried out as per following safe engineering practices.

1. Degassing.
2. Internal and External examination.
3. Record of test.
4. Marking.
5. Painting.
6. Calculation sheet.
7. History card.
8. Related instrument calibration.
9. Explosive meter check up.
10. Cylinder weight check up.
11. Final inspection.

1. Re-Testing of cylinder:

- 1.1 Shot blasting of cylinder before testing.
- 1.2 Cleaning of cylinders.
- 1.3 Ultrasonic Flaw detection testing of cylinders on parallel portion of the cylinders.
- 1.4 Hydro static stretch testing of cylinders as per Gas Cylinder Rules 2004 and IS 5844. In Jacketed method.
- 1.5 Issuing test certificates.

2. CNG cylinder valves:

- 2.1 Cleaning and overhauling of complete valves (Teflon packing, gland nut, spindle seat, retainer plate etc.
- 2.2 Burst disc, needle valve checking & replacement if required by BGL.
- 2.3 Testing of all valves for leak/passing by purging Nitrogen up to 150 bar.

3. Cylinder clamps:

- 3.1 Remove the clamps from cascade.
- 3.2 Replace the old studs with the new studs.
- 3.3 Zinc plating the complete clamps
- 3.4 Refix the clamps by using new lock nuts.

4. Cascade Tubing's:

- 4.1 Dismantling the complete SS tubing's.
- 4.2 Checking of all nut & ferrule & cleaning and replacement if required by BGL.
- 4.3 Replacement of Knobs of all valves if required by BGL.
- 4.4 Refixing of tubing, if required replace tubing.
- 4.5 Hydro testing of tubing at 300 bars.

- 4.6 Flushing of complete tubing by using Nitrogen.
- 4.7 Pressure testing, leak checking of cascades tubings, fittings with air/Nitrogen at 255 Kg/cm².
- 4.8 Calibration of SRVs and Pressure Gauges mentioning holding time with repairing & replacement with new may be done if found beyond repair.

5. **Cascade Frame:**

- 5.1 Checking of cascade frame for any damage or corrosion.
- 5.2 Repairing the damage parts.
- 5.3 Sand blasting of complete frame including Angles, Brackets & Channels.
- 5.4 Refixing the Angles & Channels by using new Nut Bolts
- 5.5 **Painting(Cascade Frame):**
Primer Coat: 2 coat of Zinc phosphate primer-coating thickness minimum 35 microns(μ) each coat.
Finish Coat: Two coat of Epoxy golden yellow (shade no: 356)-coating thickness minimum 35 microns(μ) each coat.
Total Coating (Primer & finish) Thickness minimum 140 microns (μ)

Painting (Cylinder: As per IS 4379):

- Primer Coat: One coat of Epoxy grey primer -coating thickness 25-30 microns(μ)
Finish Coat: One coat of Epoxy White shade on Cylinder shell & signal Red band (shade no: 537 as per IS: 5-1978) at neck end of cylinder: coating Thickness 40-50 microns (μ)
Total Coating (primer & finish) thickness 65-80 microns(μ)
- 5.7 Two coats of White Epoxy colour shall be applied after proper drying of Primer on the cylinder body & neck shall be painted with PO Red colour as per the Gas Cylinder Rules 2004.
 - 5.8 Two coats of Yellow Epoxy Colour shall be applied after proper drying of Primer on the Cascade frame.
 - 5.9 Ensure that only branded paints shall be used i.e. ASIAN/BERGER/SHALIMAR and certificates should be provided for paint if required by BGL.

6. Loading & Unloading of CNG Cascade Cylinder:

- 6.1 Loading/Unloading of CNG Cascade Cylinder shall be carried out either by Hydra or Mobile crane, depending of the requirement of specific job. Any other lifting equipment identified on case basis shall also be included as part of this Contractor's scope.
- 6.2 Mobile crane with Telescopic boom of required capacity shall be used. The capacity of crane shall be calculated by the Contractor prior to start of job keeping in view the load to be lifted and the distance/angle of lift and loading.
- 6.3 Loading & Un-loading of CNG Cascade Cylinders shall be from BGL's Location and Retail Outlets where CNG Cascade Cylinders are mounted on the Compressors.
- 6.4 Contractor has to take prior approval of Standard Operating Procedures (SOP) from BGL regarding Loading & Unloading of CNG Cascades.



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SECTION – 9

SPECIAL CONDITIONS OF CONTRACT

GENERAL INFORMATION:-

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. **GCC** is available at tender issuing office and same shall be referred by Bidder. Notwithstanding, the subdivisions of the documents into separate sections every part of each shall be deemed to be supplementary of every other part and shall be read with and into the Contract so far as it may be practicable to do so. Where any portion of the special conditions of the Contract (**SCC**) is repugnant to or at variance with any provisions of the **GCC** then provision of **SCC** Shall be deemed to override the provision of **GCC** only to the extent of each repugnance or variations. In case of any contradictions the Decision of the Engineer-In-Charge will be final and binding on the Contractor.

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/ LOI along with Statement of Agreed Variations.
- ii. Schedule of Rates as enclosures to Letter of Acceptance
- iii. Special Conditions of Contract
- iv. Service descriptions
- v. Instruction to Bidder
- vi. General Conditions of Contract
- vii. Indian Standards
- viii. Other applicable standards

1. **Price basis:**

Bidders to quote on the basis of **door deliver** inclusive of all taxes and duties, loading & unloading and installation charges as per scope of work defined in this tender. No additional payment shall be admissible over and above the quoted price.

2. **Validity of quoted rates:**

The rates quoted and accepted shall remain valid for the entire period of contract and no escalation whatsoever permissible after the award of contract.

3. **Taxes and duties:**

The entire work covered under this contract shall be treated as works contract services. Bidder shall be required to quote their rates for all the SOR items inclusive of all applicable taxes as defined in the tender document. The rates are inclusive of all applicable taxes in contract value. Any statutory variation in the Goods & service tax during the scheduled completion period only shall be considered by the owner against documentary evidence.

4. **Payment Terms:**

100% payment within 30 days after submission of invoice along with Test Certificates / Reports certified by Engineer-In-Charge of BGL. Contractor has to submit the invoice against each cascade.

Payment for spares shall be done on actual utilization certified by Engineer-In-Charge.

5. **Work order / Contract period-**

24 months from the date of LOI/ WO.

6. **Completion Period:**

The bidder needs to lift each lot of cascades up to 03 nos. within 10 days from the date of intimation by EIC to be intimated through letter or email.

Completion period of each lot of cascades up to 03 nos. shall be 30 days from the date of lifting of last cascade of each cascade lot.

A lot of cascades consists up to 03 Cascades as decided by EIC.

6. **Penalty/ PRS:**

a) Delay beyond 10 days from the date of intimation in lifting of last cascade of cascade lots up to 03 nos from BGL's station/ site shall incur a penalty up to Rs 2000/- per week per cascade.

b) Delay beyond 30 days from the date of lifting of last cascade of cascade lots up to 3 nos in commissioning/ installation of tested/ certified cascade at BGL's station/ site after testing of cascade as per the scope of works of tender shall incur a penalty up to Rs 2000/- per week per cascade.

c) Delay beyond 15 days from the date of intimation of defect in quality of work during next 2 months of operation from the date of commissioning of each respective cascade shall incur a penalty up to Rs 2000/- per cascade. The bidder shall have to arrange rectification of defect at no additional cost.

7. **Transportation & Dispatch Basis:**

Transportation (to & fro) shall be in the scope of contractor. The contractor should lift CN Cascade from various sites of BGL upto its testing unit at its own cost & risk. Loading & Unloading charges shall on contractors scope. The contractor should deliver these CNG Cascade(s) to its respective place or as instructed by BGL at its own risk and cost.

If any damage occur during transportation and or mishandling during testing processess, the full rectification cost shall be assessed by BGL and shall be deducted from Bill(s). If the damage found non repairable then that should be provided by the contractor.

8. **Transit Insurance-**

Transit insurance has to be arranged by Contractor and charges are to be included in quoted rates.

9. **Performance Guarantee:**

10% of Annualized Work Order value (excluding taxes and duties) in the form of Bank draft/ Banker's cheque or BG (as per attached pro-forma) as Contract Performance Security / Contract Performance Bank Guarantee (CPBG).

The Contract Performance Bank Guarantee will initially be kept valid for 90 days beyond the validity of contract and will be discharged not later than three months from the date of expiration of contract and Contractor's entire obligations including warrantee obligations

under the contract.

The Performance security shall be in the form of Crossed Demand Draft/Banker's Cheque or Bank Guarantee in favor of BGL, Hyderabad. Bank Guarantee shall be from any Indian scheduled commercial bank or a branch of an International bank situated in India and registered with Reserve Bank of India other than co-operative banks as scheduled foreign bank in case of Indian bidder and from any reputed International bank or Indian scheduled commercial bank in case of foreign bidder. However, other than the Nationalized Indian Bank, the bank whose BG 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, as per proforma enclosed in the Tender Document.

10. **Defect Liability Period (DLP) :**

03 months from the date of completion Work Order.

11. **Extension of Contract :**

The contract may be extended for a maximum period of 1 year at the same rates, terms and conditions subject to satisfactory performance of vendor and discretion of BGL, after the completion of contract period.

12. Retesting Certification issued by PESO/CCOE for carrying out the hydro test of CNG Cascade Cylinders at his premises, according to IS:5846-1993, IS :8451-2009, IS:5844-1970 and gas Cylinder rules-2004 should remain valid throughout the period of Work Order.

13. Bidders to submit documentary evidences of available machineries for carrying of re-testing of Cylinders along with the Bid.



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SECTION – 10

LOCATION OF CYLINDER CASCADES

Description and Location of Cascades due for Hydro testing:

S.No	Cascade No.	Make	Location	No. of Cylinders of 75 litre water capacity
1	EKCG/BGL-30/255-01	EKC	Hyderabad	30
2	EKCG/BGL-30/255-05	EKC	Hyderabad	30
3	EKCG/BGL-30/255-12M	EKC	Hyderabad	30
4	EKCG/BGL-30/255/05	EKC	Hyderabad	30
5	EKCG/BGL/30/255-02-M	EKC	Hyderabad	30
6	EKCG/BGL/30/255-03	EKC	Hyderabad	30
7	EKCG/BGL/40/255/10	EKC	Hyderabad	40
8	EKCG/BGL/40/255/12	EKC	Hyderabad	40
9	EKCG/BGL/40/255/6	EKC	Hyderabad	40
10	BGL-172	BPCL	Hyderabad	40
11	MKC/BGL/3000/12/025	MKC	Hyderabad	40
12	EKCG/BGL-40/255-08	EKC	Hyderabad	40
13	MKC/BGL/3000/11/0016	MKC	Hyderabad	40
14	EKCG/BGL-40(S)/260-07	EKC	Hyderabad	36
15	RCPL/BGL-40/255-03	RCPL	Hyderabad	40
16	RCPL/BGL-40/255-08	RCPL	Hyderabad	40
17	MKC/BGL/3000/11/0020	MKC	Hyderabad	40
18	EKCG/BGL-40/255/09	EKC	Hyderabad	40
19	MKC/BGL/000/11/006/40	MKC	Hyderabad	39
20	MKC/BGL/3000/11/0019	MKC	Hyderabad	40
21	EKCG/BGL-40/255/03	EKC	Hyderabad	40
22	RCPL/BGL-S-40/255-K- 01	RCPL	Hyderabad	40
23	EKC/BGL-40/260-02	EKC	Hyderabad	40
24	RCPL/BGL/M-40/255/B-05	RCPL	Hyderabad	40
25	RCPL/BGL/S-40/255-K-04	RCPL	Hyderabad	40
26	EKCT/BGL-40(M)/260-05	EKC	Hyderabad	38
27	EKCT/BGL-40/260-01	EKC	Hyderabad	40
28	MKCT/BGL/3000/11/0022	M	Hyderabad	40
29	EKCT/BGL-260-40/03	EKC	Hyderabad	40
30	EKCT/BGL-260-40/04	EKC	Hyderabad	40
31	MKC/BGL/3000/12/0024	M	Hyderabad	40
32	EKCT/BGL/40/255-05	EKC	Hyderabad	40
33	EKCT/BGL/40/255-15	EKC	Hyderabad	40

34	EKCT/BGL-30/255-12(M)	EKC	Hyderabad	30
35	EKCT/BGL-30/255/5(M)	EKC	Hyderabad	27
36	MKCT/BGL/3000/11/0011	M	Hyderabad	40
37	MKCT/BGL/3000/11/0012	M	Hyderabad	40
38	EKCT/BGL/40/255-11	EKC	Hyderabad	40
39	RCPL/BGL-40-255-B-03	RCPL	Hyderabad	40
40	MKC/BGL/3000/11/0008	M	Hyderabad	40
41	RCPL/BGL-40/255-07	RCPL	Hyderabad	40
42	RCPL/BGL/40/255-17	RCPL	Hyderabad	40
43	RCPL/BGL-S-255/K-06	RCPL	Hyderabad	40
44	RCPL/BGL-M-40/255-K-02	RCPL	Hyderabad	40
45	RCPL/BGL/5-40-255-K-04	RCPL	Hyderabad	40
46	MKCT/BGL/3000/11/0009	M	Hyderabad	40
47	EKCT/BGL/40/260-02	EKC	Hyderabad	38
48	RCPL/BGL-S-40/255-K-07	RCPL	Hyderabad	40
49	MKCT/BGL/3000/11/004	M	Hyderabad	40
50	EKCT/BGL/40/255-10	EKC	Hyderabad	39
51	RCPL/BGL/S-40/255-K-02	RCPL	Hyderabad	39
52	BPCL/BGL/255/40/173	BPCL	Hyderabad	40
53	BPCL/BGL/255/40/166	BPCL	Hyderabad	40
54	RCPL/BGL/40-255-10	RCPL	Hyderabad	39
55	RCPL/BGL-S-40/255-K-03	RCPL	Hyderabad	40
56	EKCT/BGL/40(M)-260-02	EKC	Hyderabad	39
57	EKCT/BGL-40-S-260-05	EKC	Hyderabad	40
58	MKCT/BGL/3000/11/0017	M	Hyderabad	38
59	RCPL/BGL/40/255-B-01	RCPL	Hyderabad	40
60	RCPL/BGL-40/255-18	RCPL	Hyderabad	40
61	RCPL/BGL-40/255-12	RCPL	Hyderabad	40
62	RCPL/BGL-40/255-02	RCPL	Hyderabad	40
63	RCPL/BGL/40-255-K-10	RCPL	Hyderabad	40
64	MKCT/BGL/3000/11/0015	M	Hyderabad	40
65	MKCT/BGL/3000/11/001	M	Hyderabad	38
66	EKCG/BGL/40/255-04	EKC	Hyderabad	40
67	BPCL/BGL/255/40/164	BPCL	Hyderabad	40
68	EKCT/BGL/40(m)-260-10	EKC	Hyderabad	40
69	MKCT/BGL/3000/11/005	M	Hyderabad	37
70	RCPL/BGL-40/255-13	RCPL	Hyderabad	40
71	RCPL/BGL-40/255-01	RCPL	Hyderabad	40
72	EKCT/BGL/40/260/02	EKC	Hyderabad	40
73	EKCT/BGL/40/260/01	EKC	Hyderabad	40

74	RCPL/BGL/40/255/15	RCPL	Hyderabad	40
75	RCPL/BGL/40/255/17	RCPL	Hyderabad	40
76	MKCT/BGL/3000/11/0012	MKC	Hyderabad	40
77	MKCT/BGL/3000/11/003	MKC	Hyderabad	40
78	MKCT/BGL/3000/11/0022	MKC	Hyderabad	40
79	EKCT/BGL-40(S)/260-09	EKC	Hyderabad	37
80	EKCT/BGL-30(S)/255-06	EKC	Hyderabad	30
81	EKCT/BGL-30(S)/255-02	EKC	Hyderabad	30
82	EKCT/BGL-30(S)/255-04	EKC	Hyderabad	30
Total No. of Cylinders for Hyderabad Region (Group-A)				3144
1	RCPL/BGL-04/255-14	RCPL	Kakinada	40
2	EKCT/BGL-405/260-8	EKC	Kakinada	40
3	EKCG/BGL-40/255/11	EKC	Kakinada	40
4	EKCT/BGL-40(S)/260-04	EKC	Kakinada	40
5	RCPL/BGL-40/255-16	RCPL	Kakinada	40
6	EKCT/BGL-40(S)/260-06	EKC	Kakinada	40
7	EKCG/BGL/40/255-13	EKC	Kakinada	40
Total No. of Cylinders for Kakinada Region (Group-B)				280
1	EKCT/BGL-42/260-01	EKC	Vijayawada	42
2	EKCT/BGL-42/260-02	EKC	Vijayawada	42
3	MKC/BGL/3000/11/0018	MKC	Vijayawada	38
4	MKC/BGL/3000/11/0014	MKC	Vijayawada	40
5	BGL-167	BPCL	Vijayawada	40
6	BGL-168	BPCL	Vijayawada	40
7	BGL-174	BPCL	Vijayawada	38
8	BGL-169	BPCL	Vijayawada	39
9	MKC/BGL/3000/12/0023	MKC	Vijayawada	40
10	RCPL/BGL-40/255-05	RCPL	Vijayawada	40
11	EKCG/BGL-40/255-14	EKC	Vijayawada	40
12	RCPL/BGL-40/255-11	RCPL	Vijayawada	40
13	EKCG/BGL/40/255/7	EKC	Vijayawada	40
14	RCPL/BGL-40/255-04	RCPL	Vijayawada	40
15	BGL-170	BPCL	Vijayawada	40
16	BGL-163	BPCL	Vijayawada	40
17	RCPL/BGL-40/255-09	RCPL	Vijayawada	40
18	BGL-171	BPCL	Vijayawada	40
19	MKC/BGL/3000/11/0013	MKC	Vijayawada	40
20	EKCT/BGL-40(M)/260-08	EKC	Vijayawada	40
21	EKCT/BGL-40(M)/260-07	EKC	Vijayawada	40
22	EKCT/BGL-40(M)/260-09	EKC	Vijayawada	38

23	RCPL/BGL-S-40/255-K-12	RCPL	Vijayawada	40
24	MKC/BGL/3000/11/002	MKC	Vijayawada	40
25	RCPL/BGL-40/255-K-09	RCPL	Vijayawada	40
26	RCPL/BGL-S-40/255-K-11	RCPL	Vijayawada	40
27	EKCT/BGL-40 M/260-05	EKC	Vijayawada	38
28	EKCT/BGL-40 (S)/260-06	EKC	Vijayawada	40
29	MKC/BGL/3000/11/0010	MKC	Vijayawada	40
30	MKC/BGL/3000/11/0007	MKC	Vijayawada	40
31	RCPL/BGL-40/255-06	RCPL	Vijayawada	40
32	EKCG/BGL-30/255-03 (M)	EKC	Vijayawada	30
33	EKCT/BGL-31/260-08	EKC	Vijayawada	31
34	EKCG/BGL-30/255-08 M	EKC	Vijayawada	30
35	EKCT/BGL-31/260-01	EKC	Vijayawada	31
36	EKCG/BGL-30/255-10 M	EKC	Vijayawada	30
37	EKCG/BGL-30/255-09 M	EKC	Vijayawada	30
38	EKCT/BGL-31/260-03	EKC	Vijayawada	31
39	EKCT/BGL-31/260-04	EKC	Vijayawada	31
40	EKCG/BGL-30/255-01 M	EKC	Vijayawada	30
41	EKCG/BGL-30/255-04 M	EKC	Vijayawada	30
42	EKCG/BGL-30/255-06 M	EKC	Vijayawada	30
43	EKCG/BGL-30/255-07 M	EKC	Vijayawada	30
44	EKCG/BGL-30/255-11 M	EKC	Vijayawada	30
45	EKCG/BGL-31/260-02	EKC	Vijayawada	31
46	EKCT/BGL-31/260-07	EKC	Vijayawada	31
47	EKCG/BGL-31/260-06	EKC	Vijayawada	31
48	EKCG/BGL-31/260-05	EKC	Vijayawada	31
Total No. of Cylinders for Vijayawada Region(Group-B)				1753
Total No. of Cylinders including 03 GA's				5177

Note: Serial Numbers and make of CNG storage cylinders may change as per actual site location.



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SECTION – 11
SCHEDULE OF RATES (SOR)



Tender for Inspection, Testing and Refurbishment of CNG
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SCHEDULE OF RATES (SOR) : GROUP- A

Group-A : (1) Hyderabad CGD Location

Sr. No.	Description	UOM	Qty (Total No. Of Cascade Cylinders), (a)	Unit Rate (Rs.) per Cylinder inclusive of all taxed & duties exclusive of GST (b)	Goods & Service Tax @%, Rs. (c)=(b) * GST %	Total Amount (Rs.) inclusive of all taxes, duties & GST, Rs. (d) = (c) x (a)
1	Re-furbishment, testing and Certification of CNG Cascade cylinders including mandatory hydrotesting of 75 WL capacity of CNG cylinders as per IS-5844 and Gas cylinder Rules 2010; Ultrasonic Flaw Detection Test on parallel portion of CNG cylinders including dismantling and refitting at BGL's site, pneumatic testing at site, re-commissioning, etc. as per scope of work as mentioned in the tender for the period of 3 years as per PESO norms, Gas Cylinder rules 2010 & other applicable standards (latest standards). (Total- 82 cascades of 30/ 40 cylinders in each cascade)	Nos	3144			
Sr. No.	Description	UOM	Qty(Total No. Of Cascades) (e)	Unit Rate (Rs.) per cascade inclusive of all taxed & duties except Service tax (f)	Goods & Service Tax @%, Rs. (g)=(f) * GST %	Total Amount (Rs.) inclusive of all taxes & duties except GST, Rs. (h) = (g) x (e)
2	Transportation of Cascades from BGL's site to work premises and work premises to BGL's site in Hyderabad, loading / unloading at both places, dismantling and refitting at BGL's site, pneumatic testing at site, recommissioning(including transit insurance) including Temporary replacement of cascade for continuing the operation at BGL site, (however cascade and spares) shall be provided by BGL.	Nos	82			
Sub total value Inclusive of all Taxes & Duties & GST (Rs) (I) =(d) + (h)						

Group -A -Hyderabad CGD Location : (II) SOR for Spare parts consumed during Testing & refurbishment.							
S.No	Description	UOM	Qty	Unit rate, Rs. (v)	GST @ -- % (x)	GST (y)=(v) x (x)	Total (Rs.) (z) =(y) x (v)
1	Cylinder Valve -vanaz make	No.	25				
2	3/4" SS Ferrule Set, Swagelok/Parker	Set	90				
3	1/4" SS Ferrule Set , Swagelok/Parker	Set	60				
4	Bull Nose Fitting 3/4"(M)*1/2(F), Vanaz make	No.	30				
5	Pressure Gauge Adaptor, Vanaz make	No.	12				
6	Burst Disc / Pressure Rupter disc(PRD), Vanaz make	No.	300				
7	3/4 " OD SS Tube, Sandivik make	Meter	30				
8	1/4 " OD SS Tube, Sandvik make	Meter	12				
9	SRV size:1/4" Swagelok/parker make	No.	3				
10	Cylinder valve Knob, vanaz make	No.	30				
11	3/4 " Nut SS 316, Swagelok/parker make	No.	60				
12	1/4 " Nut SS 316, Swagelok/parker make	No.	30				
13	Union Cross 3/4", Swagelok/parker make	No.	6				
14	Union Tee 3/4", Swagelok/parker make	No.	6				
15	Check Valve 3/4"OD, Swagelok/parker make	No.	3				
16	Male Connector 3/4"OD - 1/4" NPT(M) Swagelok/parker make	No.	300				
17	Bleede Valve 1/4" SS	No.	9				
18	2-Way valve Mainfold block, Swagelok/parker make	Set	3				
19	3/4" OD 2-way Valve Panel Mount, Swagelok/parker make	Set	3				
20	Male Connector (1/4" OD Tube x1/4" NPT Male)	No.	1				
21	Female Bulkhead Connector (1/4" OD Tube x 1/4" NPT-F)	No.	1				

22	4" Dial Glycerine filled Pressure Gauge (Range 0 to 420 kgf/cm ² with 1/4" NPT-M Bottom end connection)	No.	15				
23	3/4" x 3/8" NPT Male Connector, Swagelok/parker make	No.	6				
24	3/8" elbow SS 316, Swagelok/parker make	No.	6				
25	3/8" X 1/4" NPT Male Connector, Swagelok/parker make	No.	1				
26	3/8" Ferrule Set SS 316, Swagelok/parker make	No.	2				
27	3/8" Nut SS 316, Swagelok/parker make	No.	2				
28	1/4" Union SS 316, Swagelok/parker make	No.	1				
29	3/4" Union SS 316, Swagelok/parker make	No.	3				
30	2 WAY Valve knob	No.	48				
31	Spindle disc fo cylinder	No.	12				
32	Reducer 3/4"OD*1/4,,Swagelok/parker mak	No.	12				
33	1/4" OD 1/4" NPTM,, Male Connector, Swagelok/parker make	No.	12				
34	Fabrication Istallation of Gauge Panel	No.	60				
35	Supply & installation of canopy for cascades	Sq.m	12				
36	Removal & Re-installation of MS weld mesh fencing used for barricading of cng unit area to facilitate removal and re-installation of cascade mounted on cascade structure /ground. Rate to include breaking of RCC/WBM/Paver blocks, dismantling of welded joints/MS & re-welding/fabrication etc. grounding it to existing position as per direction of EIC	Rm	6				
37	Supply of Copper Tube -3/4 " OD X.049 thk(ASTM B 75, B68)	Rm	9				
38	Supply of Copper Tube -3/8 " OD X.035 thk(ASTM B 75, B68)	Rm	9				
39	Supply of Copper Nut ferrules -3/4 " OD X.035 thk(ASTM B 75, B68)	Set.	18				
40	Supply of Copper Nut ferrules -3/8 " OD X.035 thk(ASTM B 75, B68)	Set.	18				
Sub Total Value in Rs including all taxes, duties & GST, Rs. (II)							
Gross Total amount for Inspection, Testing & Refurbishment of CNG Cascades and Spare Parts prices for Group-A (Hyderabad CGD Location), Rs. (I) +(II)							

SCHEDULE OF RATES - GROUP-B

Group-B : (I) Vijayawada & Kakinada CGD Locations

Sr. No.	Description	UOM	Qty (Total No. Of Cascade Cylinders), (a)	Unit Rate (Rs.) per Cylinder inclusive of all taxed & duties exclusive of GST (b)	Goods & Service Tax @%, Rs. (c)=(b) * GST %	Total Amount (Rs.) inclusive of all taxes, duties & GST, Rs. (d) = (c) x (a)
1	Re-furbishment, testing and Certification of CNG Cascade cylinders including mandatory hydrotesting of 75 WL capacity of CNG cylinders as per IS-5844 and Gas cylinder Rules 2010; Ultrasonic Flaw Detection Test on parallel portion of CNG cylinders including dismantling and refitting at BGL's site, pneumatic testing at site, re-commissioning, etc. as per scope of work as mentioned in the tender for the period of 3 years as per PESO norms, Gas Cylinder rules 2010 & other applicable standards (latest standards). (Total- 55 cascades of 30/ 40 cylinders in each cascade)	Nos	2033			



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Sr. No.	Description	UOM	Qty(Total No. Of Cascades) (e)	Unit Rate (Rs.) per cascade inclusive of all taxed & duties except Service tax (f)	Goods & Service Tax @%, Rs. (g)=(f) * GST %	Total Amount (Rs.) inclusive of all taxes & duties except GST, Rs. (h) = (g) x (e)
2	Transportation of Cascades from BGL's site to work premises and work premises to BGL's site in Vijayawada, loading / unloading at both places, dismantling and refitting at BGL's site, pneumatic testing at site, recommissioning(including transit insurance) including Temporary replacement of cascade for continuing the operation at BGL site, (however cascade and spares) shall be provided by BGL	Nos	48			
3	Transportation of Cascades from BGL's site to work premises and work premises to BGL's site in Kakinada, loading / unloading at both places, dismantling and refitting at BGL's site, pneumatic testing at site, recommissioning(including transit insurance) including Temporary replacement of cascade for continuing the operationat BGL site, (however cascade and spares) shall be provided by BGL	Nos	7			
Sub total value Inclusive of All Taxes & Duties & GST (Rs) (I) =(d) + (h)						

**Group -B -Vijayawada & Kakinada CGD Locations : (II) SOR for Spare parts consumed during
Testing & refurbishment**

S.No	Description	UOM	Qty	Unit rate, Rs. (v)	GST @ --- % (x)	GST, Rs. % (y)=(v) x (x)	Total (Rs.) (z) =(x) x (y)
1	Cylinder Valve -vanaz make	No.	17				
2	3/4" SS Ferrule Set, Swagelok/Parker	Set	60				
3	1/4" SS Ferrule Set , Swagelok/Parker	Set	40				
4	Bull Nose Fitting 3/4"(M)*1/2(F), Vanaz make	No.	20				
5	Pressure Gauge Adaptor, Vanaz make	No.	8				
6	Burst Disc / Pressure Rupter disc(PRD), Vanaz make	No.	200				
7	3/4 " OD SS Tube, Sandivik make	Meter	20				
8	1/4 " OD SS Tube, Sandvik make	Meter	8				
9	SRV size:1/4" Swagelok/parker make	No.	2				
10	Cylinder valve Knob, vanaz make	No.	20				
11	3/4 " Nut SS 316, Swagelok/parker make	No.	40				
12	1/4 " Nut SS 316, Swagelok/parker make	No.	20				
13	Union Cross 3/4", Swagelok/parker make	No.	4				
14	Union Tee 3/4", Swagelok/parker make	No.	4				
15	Check Valve 3/4"OD, Swagelok/parker make	No.	2				
16	Male Connector 3/4"OD - 1/4" NPT(M) Swagelok/parker make	No.	200				
17	Bleede Valve 1/4" SS	No.	6				
18	2-Way valve Mainfold block, Swagelok/parker make	Set	2				
19	3/4" OD 2-way Valve Panel Mount, Swagelok/parker make	Set	2				
20	Male Connector (1/4" OD Tube x1/4" NPT Male)	No.	1				
21	Female Bulkhead Connector (1/4" OD Tube x 1/4" NPT-F)	No.	1				
22	4" Dial Glycerine filled Pressure Gauge (Range 0 to 420 kgf/cm2 with 1/4" NPT-M Bottom end connection)	No.	10				
23	3/4" x 3/8" NPT Male Connector, Swagelok/parker make	No.	4				
24	3/8" elbow SS 316, Swagelok/parker make	No.	4				
25	3/8" X 1/4" NPT Male Connector, Swagelok/parker make	No.	1				
26	3/8" Ferrule Set SS 316, Swagelok/parker make	No.	2				
27	3/8" Nut SS 316, Swagelok/parker make	No.	2				

28	1/4" Union SS 316, Swagelok/parker make	No.	1				
29	3/4" Union SS 316, Swagelok/parker make	No.	2				
30	2 WAY Valve knob	No.	32				
31	Spindle disc fo cylinder	No.	8				
32	Reducer 3/4"0d*1/4,,Swagelok/parker make	No.	8				
33	1/4" OD 1/4" NPTM,, Male Connector, Swagelok/parker make	No.	8				
34	Fabrication Istallation of Gauge Panel	No.	40				
35	Supply & installation of canopy for cascades	Sq.m	8				
36	Removal & Re-installation of MS weld mesh fencing used for barricading of cng unit area to facilitate removal and re-installation of cascade mounted on cascade structure /ground. Rate to include breaking of RCC/WBM/Paver blocks, dismantling of welded joints/MS & re-welding/fabrication etc. grounding it to existing position as per direction of EIC	Rm	4				
37	Supply of Copper Tube -3/4 " OD X.049 thk (ASTM B 75, B68)	Rm	6				
38	Supply of Copper Tube -3/8 " OD X.035 thk (ASTM B 75, B68)	Rm	6				
39	Supply of Copper Nut ferrules -3/4 " OD X.035 thk (ASTM B 75, B68)	Set.	12				
40	Supply of Copper Nut ferrules -3/8 " OD X.035 thk (ASTM B 75, B68)	Set.	12				
Sub total Value in Rs including all taxes, duties & GST, Rs. (II)							
Gross Total amount for Inspection, Testing & Refurbishment of CNG Cascades and Spare Parts prices for Group-B (Vijayawada & Kakinada CGD Locations) Rs. (I) +(II)							

Note:

- 1) Bidder may quote for Group-A or Group-B or both the Groups. Bidders quoted for a particular Group shall quote for all line item, else bid will gets rejected.
- 2) The utilization and payment of Spare Parts in respective group(s) shall be done at actuals.
- 3) Evaluation and Award shall be done as per the criteria mentioned in BEC of Bid Document.



Bhagyanagar Gas Ltd.

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