



TRIPURA NATURAL GAS COMPANY LIMITED

(A Joint Venture of GAIL (India) Ltd., Govt. of Tripura & Govt. of Assam)

**E-TENDER FOR
ARC FOR COMPREHENSIVE OPERATION & MAINTAINENCE OF M/S
BUCKHARDT MAKE & M/S KPCL MAKE GAS DRIVEN COMPRESSORS FOR
PERIOD OF 24 MONTHS UNDER CGD PROJECT OF TNGCL, AGARTALA**

UNDER OPEN DOMESTIC E - COMPETITIVE BIDDING

Bid Document No.: TNGCL/C&P/Operations/AMC Comprehensive/Comp. Pkg/SC(609)/2020-21

VOLUME –II OF II

PREPARED AND ISSUED BY

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SCOPE OF WORK



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GENERAL WORK DESCRIPTION



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GENERAL WORK DESCRIPTION

Comprehensive operation and maintenance contract of Burckhardt Compression India Pvt. Ltd. (BCIN) make online 1200/630/330 SCMh and KPCL make Online 1200/550 SCMh CNG compressors installed at various CNG stations

1. INTRODUCTION

Tripura Natural Gas Company has got the PNGRB authorization for City Gas Distribution in Agartala City, West Tripura (except areas already authorized) District and Gomati District for distribution of CNG to automobile sector through CNG filling stations and PNG to domestic household and commercial sectors.

Tripura Natural Gas Company Limited is a joint venture company of GAIL (India) Limited, Govt. of Tripura and Govt. of Assam with the mission to supply clean and green (eco-friendly) fuel. The company has installed 14 Nos. CNG Mother Stations, 03 Nos. online stations and 11 nos. Daughter Booster Stations to cater the CNG needs of our valuable customers. The CONTRACTOR is required to provide skilled manpower with 100% availability of genuine spares to carry out Comprehensive operation and maintenance contract of BCIN and KPCL make online CNG Compressors.

2. DETAILS OF COMPRESSORS

| SL. No. | Location | Compressor Sl. No. | Compressor Type-Make | Capacity | Qty |
|---------|--------------|--------------------|----------------------|-----------|-----|
| 1 | AD Nagar-MS | 08.06.03 | GED-BCIN | 330SCMH | 01 |
| | | 08.08.063 | GED-BCIN | 330SCMH | 01 |
| | | PGS-197 | GED-KPCL | 550 SCMh | 01 |
| 2 | TRTC-MS | 1211014 | GED-BCIN | 630 SCMh | 01 |
| 3 | KHAYERPUR-MS | 1210030 | GED-BCIN | 1200 SCMh | 01 |
| | | PGS-293 | GED-KPCL | 1200 SCMh | 01 |
| | | PGS-329 | GED-KPCL | 1200 SCMh | 01 |



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3. QUALIFICATION/ EXPERIENCE OF MANPOWER: The manpower to be engaged should have the following qualification & experience:

| Manpower | Qualification | Experience |
|------------|--|--|
| In-Charge | BE/BTech in Mechanical/ Electrical/ Instrumentation Engineering. | Minimum 3 years' experience in O&M of CNG online compressors |
| Technician | Minimum ITI (Mechanical/Electrical/ Instrumentation) | Minimum 2 years' experience in O&M of CNG online compressors |
| Operator | Minimum ITI (Any faculty) | Minimum 1 year' experience preferably in O&M of CNG or relevant field. |

The Minimum manpower to be deployed for respective CNG Station is as follows:

- | | |
|---------------------------|--------------------|
| 1. AD Nagar CNG Station: | 08 Operators |
| 2. TRTC CNG Station: | 04 Operators |
| 3. Khayerpur CNG Station: | 07 Operators |
| 4. Maintenance Team : | 04 Technicians |
| Total: | 23 Manpower |

4. SPECIAL WORKS CONDITION

- CONTRACTOR should ensure the manpower engaged is trained properly to handle O&M of CNG Compressors.
- CONTRACTOR will select the compressor operator and before deployment at TNGCL sites, TNGCL representative will take the Interviews of the operators.
- CONTRACTOR should provide its photo identity card to all the employees deployed for compressor operation. These I-card and Batch are to be constantly displayed during the duty hours. The ID card should be reissued immediately in case of lost or damage.



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- d. Shuffling of manpower from one location to other in consultation with EIC.
- e. CONTRACTOR should ensure availability of equipment's, special tools & tackles and spares around the clock at all the site.
- f. CONTRACTOR shall provide uniform (two sets of Industrial Cotton Dangri along with others) & PPEs (Good quality safety shoes, helmets, Raincoat, Gloves etc.) to all the manpower as approved by TNGCL & all manpower must wear uniform and PPEs during duty hours. Workers without proper uniform & PPE shall result to penalty as per the PenaltyTerms.
- g. CONTRACTOR shall provide the police verification of all the employees provided by him to carry out the operation & maintenance at various CNG O&M activity. Police verification shall be submitted for new employees within 60 days after issue of Service Order, failing of which suitable action will be taken against the CONTRACTOR. However, deposit slip for the same has to be submitted before commencement of the work.

5. STATUTORY AND LEGAL COMPLIANCES

- a. The CONTRACTOR shall be solely responsible for payment of wages to the bank account of the personnel deployed by him by 7th of the subsequent month.
- b. The CONTRACTOR shall ensure payment of wages to the person deployed and meet all statutory obligations of payment as per Minimum Wages Act 1948 and Payment of Wages Act 1936.
- c. The CONTRACTOR shall comply with the provisions of all the applicable labour laws, particularly following Acts and any amendments/modifications thereto or any other law relating thereto and rules and there under from time to time and comply with all provisions applicable therein and/or make all the payments specified therein.
 - 1. Payment of Wages Act 1936.
 - 2. Workmen's Compensation Act 1923.
 - 3. Industrial Disputes Act, 1947
 - 4. Minimum wages Act 1948
 - 5. Employees State Insurance Act 1948
 - 6. Maternity Benefit Act 1961
 - 7. Mines Act 1952
 - 8. Employees provided funds and Misc., Provisions Act 1952.



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9. Contract Labor (Regulation and Abolition) Act1970
 10. Payment of Bonus Act,1965
 11. Factories Act1948
 12. Shops and Establishment, Factories Act
- d. The CONTRACTOR shall be liable to pay his contribution and his employee's contribution to the State Insurance Scheme, Provident Fund Authorities, etc. in respect of all his employees for the performance of his obligations under this Agreement in accordance with the provisions of the Employees' State Insurance Act, 1948. Employees Provident Fund and Miscellaneous Provisions Act 1952 as amended from time to time. The PF no. & payment details of each employee to be presented with the monthly bills.
- e. In case the CONTRACTOR fails to submit and/or pay full details of his labour employed and the contributions payable, the Company shall recover from the monthly Bills of the CONTRACTOR the amount of the shortfall in contribution assessed by the concerned authorities. The amount so recovered shall be paid to the concerned authorities against the actual contribution payable for Employees State Insurance or Employees Provident Fund, etc.
- f. The monthly PF, ESIC challans etc. to be presented along ECR statement with the monthly RA bills. Also Individual PF & ESIC Nos. of all contractual employee to be submitted to TNGCL otherwise RA bills will not be process for releasing thepayments.
- g. All payments shall be made by the CONTRACTOR to his employees in accordance with the various Rules and Regulations stated above. The CONTRACTOR shall keep the Company indemnified from any claims whatsoever inclusive damages/costs or otherwise arising from injuries or alleged injuries or to death of persons employed by the CONTRACTOR.
- h. The CONTRACTOR shall provide the manpower as per the qualification and experience mentioned in the Bid document.
- i. The insurance for the following will be covered and paid by for CONTRACTOR and he shall indemnify the Company and hold the Company harmless in respect of all and any expense arising from any injury and or damage in respect of.

- Workmen's compensation and risk of accidents of CONTRACTOR's own



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employees.

- Risk of accident of CONTRACTOR's own employees, representatives, sub-contractors and agents' property of third parties arising out of the acts of CONTRACTOR's employees, representatives, sub-contractors and agents.
- j. The CONTRACTOR will be fully responsible for complying with all relevant provisions of the Contract Labour (R&A) Act, 1970, including registering himself/themselves under this Act and shall pay rates of wages and observe hours of work and conditions of employment according to rules in force from time to time.

6. ACCOMODATION/ TRANSPORTATION/ MEDICAL

The contractor shall make his own arrangement for the accommodation of his personnel at respective locations and subsequent transportation arrangement for them from their place of residence to work place or any other place as required and company shall have no obligation in this respect. The company shall not be responsible for providing any medical assistance to the contractor personnel.

7. DISCIPLINE

The Contractor shall be responsible for the discipline and good behavior of all his personnel deployed in the services contracted out and should any complaint be received against any of his employee; he shall arrange to replace such persons within 24 hours of notice issued by the Engineer-in-Charge. The decision of the Engineer-in-Charge in this matter shall be final and binding on the contractor.

8. SUB- LETTING OF CONTRACT

No part of this contract nor any share or interest therein in any manner or extent, will be transferred or assigned or sub-let, directly or indirectly to any person/ firm or Organization without prior permission of TNGCL.

GENERAL

- a. The operation and maintenance services shall be provided in terms of shift pattern on the round the clock basis.
- b. The Contractor shall deploy adequate number of technicians/operators/



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engineers/ helpers as well as tools & equipment for smooth and proper operation & maintenance of the compressors supplied in terms of the contract. In case required to meet operational requirements, the Contractor shall augment the same as per direction of Engineer-in-Charge.

- c. The Contractor is required to carry out all services as mentioned in the Scope of Services and Schedule of Rates on all the 365 days including Sunday and all holiday and around the clock.
- d. The workforce deployed by the Contractor for O&M services at CNG installation shall be of sound relevant technical professional expertise which is otherwise also essential from the safety point of view of the personnel of the Contractor as well as for the installation.
- e. Contractor has to ensure the safety of man and machine all the times. Damages of equipment due to negligence will be recovered as per the decision of Engineer-in-Charge, which will be final.
- f. Regarding work completion, the decision of the Engineer-in-Charge will be final and binding.
- g. The Contractor shall make his own arrangements to provide all facilities like boarding, transport, refreshment etc. to his workmen.
- h. Contractor shall maintain proper record of his working employee's attendance and payment made to them. Biometric Attendance Report to be submitted to the EIC every month for record.
- i. All the safety rules and regulations prevailing and applicable from time to time at the installations as directed by TNGCL will be strictly adhered to by the contractor.
- j. The services shall be provided in terms of shift pattern on the round the clock basis. The Contractor is responsible to provide effective and efficient services in all shifts and assure that there is no disruption in the services for want of any resources.
- k. All the jobs mentioned under scope of services shall be carried out as per



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sound engineering practices, work procedure documentation, recommendation of the manufacturer and as per the guidelines f direction of engineer-in-charge of authorized representative.

- i. The BIDDER shall allow weekly rest and daily working hours to his workmen as per the relevant Act / Law and Rule made there under. However, no work shall be left incomplete/unattended on any holiday/weekly rest. Technician/operators provided shall have minimum qualification of ITI. Contract in person or his authorized representative shall provide the services on daily basis to interact with Engineer-in- charge and deployed workman.
- m. The BIDDER shall ensure that no person in the premises of CNG Station would smoke or no fire or other ingredients of ignition should be permitted in the vicinity of the CNG Station.
- n. It will be the responsibility of the BIDDER to pay as per the minimum wages of the appropriate government applicable under the factories Minimum Wage Act1948.
- o. The services shall be provided in terms of shift pattern on the round the clock basis. The BIDDER is responsible to provide effective and efficient services in all shifts and assure that there is no disruption in the services for want of any resources.
- p. It is agreed between the parties that if the quality of jobs carried out by the BIDDER are not of standard as required by Company and breach of any of the terms and conditions herein mentioned, the Company is at liberty to terminate this Agreement at the option of the Company by giving one months' notice in the writing to the BIDDER without assigning any reasons thereof.
- q. On the termination of this Agreement, the BIDDER will immediately remove himself and his directly or indirectly employed or deployed manpower from the said premises with all the goods, if any, property and effects belonging to him. The BIDDER shall not cause any hindrance or objection in such circumstances.
- r. BIDDER should submit the trouble shooting & root cause analysis report to TNGCL, within 4-5 working days from the date of compressor Breakdown, failing to which RA bill will not be processed for the said LOA till the satisfactory report is received from bidder



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SCOPE OF WORK



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1. Equipment under Comprehensive Annual O&M Contract(CAMC)

Comprehensive Annual O&M Contract proposed will be limited to the equipment listed under CNG Mother Station as per details given below:

| SL. No. | Location | Compressor Sl. No. | Compressor Type-Make | Capacity | Qty | Engine Type-Make | Qty |
|---------|--------------|--------------------|----------------------|-----------|-----|------------------|-----|
| 1 | AD Nagar-MS | 08.06.03 | GED-BCIN | 330SCMH | 01 | G3306-CAT | 01 |
| | | 08.08.063 | GED-BCIN | 330SCMH | 01 | G3306-CAT | 01 |
| | | PGS-197 | GED-KPCL | 550 SCMH | 01 | G3406-CAT | 01 |
| 2 | TRTC-MS | 1211014 | GED-BCIN | 630 SCMH | 01 | G3406-CAT | 01 |
| 3 | KHAYERPUR-MS | 1210030 | GED-BCIN | 1200 SCMH | 01 | G3408-CAT | 01 |
| | | PGS-293 | GED-KPCL | 1200 SCMH | 01 | GTA855-Cummins | 01 |
| | | PGS-329 | GED-KPCL | 1200 SCMH | 01 | GTA855-Cummins | 01 |

Other accessories like Air Compressors, Instrumentation & Control Panel etc. related to the Gas Compressor packages.

2. Scope of Work:

- i. Any spare parts required during the contract period shall be supplied by contractor free of cost. Further, all the consumables, lubricating oil, coolant, sealant, man power, DM water, housekeeping etc. required for carrying out the comprehensive Operation & Maintenance of the complete compressor package during the contract period, including periodic, breakdown maintenance for continuous and uninterrupted operation of the compressor packages shall be in scope of the contractor and shall be kept in stock. Electricity shall be supplied free of cost to the contractor.



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- ii. All tools, tackles and fixtures required for carrying out the above maintenance of the compressor shall be in scope of the Contractor. Contractor shall maintain exclusive tool boxes for each location. The scope will also include handling equipment like crane, forklift, chain pulley block etc. required during the any maintenance activity.
- iii. A list of the Spares & Consumables shall be provided by the vendor for maintaining ready stock at the place of work for smooth operation of the compressor.
- iv. Any expert services required from Principle Company or OEM shall be arranged by the Contractor or his agent at his own cost. All arrangements like phone, fax, computer, internet etc. required for correspondences with above personnel shall be arranged by the Contractor.
- v. Submission of monthly PREVENTIVE, SCHEDULED and BREAKDOWN maintenance reports to EIC of respective location along with supported documents.
- vi. The Contractor shall submit a copy of the daily / weekly / fortnightly / monthly / bio-monthly / quarterly and yearly performance report to the EIC in both soft and hard form. All stationery including the printed material shall be in scope of the Contractor.
- vii. **Ensure 100% availability of each package on monthly basis**
- viii. The periodic maintenance required to be done as per OEM recommendation shall be taken up promptly. The Contractor shall provide the detailed preventive maintenance schedule along with the following:
 - Estimated down time required for each type of maintenance schedule.
 - List of spares and their quantities required for each type of maintenance schedule per compressor.
 - Type and number of man days required for each type of maintenance schedule per compressor.
- ix. The maintenance team will assist any unplanned/emergency maintenance of equipment installed at CNG Station
- x. The contractor shall use only OEM's certified/recommended spares during maintenance. In



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case, the schedule maintenance of the OEM manual recommends checking and replacing parts like valve springs, valve plates, piston rings etc. after certain time interval, same shall be replaced or used. Any untoward consequences for non- replacement of such parts shall be the responsibility of the contractor.

- xi. All routine and periodic checks / inspections required to be done as per OEM recommendation shall be done by the Contractor. Instruments required for above inspection like vernier calliper, micrometer screw gauge, fill gauges, bore gauge etc. shall be in scope of the Contractor and these instruments shall be calibrated every year.
- xii. During preventive maintenance/ handing over of machine, any wear limits of all components of compressor package will be determined/analyzed on pro rata basis from the last date of spare replacement and considering total running hours of machine. Joint decision for replacement of parts will be taken with due consideration to total running hours of package.
- xiii. All parts replaced by the Contractor during the above contract period shall be properly packed and stored/disposed/scrapped.
- xiv. All the maintenance / inspection job carried out by the Contractor shall be recorded and the report of the same shall be jointly signed by TNGCL representative.
- xv. Painting of the equipment is to be done by the contractor for safety of equipment, as per directions of EIC of the respective.
- xvi. A detailed report of all spares & consumables used have to be maintained by the contractor, having details of part no, quantity used, date, expected running hours before replacement, etc. The same has to be submitted monthly to TNGCL.
- xvii. All parts spare parts to be replaced in the compressor package should be brand new and unused. Inspection of each spare part to be utilized in the CNG Compressor will be carried out by TNGCL representative.
- xviii. All routine leak checks/inspections of the associated SS tubing, fittings valves and hoses outside the compressor package (i.e. inlet & outlet of compressor) shall be done by



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contractor.

- xix. The contractor shall ensure that compressor running parameters are recorded in daily log book including all vital parameters and Maintenance records of preventive and scheduled maintenance and spare used. The format of log book to be finalized in consultation with EIC in line with OEM specification/recommendations. All stationery including the printed material shall be in scope of the contractor.
- xx. The entire maintenance / inspection job carried out by the contractor shall be recorded and the report of the same shall be jointly signed by owner representative.
- xxi. The EIC will be final authority to take decision with regards to maintenance or replacement of parts or any disagreement between the contractor and owner during the execution of the contract.
- xxii. The contractor shall carry out thickness testing of pressure vessels periodically as per gas cylinder rules or static & mobile pressure vessels rules.
- xxiii. In general, the contractor has to carry out full Comprehensive Operation & Maintenance of the BIDDER make CNG packages at the CNG stations, thereby making available the equipment's in running conditions at all times, through supply of adequate skilled technicians, OEM spares, OEM recommended consumables and any other specialized service.
- xxiv. Contractor shall arrange filling of Co2 cylinders yearly, however the flooding system function check with discharging the Co2 shall be carried periodically and recorded. The cost of refilling of CO2 cylinder shall be reimbursed by TNGCL including necessary transportation cost on submission of necessary documents.
- xxv. The periodical hydro testing of CO2 cylinders and any other equipment through approved Agency as per Statutory Norms shall be in the Scope of the Bidder. The cost of the same shall be reimbursed by TNGCL including necessary transportation cost on submission of necessary documents.
- xxvi. Before CO2 refilling and hydro-testing, the bidder shall take prior approval of TNGCL towards fixing of the agency with rate.



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- xxvii. The Contractor shall carry out calibration of gas detectors and flame detectors every six months/yearly or earlier as per requirement or instruction of EIC of BGL. Also yearly calibration of all the instruments such as pressure gauges, transmitters, switches, mass flow meters etc. shall be in the scope of the Contractor. In addition to the above all safety relief valves shall also be tested and calibrated every year.
- xxviii. PLC programming/repair/update/reinstall is in the scope of contractor and same should be carried out with OEM/OES.
- xxix. Calibration shall be done from government-approved laboratories and shall be carried out at least 1 week prior to the calibration due date. Calibration should be done at Agartala Site and NABL Certified agency should be engaged for Calibration work during calibration Engineer (Instrumentation) should be present at site without Engineer Instrumentation calibration work can not be executed.

3. CNG Compressor Operations:

- i. The contractor shall carry out daily operation activities round the clock on shift basis of CNG Compressor, Air compressor and other associated equipment as per OEM recommendations in order to ensure smooth operations and minimize downtime of the Compressor packages.
- ii. The contract will deploy adequately trained personnel for carrying out Operations Activities.
- iii. All the vital parameters of the CNG Compressor such as Oil Level, Air, Coolant level etc. are to be noted in daily logbook.
- iv. Opening and Closing readings of all the Mass Flow Meters in the CNG Compressor packages are to be recorded as advised by EIC and the meter reading records are to be provided to EIC/TNGCL's representative on daily basis.
- v. The pressure reading of all CNG cascades in the CNG Station will be recorded by operator.
- vi. Taking hourly reading of parameters of operating packages.



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- vii. Continuous vigil on the condition of running equipment.
- viii. Fault finding and troubleshooting of the equipment are carried out and maintain the record of it.
- ix. Root Cause Analysis Report of any major breakdown to be submitted to TNGCL.
- x. MIS duties – all Checklists, DPRs, Monthly reports miscellaneous correspondence regarding resource requirements and information required by TNGCL as and when required.
- xi. Providing resources such as tools, cotton waste etc. as required for operations.
- xii. Providing all personnel with the necessary PPE like Safety shoes, Ear plugs / Ear muffs, Hand gloves, Cotton uniform etc. and ensure that the personnel shall all the time use PPE when they are at site.
- xiii. Disposal of empty barrels/burnt oil barrels shall be disposed according to documented procedure.
- xiv. All wastes (hazardous, bio-degradable & non-biodegradable) are stored & disposed off as per documented procedure.

4. Contractor team – Site deputation, Roles and Responsibility

Contractor shall deploy sufficient manpower to take care of said compressor packages. The functions and responsibilities of the team are listed below:

O&M In charge with sufficient experience and qualification as per Clause#3 under General Works Description.

- a. To function as a Co-ordinator with the TNGCL O&M team for Comprehensive AMC services.
- b. Interface with Contractor/ TNGCL on all equipment and system issues mobilize any Contractor/ TNGCL resources required for scheduled or unscheduled maintenance.



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- c. Assist TNGCL personnel with development and implementation of sound operating and maintenance strategy and procedures, including corrective action guidance.
- d. Assessments of consumables, operational and maintenance spares, OEM services.
- e. Provide reports as per TNGCL O&M practices.
- f. Conduct training programs for upgrading O&M resources, participate in all Contractor / TNGCL sponsored safety trainings.
- g. Collect and provide data as deemed necessary by TNGCL to analyze equipment performance.

Maintenance Team of Technicians with sufficient experience and qualification as per Clause#3 under General Works Description.

- a. To function as an integral member of Maintenance team for providing CAMC services to TNGCL, they will support site in-charge and will be available to meet any emergency situation.
- b. Assist the operation team for all routine, breakdown & scheduled maintenance activities during O&M.
- c. Monitor the performance of equipments.
- d. They will be part of operation team.

Operation Team: with sufficient experience and qualification as per Clause#3 under General Works Description.

- a. Assist the operation & maintenance requirement for CAMC services to TNGCL.
- b. Monitor all essential parameters of the running equipment and report any discrepancy in operational parameters.



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- c. Responsible for log book data capturing, minor maintenance activities, safety of team and handing over the charge to the next shift.

Maintenance team shall be made available for work on 24 Hrs basis

5. SCHEDULED MAINTAINENCE:

All activities required to be carried out as per instruction of EIC.

- a. All kind of machinery, tools, tackles and consumable items required to complete the above job are in the scope of the contractor.
- b. De-coupling of starter motor/electrical lockout of starter motor to be done before proceeding.
- c. Complete depressurizing of the equipment along with pipe fittings before proceeding with maintenance.
- d. Scheduled maintenance shall be categorized as monthly **1500, 3000, 6000, 9000 and 15000 hourly**. The tasks may be rescheduled based on equipment health as per instruction from EIC.
- e. Vibration condition Monitoring will be carried out in scheduled maintenance.
- f. In addition to the jobs in, the following jobs need to be carried out at each scheduled maintenance:
- i. Inspection/Cleaning/repair/replacement of valves, fittings and other piping's.
 - ii. Checking of diaphragms, O rings, gaskets. Replacements if required.
 - iii. Adjustment of PRVs.
 - iv. Checking the alignment of Engine compressor coupling and performing alignment if required.
 - v. Checking for freeness/ abnormal sounds/ vibration monitoring of all rotating reciprocating parts.
 - vi. Checking for any wear and tear of internal parts like crankshaft, crank shaft, piston rods, and cylinder liner etc.
 - vii. Maintenance of lubricator assembly, if required.
 - viii. Inspection of Engine valves, sparkplugs, carburetors. In case of any damaged



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- parts, necessary steps to be taken as per instruction of EIC.
- ix. Boxing up of dismantled parts & connection of all associate piping with proper gasket & fasteners.
 - x. Maintenance/ inspection of all other accessories like instrumentation gauges, pipe fittings, joints, PLC, electrical connections.
 - xi. Cleaning/ house-keeping of the equipment including the foundation area
 - xii. Return of excess/unused material (as per standard Engineering practice)to storage areas as per instructions of EIC.
 - xiii. The job shall be deemed completed only after successful trial including leak testing.
 - xiv. Maintenance of Scheduled Maintenance LOG Sheets.
- g. Spares will be supplied by TNGCL for Top & Major Overhauling of the Engine, Labour Part (manpower deployment) is in Bidder's Scope including consumables.
- h. Check the respective Suction Stage Pressure.
- i. Conditional monitoring shall be carried out in a month.
- j. Bidder has to support TNGCL during CNG Station automation work.

6. ROUTINE MAINTAINENCE:

Routine maintenance shall include the following in addition to OEM recommended checks:

- a. Checking for any abnormal sounds, vibration, loose bolts including foundation bolts and attending the problem if required.
- b. Checking Engine oil level and quality and oil top up if required. Both Compressor Crankcase oil and lubricator oil to be maintained.
- c. Draining of Condensate from blow down vessel daily.
- d. Cleaning of filters/ strainers, and replacing them if required.
- e. Checking for any leaks in pipe fittings and attending the leaks with proper gaskets, O-rings, as applicable.
- f. Check motion work oil and inspect crank case for contamination.
- g. Check motion work.
- h. Check of strainer in separator.



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- i. Control condensate raining.
 - j. Tighten all cylinder head screw respective bolts.
 - k. Check condition and tension of V-Belts.
 - l. Check the functioning of respective tightness of safety & diaphragm valves.
 - m. Check the Concentric valves of all the stages, wherever required replace inner parts.
 - n. Carry out minor repairs like arresting leakages, adjustments required etc. immediately to ensure availability of Compressor Package.
 - o. Report in standard format will be generated and sent to TNGCL.
 - p. Forecast of every preventive/ schedule maintenance with spares requirement will be done on regular basis.
 - q. Maintaining of Daily LOG Sheets.
- 7. TIME SCHEDULE & CONTRACT PERIOD:** 24 months from the date of handover of compressor packages.
- 8. SUB-LETTING OF CONTRACT:** No part of the CONTRACT nor any share or interest therein shall in any manner or degree be transferred, assigned or sublet by the BIDDER directly or indirectly to any person, firm or corporation whatsoever.



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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



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same shall be referred to by Tendered. Notwithstanding, the subdivisions of the documents in to 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.

1. Location / Site Information:

- a. AD Nagar CNG Mother Station
- b. TRTC CNG Mother Station
- c. Khayerpur CNG Mother Station

2. **Deployment Schedule:** Within 02 weeks from the award of work LOI/ WO or as intimated by Engineer In charge.

3. **Contract Period:** The effective period of the contract shall be 24 months from the date of handover of site extendable up to further Six Months based on overall performance of the Contract.

4. **Validity of Quoted Rates:** The Rates Quoted shall remain valid for the entire period of Contract and no escalation whatsoever shall be permissible after award of the contract except for the statutory variation due to GST. Any other taxes and duties are inclusive in the rates quoted by the party and it shall remain firm for the entire period of contract. The contract may be terminated at any time during the contract period without assigning any reason and by giving One Month notice to the contractor by the engineer-in-charge as per the requirement of TNGCL.

5. Taxes and Duties:-

- a. Income tax at the prevailing rate as applicable from time to time shall be deducted from contractor's bills as per Income tax Act, and quoted rates shall be



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deemed to include this

- b. The contractor agrees to and does hereby accept full and exclusive liability for the payment of any and all taxes, duties hereafter increased, imposed or modified from time to time in respect of works and materials. The prices shall also be inclusive of all taxes and duties but exclusive of GST on works contract as applicable. Owner shall make from contractors bills such tax deductions as are required as per rules and regulations in force from time to time.

6. Payment Terms:

- a. Monthly running account bills in triplicate subject to carrying out maintenance as per the scope of the work. Payment shall be made from the F&A Dept. of TNGCL, within 15 days from the date of receipt of the bill. The bill should be submitted along with the copies of all reports – preventive M&R, statutory testing f calibration reports etc as necessary duly certified by station In-Charge/Engineer-In-Charge.
- b. The Final Bill shall be submitted by the contractor within a month from the date of completion of the contract and payment of final bill shall be made to the contractor within 30 days of submission of the bill.

7. Contract Performance Security:

Within 15 days of the receipt of the notification of award of Fax of Intent from TNGCL the successful bidder shall furnish the contract performance security in accordance with Article 24 of General Conditions of The Contract in the form provided in the bidding documents. The Contract Performance Security shall be in the form of either Banker's Cheque or Demand Draft or Bank Guarantee or Letter of Credit and shall be in the currency of the Contract

The contract performance security shall be for an amount equal to 10% of the value of the contract towards faithful performance of the contractual obligations and performance of equipment. This Bank Guarantee/ DD/ Letter of Credit shall be from any Indian scheduled bank or a branch of an International bank situated in India and registered with Reserve bank of India as scheduled foreign bank. However, in case



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of bank guarantees from banks other than the Nationalized Indian banks, the bank must be a commercial bank having net worth in excess of Rs. 100 crores and a declaration to this effect should be made by such commercial bank either in the Bank Guarantee itself or separately on its letterhead.

This Bank Guarantee shall be valid for a period as stated in Article-24 of General Conditions of the Contract.

Performance Guarantee for 10% of total order/Contract value shall be exclusive of GST.

Failure of the successful bidder to comply with the requirements of this article shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security, in which event TNGCL may award the order to the next lowest evaluated bidder or call for new bids.

- 8. Recovery:** Cost of any Damage /loss of the property of TNGCL, by the contractor shall be recovered from the Bill / security deposit of the contractor and decision of the TGCL / EIC in this regard shall be final Binding and conclusive.
- 9. Right to get services carried out through other Agencies:** Nothing contained herein shall restrict TNGCL from accepting similar services from other agencies, at its discretion and at the risk and cost of the contractor, if the contractor fails to provide the said services any time. On such occasion TNGCL may avail services of L2,L3,.....etc. bidders, provided the same rates, terms and conditions acceptable to them.
- 10. Safety & Security:**
 - a. The contractor shall provide proper cotton dresses (Uniform), safety shoes and to provide safety kit as per requirement. No contractor's personnel shall be allowed on duty without wearing applicable Safety gears. Contractor should also ensure police verification of the personnel before deploying them.



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b. The contractor shall provide signed photo identification cards for his personnel to be deployed with in **TNGCL'S** premises. The contractor shall obtain proper gate passes for men/ materials from TNGCL's Security department.

11. Rejection of Tender: TNGCL reserves the right to accept or reject any or all tenders and to waive irregularities and Formalities at its own discretion. Any attempt for canvassing shall debar the tender resulting in summarily rejection of the tender.

12. Employment Liability of Contractor:

- a. The Contractor shall ensure and will be solely responsible for payment of wages and other dues latest by 7th of the following month to the personnel deployed by him in the presence of the Company's representative.
- b. The Contractor shall be directly responsible and indemnify the company against all charges, claims, dues etc. arising out of disputes relating to the dues and employment of personnel deployed by him.
- c. The Contractor shall indemnify the company against all losses or damages caused to it on account of acts of the personnel deployed by the contractor. The Contractor shall ensure regular and effective supervision of the personnel deployed by him.
- d. The Contractor shall be liable for making good all damages /losses arising out of loss or theft of each handled, leakage, pilferage of any office, furniture equipment fitting and fixtures what-so-ever as may be caused directly or indirectly by the engaged persons through him/ work carried out by them.
- e. The Contractor shall, at his own expense, comply with the Model Rules for labour welfare framed by the Govt. f Statutory Authorities under the various labour laws from time to time for the protection of their health, etc. In case Contractor fails to make arrangements as aforesaid, the TNGCL shall be entitled to do so and recover the cost thereof from Contractor.
- f. The Contractor shall at his own expense arrange for the safety provisions as required by the TNGCL in respect of all his labour directly or indirectly employed for performance of his obligations under this Agreement and



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shall provide all facilities in connection therewith. In case Contractor fails to make arrangements and provide necessary facilities as aforesaid, the TNGCL shall be entitled to do so and recover from Contractor.

- g. The Contractor will be fully responsible for complying with all relevant provisions of the Contract Labour (R&A) Act, 1970, including registering himself f themselves under this Act, if applicable and shall pay rates of wages and observe hours of work and conditions of employment according to rules in force from time to time.
- h. The Contractor shall observe and implement all the laws of the land and the rules framed there under for the staff employed by him and the TNGCL shall in no event be liable or responsible for any default or non- observance of such laws / rules on the part of the Contractor.
- i. The Contractor shall indemnify and keep indemnified the TNGCL against any damage and/ or injury caused to the premises, or to the properties or to the members of the staff of the TNGCL through the neglect or default or otherwise of the Contractor
- j. In case of non-payment of wages by the Contractor to their employees, and on being satisfied that such payments have not been made by the Contractor within the stipulated period as mentioned herein above, the TNGCL shall have the right to pay the dues to the Contract workmen engaged by the contractor for performing the aforesaid contractual obligations and deduct the amount so paid from the bills submitted by the Contractor.
- k. That if during the subsistence of the contract, any monetary liability occurs and/or becomes payable by the Contractor and has to be paid by the TNGCL by order of any authority or under any provisions of any law, the amount of such liability shall be recovered by TNGCL from the Contractor from the next bill / security deposit, as applicable.
- l. That in case the services are not provided at any time for whatsoever reasons, the Contractor shall make alternative arrangements so as to enable the work to be done satisfactorily at no extra cost to the TNGCL. If no such alternate arrangements are made, proportionate deductions shall be made out of the contract amount. TNGCL shall be free to make alternate arrangement, the cost of which shall be recovered from the Contractor's bills. In case of not providing the services on a particular working day, the pro rata deduction would be made from the monthly bill for the aforesaid day.



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- m. That any loss, theft or damage to the life and/or property of the employee of the TNGCL and/ or property of TNGCL shall be compensated by the Contractor, if the cause of such loss, theft or damage is on account of default, negligence and/or lapses of the employees of the Contractor. Any act of indiscipline / misconduct /theft / pilferage on the part of the employees of the Contractor would be viewed seriously and the TNGCL will have the right to terminate the contract forthwith without giving any prior notice.

13. PERIOD OF CONTRACT & TERMINATION OF CONTRACT:

The contract shall be initially for a period of 02 year and extendable for further 01 year, at the option of TNGCL after evaluation of their services, if found satisfactory and such extension shall be binding on the contractor. Notice of intention to extend the contract will however, be given 30 days before the expiry of the contract.

TNGCL reserves the right to terminate the full contract or a part thereof at any time without assigning any reason by giving a 30 days' notice in writing. The contractor shall not be entitled for any compensation by reason of any such termination.

On award of contract, the contractor shall enter into an agreement with TNGCL on a non-judicial stamp paper of requisite value in the prescribed format.



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**13. Compensation for non-fulfillment of obligation under Annual Maintenance
Contract of Online Compressors**

| Sl. No. | Penalty Clause | | | | | | | | | | | | |
|---|---|--|------------|---|--------------|--|--------------|--|--------------|--|--------------|---|-------------|
| 1 | <p>The BIDDER has to ensure 100% availability of each package cumulative on monthly basis failing which penalty will be attracted. Penalty as per monthly down time of machine on cumulative basis will be as follows.</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">a. Breakdown restored within 6 hours</td> <td style="text-align: right;">No Penalty</td> </tr> <tr> <td>b. Breakdown restored beyond 6 hours up to 12 hours</td> <td style="text-align: right;">Rs. 10,000/-</td> </tr> <tr> <td>c. Breakdown restored beyond 12 hrs up to 24 hrs</td> <td style="text-align: right;">Rs. 15,000/-</td> </tr> <tr> <td>d. Breakdown restored beyond 24 hrs up to 32 hrs</td> <td style="text-align: right;">Rs. 20,000/-</td> </tr> <tr> <td>e. Breakdown restored beyond 32 hrs up to 40 hrs</td> <td style="text-align: right;">Rs. 25,000/-</td> </tr> <tr> <td>d. Breakdown restored beyond 40hrs up to 72 hours</td> <td style="text-align: right;">Rs.30,000/-</td> </tr> </table> <p>e. In case there is a continuous breakdown beyond 72 hours upto 15 days, 50% of monthly maintenance charges excluding operational part (30% of Lump-sum Charges) will be deducted.</p> <p>f. In case there is a continuous breakdown beyond 15 days, no maintenance charges will be paid. Only operational charges (i.e, 30% of Lump-sum Charges) may be payable at the sole discretion of Engineer-in-charge</p> | a. Breakdown restored within 6 hours | No Penalty | b. Breakdown restored beyond 6 hours up to 12 hours | Rs. 10,000/- | c. Breakdown restored beyond 12 hrs up to 24 hrs | Rs. 15,000/- | d. Breakdown restored beyond 24 hrs up to 32 hrs | Rs. 20,000/- | e. Breakdown restored beyond 32 hrs up to 40 hrs | Rs. 25,000/- | d. Breakdown restored beyond 40hrs up to 72 hours | Rs.30,000/- |
| a. Breakdown restored within 6 hours | No Penalty | | | | | | | | | | | | |
| b. Breakdown restored beyond 6 hours up to 12 hours | Rs. 10,000/- | | | | | | | | | | | | |
| c. Breakdown restored beyond 12 hrs up to 24 hrs | Rs. 15,000/- | | | | | | | | | | | | |
| d. Breakdown restored beyond 24 hrs up to 32 hrs | Rs. 20,000/- | | | | | | | | | | | | |
| e. Breakdown restored beyond 32 hrs up to 40 hrs | Rs. 25,000/- | | | | | | | | | | | | |
| d. Breakdown restored beyond 40hrs up to 72 hours | Rs.30,000/- | | | | | | | | | | | | |
| 2 | In any case/ any situation, total penalty will be limited to 50% of monthly invoice value of concerned package. | | | | | | | | | | | | |
| 3 | <p>Non-availability of manpower in any shift/any workplace will not be allowed. The BIDDER will be penalized for each such act as follows</p> <p>For non-availability of compressor operator, PPE, Uniform = 1% of Max. Invoice value of Single Pkg. f Incident & Max. amount will be penalized up to 5% of the Max. Invoice value of each package in a month.</p> <p>If the BIDDER fails to provide PPE and Uniform to his manpower after stipulated time, TNGCL will provide the PPE and Uniform at his risk and cost considering original invoice Value plus 15% overhead charges which will be recovered from BIDDER.</p> | | | | | | | | | | | | |
| 4 | We at TNGCL will not tolerate any kind of Indiscipline act at the premises from the BIDDER employee's during the service time. If any such incident happens, the BIDDER will be penalized 2% of the Max. Inv. Value / Incident & Max. amount will be penalized up to 5% of single package invoice value | | | | | | | | | | | | |
| 5 | For any IR (Industrial Relation) issue (like strike by operators for wages, union issues etc.) CNGstationoperationstopped,BIDDERwillbepenalizedRs.25,000/-perincident.Max. Capping is up to Rs.1,00,000/- per Month | | | | | | | | | | | | |



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SCHEDULE OF RATE



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SCHEDULE OF RATE

GROUP A (BCIN MAKE COMPRESSOR)

| Sl. No. | Description | Unit | Qty | Unit Rate | Per Unit GST | Per Unit Rate inclusive of all taxes | Total amount inclusive of all taxes and duties |
|---------|---|-------|-----|-----------|--------------|--------------------------------------|--|
| 1 | Lump sum Comprehensive operation & maintenance charges of BCIN Make 330 SCM³/H Gas Engine Driven CNG Compressor for a period of 2 (Two) year inclusive of all consumables, manpower, spares and lubricants excluding electric power charges as under: | | | | | | |
| 1.1 | Comprehensive O&M Charge | Month | 48 | | | | |
| 2 | Lump sum Comprehensive operation & maintenance charges of BCIN Make 630 SCM³/H Gas Engine Driven CNG Compressor for a period of 2 (Two) year inclusive of all consumables, manpower, spares and lubricants excluding electric power charges as under: | | | | | | |
| 2.1 | Comprehensive O&M Charge | Month | 24 | | | | |
| 3 | Lump sum Comprehensive operation & maintenance charges of BCIN Make 1200 SCM³/H Gas Engine Driven CNG Compressor for a period of 2 (Two) years inclusive of all consumables, manpower, spares and lubricants excluding electric power charges as under: | | | | | | |
| 3.1 | Comprehensive O&M Charge | Month | 24 | | | | |
| | Total Basic Rate | | | | | | |
| | Total GST | | | | | | |
| | Total amount inclusive of all taxes | | | | | | |



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SEAL & SIGNATURE OF THE BIDDER

SCHEDULE OF RATE

GROUP B (KPCL MAKE COMPRESSOR)

| Sl. No. | Description | Unit | Qty | Unit Rate | Per Unit GST | Per Unit Rate inclusive of all taxes | Total amount inclusive of all taxes and duties |
|---------|---|-------|-----|-----------|--------------|--------------------------------------|--|
| 1 | Lump sum Comprehensive operation & maintenance charges of KPCL Make 550 SCM Gas Engine Driven CNG Compressor for a period of 2 (Two) year inclusive of all consumables, manpower, spares and lubricants excluding electric power charges as under: | | | | | | |
| 1.1 | Comprehensive O&M Charge | Month | 24 | | | | |
| 2 | Lump sum Comprehensive operation & maintenance charges of BCIN Make 1200 SCM Gas Engine Driven CNG Compressor for a period of 2 (Two) years inclusive of all consumables, manpower, spares and lubricants excluding electric power charges as under: | | | | | | |
| 2.1 | Comprehensive O&M Charge | Month | 48 | | | | |
| | Total Basic Rate | | | | | | |
| | Total GST | | | | | | |
| | Total amount inclusive of all taxes | | | | | | |

SEAL & SIGNATURE OF THE BIDDER