

MAHARASHTRA STATE ELECTRICITY TRANSMISSION CO. LTD.
EHV (O&M) Circle Nagpur
CIN No – U040109MH2005SGC153646

Name of office	:	Office of the Superintending Engineer
Office address	:	EHV (O&M) Circle Nagpur 2nd floor Vidyut Bhavan Katol Road Nagpur
E-mail Id	:	se4100@mahatransco.in
Website	:	https://www.mahatransco.in

No:-SE/EHV/O&M/CIR/NGP/T/2831

Date:- 05.11.2018

RFx No. 7000010745

Sub: - SRM E-Enquiry for Supply of 1 No. 50kg SF6 Gas Duly Filled in Cylinder for various sub-stations under EHV (O&M) Circle Nagpur.

Dear Sirs,

With reference to above subject, SRM E-Enquiry is invited for Supply of 1 No. 50kg SF6 Gas Duly Filled in Cylinder for various sub-stations under EHV (O&M) Circle Nagpur, from the registered contractor's. The terms & Conditions are as follows:-

-: TERMS AND CONDITIONS:-

- 1) The two bid system should be followed for submitting the offers, Digitally signed online bids are submitted on MSETCL SRM E-tendering website i.e <https://srmetender.mahatransco.in>
- 2) **Scope of work:** - Supply of 1 No. 50kg SF6 Gas Duly Filled in Cylinder for various sub-stations under EHV (O&M) Circle Nagpur as per Annexure 'A', scope of work & technical specification. This specification governs the technical & statutory requirements of SF6 gas filled & stored in cylinders.
- 3) **Application:-** For use in SF6 circuit breakers and gas insulated power equipments in electrical installations under Nagpur circle.
- 4) **Compliance with standards:-**
 - i) SF6 Gas: SF6 (Sulphur Hexafluoride) gas shall conform to IEC: 376 and IS -13072
 - ii) Gas Cylinders: SF6 gas cylinders shall conform to the relevant standard
 - iii) Cylinder Valves: The valves fitted to the cylinders shall conform to ANSI: B57.1 or BS: 341 Part I or IS: 3224.
- 5) **Statutory requirements:**
 - i) The chief Controller of Explosives, Department of Explosives, and Government of India are the statutory authority regulating the importation and use of SF6 gas cylinders. A license has to be obtained by the users from this Authority for importation.
 - ii) Filler's certificate indicating filling ratio at which each cylinder has been filled.
- 6) **Delivery Period:** - The goods are to be delivered within 15 days from the date receipt of work order/LOI. The goods should be delivered as per the Annexure 'A' only. It shall be the responsibility of the supplier to dispatch the goods to the destination mentioned, duly filled & sealed packed and insured, preferably by Road transport.
- 7) **Validity Period:** - The work order is valid for 1 year from the date of issue of LOI or order.

- 8) **Security Deposit:** - The contractor will have to deposit 5% amount of the order value towards security deposit within 7 days from the receipt of order in cash/BG/NEFT/RTGS. The same will be refunded only after satisfactory completion of work/validity/contract period.
- 9) **Payment:** - 100% Payment of bill will be made after receiving of goods in good physical conditions as per actual after receipt of bill in triplicate, after satisfactory completion of work, duly entered in M.B. & complete GR/Quality inspection in SAP by the concerned within reasonable period subject to availability of funds.
 - i] Certificate of dispatch/Delivery memo.
 - ii] Certificate as per statutory requirements as applicable.

The Material & original bill shall be forwarded to Superintending Engineer EHV (O&M) Circle Nagpur 2nd floor Vidyut Bhavan Katol Road Nagpur 440013 as above and should be marked original. The bill should indicate G.S.T. Registration number & PAN number held by the supplier. The MSETCL shall not be responsible for delay in payment of bills if the supplier fails to comply with any of the above requirements.
- 10) **Penalty:-** If the contractor fails to execute the work as per the scope of work within stipulated period as above, penalty towards delay @ ½ % per week maximum to the extent of 10% of order value will be levied and deducted from bill for non-execution of the work.
- 11) **Risk/cost:-**If the work is not completed by you the same will be got done from the other agency at your risk & cost.
- 12) **Due date:-** You should submit your offer / rates against this SRM E-Enquiry online only during period from till dt. 06.11.2018 to 13.11.2018
- 13) **Inspection:** On receipt, the goods shall be subjected to inspection and also test, if necessary, and our decision regarding the acceptability of the goods shall be final and binding on the suppliers.
- 14) **Consequences of Failure to Deliver:** The time stipulated for delivery of goods shall be deemed to be the essence of the contract and delivery must be completed within the stipulated date/s. However supply of goods should be completed within specified delivery period else supply of goods will attract penalty clause.
- 15) **Conformity to Specifications:** The goods should be of the best quality and shall be conforming to Specification given as per scope of work & ANNEXURE "A"
- 16) **Packing & forwarding:-**Inclusive. The supplier shall be responsible for the goods being properly and adequately packed so as to prevent any loss, damage or deterioration during transit.
- 17) **Guarantee/warranty period:** The goods which are supplied should be guaranteed/warranted for the 12 months from the receipt of material or as per manufacturer warrantee term from the date of supply of goods. The certificate should be submitted along with the bills. If any defect is observed, the same should be repaired/replaced immediately by you at free of cost.
- 18) After due date no clarification will be given and the decision of undersigned will be final and binding to all the bidders quoting for said work.

- 19) Following documents should be enclosed along with your offer
 - a. Valid Electrical Contractor License.
 - b. Valid Goods & Service Tax (GST) registration certificate.
 - c. Copy of PAN card along with ITR for last financial year.
 - d. Valid Shop Act Registration/ Gram Panchayat NOC.
 - e. Work experience certificate of similar work executed.
- 20) Payment regarding EMD & Tender fees is to be made online only during sale period.
- 21) The right to place an order or to cancel without assigning any reason is reserve with undersigned.
- 22) In case of any dispute arising out of your contract, it will be in the jurisdiction of Nagpur Court only.

Sd/-
Superintending Engineer
EHV (O&M) Circle Nagpur

Copy to: - The Manager (F&A) EHV (O&M) Circle Nagpur

ANNEXURE "A"

Sub: - SRM E-Enquiry for Supply of 1 No. 50kg SF6 Gas Duly Filled in Cylinder for various sub-stations under EHV (O&M) Circle Nagpur.

Sr. No.	Description of works	Quantity
1	Procurement of SF6 gas as per IEC standard	50 kg
2	Empty Cylinder cost of 25/50 Kg	01 No.

Note:-50 kg SF6 gas cylinder duly filled in New Cylinder

Sd/-
Superintending Engineer
EHV (O&M) Circle Nagpur

Scope of Work

Scope of supply and Technical Specification

1. The scope includes supply of SF6 gas as per IEC-376 in cylinder having a capacity of 50KG.
2. Supply of SF6 gas includes the cost of cylinder, Packing, Forwarding, Loading & unloading.
3. The requisite clearances & License, if any from the component Govt. Authority in the name of MAHATRANSCO will be in the scope of contractor.
4. **Gas Cylinders & Valves:** SF6 gas shall be supplied in NEW cylinders. The valves fitted to the cylinder shall be NEW.
5. **Filling Ratio:** The filling ratio (The ratio of weight of liquefiable gas introduced in the cylinder to the weight of the water the cylinder will hold at 15°C) shall not exceed 1.20.
6. **Design & Test Pressures:**
 - The cylinders shall have a minimum designed working pressure of 130 kgf/cm² (gauge).
 - The test pressure for hydraulic stretch test shall be at least 210 kgf/cm² (gauge).
7. **MARKING :**

Identification Marking: Each cylinder shall be durably and legibly marked by stamping, engraving or similar process with the following, preferably at the valve end and off the cylindrical part.

Other Markings: Each cylinder shall be marked by stamping, engraving or similar process with the following details:

 - a) Manufacturer's mark.
 - b) Inspection agency's mark
 - c) Rotation No. (Serial No.)

Other specification details as prescribed in the relevant standard.

Technical Data Sheet for SF6 gas Cylinder as per IEC-376

- a. Physical properties:- Colorless, odorless, nontoxic and non-Flammable
- b. Density at 20° C :- 6.16 g/l
- c. Electric Strength: - 2 & 1/2 times that of nitrogen.
- d. Compatibility: - Upto temperature of about 180° C its compatibility with material used in electrical construction shall be similar to that of nitrogen.
- e. Toxic Impurities: - SF6 gas shall comply with the requirements of the test as per clause 22 of IEC 487 1971.
- f. Impurities: - SF6 gas shall not contain more than the maximum allowable quantities of impurities given below.

Impurity or group of imparities	Maximum permitted concentration by mass
CF4	0.05%
Oxygen (Air) + Nitrogen	0.05%
Water	15 ppm
Acidity expressed as ppm	0.3 ppm
Hydrolysable fluorides expressed as ppm	1.0 ppm
Oil Content	Substantially free from oil
Purity	99.9%
Dew Point	-50°C

- g. Standard size of cylinder: - 50 Kg.
- h. Preferred size of cylinder: - 50 Kg.
- i. Test pressure of cylinder: - According to gas cylinder rules 1981 and company.
- j. Maximum filling ratio:- With IS7285/1974 tropical country.
- k. Tests:-
 - Toxicity test clause no.22 of IEC 376 1971
 - Water content and condensation Temperature B-1971:- Clause nos. 23,24,25 7 26 of IEC:376 Saturn
 - Carbon tetra fluoride oxygen and nitrogen Content 1971:- Clause Nos. 27,28,29,30 & 31 IEC 376
 - Hydrolysable Fluoride: - Clause Nos. 32, 33,34,35,36 & 42 IEC-Content 376 1971.
 - Acidity: - Clause Nos.:- 38,39,40,41 and 42 of IEC – 376 1971.
 - Oil content: - Section 13 of IEC 376 A-1971.