



Bhagyanagar Gas Ltd.

BHAGYANAGAR GAS
LIMITED

**Tender for Procurement of Automatic Power Factor
Control Panels at various CNG Stations of BGL in and
around of Hyderabad.**

VOLUME
II OF II

Bid Document No. BGL/258/2014-15



Bhagyanagar Gas Ltd.

BHAGYANAGAR GAS LIMITED

(A JOINT VENTURE OF HPCL & GAIL)

BID DOCUMENT FOR

**PROCUREMENT OF AUTOMATIC POWER FACTOR
CONTROL PANELS AT VARIOUS CNG STATIONS OF
BGL IN AND AROUND OF HYDERABAD.**

**UNDER LIMITED DOMESTIC
COMPETITIVE BIDDING IN SINGLE BID SYSTEM**

Bid Document No.: BGL/258/2014-15

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SECTION – 7

SPECIAL CONDITIONS OF CONTRACT (SCC)



General:

The Special Conditions of Contract shall be read in conjunction with the General Conditions of Contract, Schedule of rates, specifications, drawings and any other documents forming part of contract, wherever the context so requires. Notwithstanding the sub-division of the documents into these separate sections and volumes, every part of each shall be deemed to be supplementary to and complementary of every other part and shall be read with and into the CONTRACT so far as it may be practicable to do so.

Where any portion of the General Condition of Contract is repugnant to or at variance with any provisions of the Special Conditions of Contract, unless a different intention appears, the provisions of the Special Conditions of Contract shall be deemed to override the provisions of the General Conditions of Contract and shall to the extent of such repugnancy, or variations, prevail.

Location/ Site Information:

- a) It is understood that before quoting the rates, the contractor will visit the work site which is situated at APSRTC, CNG stations of BGL in around Hyderabad as mentioned below and will make him/ herself acquainted fully and understand the nature and quantum of the job to be carried out. Ignorance of this will not be considered after award of work. The contractor will be responsible to complete the entire job in all respects.
- b) The following are the details of locations:
 1. **BGL-COCO, Saroornagar, Hyderabad**
 2. **APSRTC depot, Cantonment, Hyderabad**
 3. **APSRTC depot, Hakimpet, Hyderabad**
 4. **APSRTC depot, Medchal, Hyderabad**

Scope of Work:

The scope of work includes Design, Manufacture, Supply and installation of Automatic Power Factor Control Panel (APFC Panel) based on Micro-Processor based intelligent auto switch control panel of following ratings at required locations:

1. BGL-COCO, Saroornagar, Hyderabad-30KVAR
2. APSRTC depot, Cantonment, Hyderabad-60KVAR
3. APSRTC depot, Hakimpet, Hyderabad-30KVAR
4. APSRTC depot, Medchal, Hyderabad-11KVAR

Automatic Power Factor Control Panel (APFC Panel) should be of following features:

- Automatic C/K and rated step adjustments.
- Auto CT polarity correction.
- Input and each capacitor bank protection with MCCB/MCB.
- Display of Power Factor, Voltage, Current & total harmonic distortion of current(THD).



- Programmable sensitivity.
- System selection based on load and operational analysis.
- Proper selection of components to achieve uninterrupted cohesive operation.
- LED indication for Capacitor Bank/Stages selected and as per Technical specifications of the tender.

Vendor to include in his quoted rates installation charges, supply of required rating & required length of power cable, Cable trays and all other required accessories for connecting with existing operational loads at locations. No extra payments shall be made except for SOR items.

1. The bidder must mobilize adequate manpower for this site.
2. The quantities given above against individual items/ SORs are indicative and shall not be considered to be binding. The quantities may increase or decrease at site at the time of actual execution and as per the discretion of Owner/ Engineer-in-charge. The unit rate shall be operated to work out the final payment due to Contractor.
3. BGL reserves the right to operate any SOR for the full quantities or part quantities or nil quantities as per the site conditions. In this case; BGL's decision will be final and binding.
4. **Safety rules and regulation:**

Contractor shall adopt the safety rules and regulation as per the prevailing practices. The contractor shall be executing the civil & miscellaneous jobs in the running/ already operational station, the contractor has to take utmost safety in execution of the jobs. He has to appoint one dedicated supervisor for the site at CNG station at Saroornagar, and the works should be executed during day time from 09:00 AM to 06:00 PM by taking proper cold/ hot work permit systems. If the works are to be executed beyond 06:00PM, the contractor has to take prior approval from site-in-charge/ EIC & work station-in-charge. If any hot work like chipping, welding, cutting etc. have to be carried out, which can create sparks, fire etc., have to be done only in presence of BGL official by taking proper approval from site-in-charge/ EIC & work station-in-charge by deploying proper fire & safety equipments like extinguishers/ fire hydrants etc. The sites, where works will be going on; should be barricaded by putting necessary steel/ tin cover or as suitable and directed by EIC for at least 1 meter height so that these should not affect/ hamper the operation/ running of the existing equipments. All the workers shall be provided with proper safety equipments like shoes, helmets, etc. Sign boards like work under progress, danger, etc shall be displayed at the work site. Contractor shall ensure quality supervision in the working areas. No hot works are allowed in the CNG area without proper clearance from BGL.

5. **TRANSPORTATION OF ALL MATERIAL:**

Shall be arranged by the contractor on his own and no separate payment shall be paid. It should be included in the offered rate.



6. **ALL MANPOWER, MACHINERIES TOOLS AND TACKLES:**
Equipment's, tools/tackles, machinery, labor, manpower etc for the work shall be in the scope of contractor.
7. **VALIDITY OF CONTRACT PERIOD:**
5 months from the date of award of work.
8. **COMPLETION TIME:**
Supply, Installation, commissioning of APFC panel at all locations shall be within 4 weeks from the date of placement of WO.
9. **MOBILIZATION PERIOD:NA**
10. **MOBILIZATION ADVANCE: Nil**
11. **DEFECT LIABILITY PERIOD:**
One year from the date of successful completion of entire work for each location.
12. **PRICE REDUCTION SCHEDULE (LD):**
The price reduction schedule shall be @ 0.5% per week of delay or part thereof subject to maximum of 5% of total undelivered portion of contract value.
The said amount will be recovered from amount due to the Contractor/
Contractor's Contract Performance Security payable on demand.
The decision of the ENGINEER-IN-CHARGE in regard to applicability of Price Reduction Schedule shall be final and binding on the CONTRACTOR.
13. **SECURITY DEPOSIT:**
10% of executed works of RA bill/final bill for which the contractor has to submit BG or which may be deducted from the submitted RA bills/final.
14. **PAYMENTS:**
Payments shall be made after successful commissioning of supplied APFC panels and after due acceptance of EIC. RA bills shall be made after completion of respective works of SOR after acceptance /approval of Engineer-In Charge.
15. **TERMS OF PAYMENTS:**
The payment shall be made progressively against supply, installation and successful commissioning of each APFC panel in the following manner.
 - a. 100% of order value will be paid progressively by owner with in 15days after due acceptance by EIC.
 - b. Invoice in triplicate.
 - c. Performance Bank Gurantee(s) of 10% of contract value(If already submitted, copy of the same)
16. **ABNORMALLY HIGH RATES ITEMS(AHR) :**
In then schedule of Rates (SOR) ,where the tenderer's quoted rate(s) for the items exceeds 50 % of the Owner's estimated rate such rate shall be considered as



abnormally high rates (AHR) and payments of the AHR items, beyond the SOR quantity, shall be made at the least of the following rates.

19.1 RATES AS PER SCHEDULE OF RATES:

19.2 Rate of the item, which shall be derived as follows:

- A) Based on rates of the machine and labour as available from the contract (Which includes contractor supervision, profit, overheads and other expenses)
- B) In case rates are not available in the contract ,rates will be calculated based On the prevailing market rates of machine ,material and labour plus 15 % to cover contractor's supervision profit, overhead and other expenses.

20. EXTRA ITEMS/SUBSTITUTED ITEMS:

If any work to be executed relating to the contracted work and rate for the Same is not available in the schedule of the rate then the following methodology shall be adopted .

- A) If the item of work is similar to the item for which he has quoted rates in the Schedule Of rates, the rate will be derived from similar items of work in the SOR.
- B) If any item of work does not appear in the SOR quoted by the contractor in that case the rates of such items shall be derived from cost of material and labour plus 15 % to cover contractor's supervision profit, overhead and other expenses. The rate shall be derived from market rate analysis.

21. SERVICE TAX:

The Quoted price/rates should be inclusive of all taxes and duties EXCEPT SERVICE TAX. It may be noted that the responsibility of payment of Service tax lies with the Service Provider only. Incase of Service tax is applicable for the tendered work, the contractor shall claim the service tax indicating rate of abatement/deduction allowed as per " Service Tax Act " in the 1st Invoice itself. Contractor providing taxable service shall issue an Invoice/Bill serially numbered and shall contain the following:-

- a) Name and address and Service tax Registration No of service provider
- b) Name and address of the taxable service receiver,
- c) Description, Classification and value of taxable service provided,
- d) Service tax amount

The above details are required to enable BGL to avail Cenvat credit for the service tax payment.

Payments to Service provider for claiming service tax amount will be made provided above formalities are fulfilled only. Incase of any statutory variation in Service tax during the currency of the contract, the contractor shall submit a copy of Government notification to evidence the rate as applicable on the date of submission of bid and on the date of revision. Claim for payment of service



tax/statutory variation in service tax, should be raised within two(2) months from the date of issue of Government Notification for payment of differential service tax, otherwise claim in respect of above shall not be entertained for payment of arrears.

22 . TAXES, DUTIES, OCTROI, LEVIES ETC.:

The quoted rates/prices shall be deemed to be including of all taxes including sales tax work contract tax, octroi, levies , over head charges etc till completion of the contract and contractor shall not be eligible for any compensation on this account. Contractors are advised to quote the service tax rate, applicable at the time of submission of offer, clearly in their commercial bid/s. While arriving the lowest bidder (among the bidders who have quoted for the work), L1, service tax shall be taken in to account while calculating the bid value.

23 .The Engineer In charge shall have the power to :

- A) issue the further necessary instruction to the contractor from time to time during the progress of the work for the purpose proper and adequate execution of it and the contractor shall carry out and be bounded by the same
- B) Order the contractor to remove or replace any workmen whom the company considers incompetent or unsuitable on the opinion of the company's representative as to the competence of any workman engaged by the contractor. The decision of EIC shall be final and binding on the contractor.

24 PHOTOGRAPHS/LABOUR PERMISSION/VEHICLE PERMISSION:

The contractor shall arrange to make photo gate passes/labour permissions/vehicle passes etc. for his persons/labours/vehicles for working in site plant premises at his own cost as rules of the company.

**25 RESPONSIBILITIES OF THE CONTRACTOR AND COMPLIANCE WITH
LABOUR/INDUSTRIAL LAWS:**

- A) The contractor shall discharge obligation as provided under various applicable statutory enactments including the Employees Provident Fund and miscellaneous Provisions Act 1952, the employees state insurance (ESI) act 1948, the contract labour (regulation and abolition)act 1970, the inter state Migrant workmen (regulation of employment and conditions of service)act 1979,the minimum Wages Act, 1948 the payment of wages act 1936 ,Workman Compensation Act 1923, payment of bonus act, and various other labor legislations as in existence (at present in India) and as amended from time to time
- B) The contractor shall be responsible for required contributions towards PF . ESI,Pension or any other statutory payments to be made in respect of the contract and the personnel employed for rendering the services to BGL and shall deposit these amounts on or before the prescribed dates. Every contractor shall submit the proof of depositing the employee's and employers



contributions. The contractor shall be responsible to pay any administrative /inspection charges thereof, where applicable ,in respect of the personnel employed by him for the work of BGL

- C) The contractor shall regularly submit all relevant records/documents to BGL representative for verification.
- D) The contractor shall be solely responsible for the payment of wages and other dues to the personnel, if any, deployed by him latest by 7th day of the subsequent month.
- E) The contractor shall indemnify BGL against all claims, demands, actions, cost and charges etc brought by any court, Competent Authority / Statutory Authorities against any act or acts of the contractor or his worker.
- F) The contractor shall ensure regular and effective supervision and control of the personnel, if any, deployed by him and gives suitable direction for undertaking the contractual obligations.
- G) The contractor shall not employ or permit to be employed any person suffering from any contagious, loathsome or infectious disease. The contractor shall deploy the workers after verification of their character and antecedents. In case any worker is found having criminal record, he shall have to be immediately replaced without assigning any reason under intimation to Engineer-In Charge.
- H) The personal to be deployed to carry –out the job should be on rolls of the Contractor/contracting firm.

26. All the tender papers must be stamped and signed



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SECTION – 8

TECHNICAL SPECIFICATION



TECHNICAL SPECIFICATION AUTOMATIC POWER FACTOR CORRECTOR

1. Contactors

Contactors shall be 3 phase, IEC rated.

2. Digital Microprocessor Controller

The digital microprocessor controller shall be 8 to 4 steps controller as per the KVA rating, which includes the following features:

- a) Adjustable target power factor from 0.85 lagging to -0.95 leading.
- b) Circular or linear switching modes.
- c) Automatic or manual switching of steps.
- d) switching ratios of 1:1:1:1:1, 1:1:2:2:2, 1:1:2:2:4, 1:1:2:3:3, 1:1:2:4:4, 1:1:2:4:8, 1:2:2:2:2, 1:2:3:3:3, 1:2:3:4:4, 1:2:3:6:6, 1:2:4:4:4, 1:2:4:8:8
- e) Switches up to 12 steps for each switching ratio.
- f) Option of selecting switched steps as fixed steps.
- g) Adjustable capacitor current to current transformer ratio (c/k value or sensitivity) from 0.025A to 1.5A.
- h) selectable switching on and off delays of 10, 30, 60, 120, 180, 300, and 500 seconds and an option to have the controller automatically adjust the switching on and off delay between 2-500 seconds as a function of reactive load.
- i) Selectable re-switching blocking delay of 20, 60, 180, and 300 seconds.
- j) Choice of automatic, semi automatic or manual determination of CT ratio and position, c/k ratio, step switching ratio, and step quantity.
- k) Memorization of CT position after the first start-up in automatic start-up mode.
- l) Measuring voltage range of 58 - 690 Volt without potential transformer.
- m) Displays capacitor step current based on CT ratio without having to use multipliers.
- n) Displays fundamental and RMS current on the main bus bar without having to use multipliers.
- o) Displays individual harmonic current distortion on the main bus bar for the 3rd, 5th, 7th, 11th, 13th, and 17th harmonics.
- p) Temperature sensor adjustable from 25 to 50°C.
- q) Alarm relay for temperature above set point, individual harmonic current distortion above set point, total harmonic current distortion above set point, power factor below target set point, measuring voltage missing, excessive CT secondary current, CT secondary current too low.
- r) Selectable step switching feature in alarm conditions which provides anti-resonance features.
- s) Selection of activation or deactivation of individual alarms.
- t) Display shows symbols for alarms when in alarm status and dry alarm contact closes in alarm condition.
- u) No voltage release switches out all capacitors in case of interruption of supply voltage.
- v) Monitors and displays quantity of individual step operations for determining contactor wear.



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- w) Displays a fault when any step current is reduced to zero indicating faulty step components.
- x) Communications via RS232 as a standard with price adder for RS485 MODBUS RTU using Windows software.
- y) Key board locking feature to prevent unauthorized tampering.
- z) watchdog continuously monitors processor and indicates a fault if the processor malfunctions.

3. Enclosure

Enclosures shall be made of Heavy duty 16SWG-CRCA sheet enclosure with powder coating.

The enclosure door shall have a lockable handle.

4. Labelling

A “Wait one minute after disconnection from supply” label shall be located on the enclosure door. A “Wait five minutes after disconnection from supply” label shall be provided loose for the disconnecting device. Both labels shall be worded as per code requirements.

5. Testing

Testing shall be performed as per CSA and UL standards. For filtered units a confirmation of the filter tuning frequencies must be performed prior to shipment.



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SECTION – 9

SCHEDULE OF RATES



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SCHEDULE OF RATES (SOR)

Sl.No	Item Description:	QTY (A)	Unit Rate (B)	Total Amount in (Rs.) C=(A X B)
1	Design, Supply, installation and commissioning of Automation Power Factor Control(APFC) Panel of following ratings with Micro processing based intelligent auto switching control, Automatic C/K and rated step adjustment, Auto CT polarity correction, as per Technical Specification and directions of EIC on FOT Basis.	No's		
a	COCO-Sarooranagar:30 KVAR	1		
b	APSRTC depot-Medchal: 11 KVAR	1		
c	APSRTC depot-Hakimpet: 30 KVAR	1		
d	APSRTC depot-Cantonment: 60 KVAR	1		
Sub-Total in Rs.				
VAT@ _____%				
Grand Total inclusive of all applicable taxes and duties in Rs.				

- Notes:**
1. No extra payments shall be paid except for SOR items. Vendor to include cost of cables, cable trays, required accessories, Manpower charges, tools & tackles in while quoting unit rate.
 2. The Price Quoted above for supply item must be on FOT site basis.
 3. Evaluation will be done at lowest cost to Owner (BGL).

(Seal & Stamp of Bidder)