

MAHARASHTRA STATE ELECTRICITY TRANSMISSION COMPANY LTD
(CIN NO- U40109MH2005SGC153646)

Office of The Executive Engineer MSETCL EHV O&M, Division,
Near Market Yard, Bapat Camp, Kolhapur
Tal: - Karvir, Dist-Kolhapur-416 005
E-mail: - ee3210@mahatransco.in
Phone No. 0231-2651529.

(RFX No. 7000008997)

Sub:- SRM Enquiry for Filtration of transformer oil at various S/S under EHV O&M Dn, Kolhapur.

Dear Sirs,

Rates are called through SRM only by undersigned for the works mentioned in schedule 'A' **on or before 04.06.2018 up to 17:00 Hrs.** The other terms and conditions are as mentioned below.

- 1) **PRICES:** The rates are accepted as per Schedule A with work at Various substations under EHV O&M Division Kolhapur.
- 2) **TAXES & duties:** Rates are Inclusive of GST.
- 3) **Tender Fee:** You should have to paid tender fee of Rs. 100 + GST @ 5% i.e. Rs. 105/- in SRM Only.
- 4) **EMD:** You should have to pay EMD of Rs. 5000/- in SRM only which will be refunded after finalization of work order & payment of security deposit.
- 5) **WORKING PERIOD :** The work should be strictly executed within the time limit i.e. within 7 days, from the date of handing over the site excluding Monsoon period . The working period should be strictly adhered to, Outages will be availed as per requirement for this work by concern substation In-charge. Extended working period will be considered in exceptional cases.
- 6) **TERMS OF PAYMENT:** - 100% payment will be effected to you within reasonable time subject to completion of work satisfactorily and on the basis of actual measurement recorded by the Engineer in charge as per availability of funds. Any losses or damages due to handling or theft or any other reasons during the period would be on contractors account. The amount of damages if any will be recovered from contractor's bill or any other payment due for payment as per assessment given by Engineer In-charge.
- 7) **BILLS** :- Bills in Triplicate should be submitted to the concerned Substation Incharge (with Guarantee Certificate, MOM each of 3 copies) who will certify & record the bills in SAP & submitted to this office for technical scrutiny & audit.
- 8) **INCOME TAX** :- Income Tax at source will be recovered from your bill as per rules.

- 9) Work Tax :- Will be recovered from your bill as per rules
- 10) **PENALTY:** -If the works are not carried out within stipulated time limit, penalty at the rate 1/2% per week delay of contract value will be recovered from your bill subject to 10% maximum.
- 11) In case you fail to complete the work fully or partly, the balance work will be completed from other agency at your own cost & risk and difference in cost will be recovered from your bill and security deposit in this case will be forfeited to the Company.
- 12) The joint survey should be carried out with concerned Engineer In-charge of work. Joint-inspection report duly signed by MSETCL's representative & agency containing details of work to be done and same should be submitted along with bill. The work is to be carried out in presence of operating officer or his representative and up to his entire satisfaction.
- 13) The workman ship & material used should be of best quality and confirming to the standard specification.
- 14) **DEDUCTION:** -Any amount or amounts which become payable by the contractor to the M.S.E.Trans.Co.Ltd. under particular contract may be deducted by the Purchaser from any amount/amounts due or becoming due by him to the contract under the same or any other contract.
SAVE AND EXCEPT: -
Amount/Amounts due on account of damage or compensation for default or breach of contract by the contractor in which case instead of deduction of the said amount/amounts, shall be retained and the purchaser shall have the right on amount/amounts so retained or withheld.
- 15) **JURISDICTION:** -All disputes or difference arising out of in connection with the contract, if concluded, shall be subject to the jurisdiction of Kolhapur Court.
- 16) **QUANTITIES:**
The quantities indicated in Schedule 'A' are tentative. The quantities are likely to be varies according to site condition, and the payment will be made on the actual measurement basis.
- 17) For any excess work, related to work order, you have to take approval from EHV O&M Division, Kolhapur.
- 18) **QUALITY:** - work should be carried out as per specification enclosed in Scope only as per the instruction from Site In-charge.
- 19) **GUARANTEE-:** - The Contractor has to give a performance guarantee for 12 months for the materials/workmanship from the date of completion of work carried out. If any abnormality observed at site within the performance guarantee period the Contractor will have to carry out work free of charge, including to and fro transportation etc., within seven days from the date of intimation. The work will be inspected by operating officers.

- 20) **SECURITY DEPOSIT:-** 5% of the value of the order is to be paid as Security Deposit by cash/ D.D/BG/FDR in this office within 7 days from the date of receipt of this order. No interest will be paid on this amount and this will be refunded after execution of works satisfactorily & NOC from concerned Incharge.
- 21) You are also deemed to be fully aware of the Company's general conditions of contract for work, supply of equipment/material and any ignorance of any of the conditions will not exempt you from your liability to abide by the same.
- 22) The priority wise work will be informed to you by concerned Incharge or his representative under this division.
- 23) Inspection by our representative: The Concerned Executive Engineer or Engineer incharge will be free to visit the contractors work as and when required at any time.
- 24) Tool & Plants : All tools & machinery required will have to be arranged by you at your cost.
- 25) You have to execute the agreement bond on Stamp Paper of Rs.500/- Amount will, before starting of work. Cost of Stamp paper will be born on you only.
- 26) Technical skilled persons: - The contractor shall depute skilled workman for each class of work.
- 27) The contractor shall employ and provide onsite only such employees who are skilled and experienced for execution and supervision of work. The contractor shall provide housing accommodation to his employee's .He shall also be responsible for any injury / accident to his employees. Payment of compensations etc. as may required to be paid eventually shall be borne by the contractor himself. The contractor should ensure that his staff uses the requisite safety equipment. The employees should be duly insured against any such eventuality. The proof of insurance should be submitted to this office along with order acceptance letter.
- 28) Any accidents occurred during the period of execution of work to any of your workers or to any outsider will be entirely on Contractor's account and Company is not responsible for the same in any way.All the safety precautions should be observed by the contractor.
- 29) **SITE CLEARANCE:** The contractor shall during the progress of work, keep the site reasonably free of all unnecessary obstructions and shall store the material nearby so as not to cause any obstruction for normal working / operations. Similarly on completion of the works the contractor shall clear away and remove from the site all surplus material, rubbish and temporary work of any kind.Site should be kept clean.

SUB LETTING OF CONTRACT: The contract or any part thereof shall not be assigned, transferred, or sublet without the prior written permission of the undersigned. Even if such permission is granted, it shall be responsibility of the principal contractor to whom the work order was originally issued to execute the works

as per the terms of the contract.

- 30) Precaution: - All equipment and Lines are in charge condition. The contractor should take all precautions at his own cost until handling over the site to the MSETCL. The insurance of labour will be on your account.
- 31) The work should be carried out as per our specifications & full satisfaction, of concern Engineer incharge.
- 32) Outages will be arranged for this work as per requirement by MSETCL.
- 33) Accident: - If any accident occurs to your laborers skilled or unskilled compensation if any is to be paid by you.
- 34) First Aid Box: - The contractor should always keep and maintain First Aid Box for this work as safety measure.
- 35) **Hindrance of work:-** If the work has to be suspended due to any reason i.e. stay order from court of law, legal complication, held up from any other agency, shut down etc. The MSETCL shall not pay any compensation/ damage to the contractor towards item lie labour, idle machinery, vehicles etc. However in such case the contractor will be paid for the actual work executed by him under the supervision & measured by concerned Executive Engineer.
- 36) Any losses or damages during the Execution of work as per Schedule 'A' of or any other reason during the period will be on your account. The amount of damages if any will be recovered from your bills.
- 37) The undersigned has reserved the right to cancel the order as whole or part without assigning any reasons.
- 38) It is to note that agency should monitor amount of work order i.e Rs 3 Lakhs, amount exceeding this amount will not be payable and solely agency liability.

Please acknowledge receipt of this order and your readiness for compliance within one week from the date of this order.

Thanking you,

Yours faithfully,

Encl: -As above.

Executive Engineer
EHV (O & M) Division Kolhapur.

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Subject: Filtration of transformer oil at various S/S under EHV O&M Dn, Kolhapur.
SCHEDULE A

Sr. No.	Particulars	Unit	Qty	Rate Per unit Incl. Taxes.	
				In Planned Outage	In Emergency Breakdown
A	Offline filtration of T/F of various capacities to achieve the desired results as per IS 1866-2000 including topping up with DGA, BDV, Tan delta & PPM testing results and all allied works.	Ltr.	As per Actual	2.06	2.59
B	Draining of oil from main tank & radiator bank, preparation of oil with filtration, drying out of main tank with applying vacuum and refilling of oil with desired results under vacuum to main tank of T/F of various capacities to archive desired results as per IS 1866-2000 (Only oil in drum will be supplied by MSETCL at site) with topping up of filtered oil.	Ltr.	As per Actual	3.24	4.01
C	Replacement & filtration of oil in OLTC only (Only oil in drum will be supplied by MSETCL at site).	Ltr.	As per Actual	2.65	3.30

Note:

- 1) Above rates are Inclusive of GST @ 18%.
- 2) Quote rates in SRM only in % basis.
- 3) Schedule is enclosed herewith for your ready reference.
- 4) For Sr. No. B & C SAP No. Considered for Planned & Emergency work are same but in actual rates for both conditions are different.
- 5) Local agency will be given preference.**

Note Following documents should be Submitted in SRM only:

- 1) Valid electrical contractor's license.
- 2) Valid GST registration
- 3) Valid registration under E.P.F.
- 4) Income Tax Return for AY 2016-17 & 2017-18.
- 5) The experience certificate of executing same type of work satisfactory should be attached from an officer not below the rank of Executive engineer.
- 6) Solvency certificate from nationalized bank / Scheduled bank for current year for amount of Rs. 75000/- or more.
- 7) Valid Bombay Shop Act License.
- 8) PAN Card Copy.

Executive Engineer
EHVO&M Division Kolhapur

SCOPE OF WORK:

1. Free Electricity will be provided by MSETCL for above mentioned work.
2. For oil replacement, fresh oil will be supplied by MSETCL.
3. Oil storage tank will be provided by MSETCL.
4. The completion period of above mentioned work of filtration/ vacuuming / replacement will be upto achieving desired results as per MSETCL standards.
5. Testing of oil before and after filtration is to be carried out by the contractor with his own cost from the authorized agency / lab and report should be submitted to the concerned Sub-Station In-charge / Executive Engineer. The works should be carried out to the entire satisfaction of Sub-Station In-charge.
6. The work is to be executed as per scope of work enclosed as per scope of work'.
7. The details of the transformer for which above work is to be carried out will be informed separately as and when required by concerned this office.
8. Transportation of filter machine will be agency's account and extra charges towards transportation will not be paid. The rates should be quoted considering the transportation cost.
10. New Oil: if required will be supplied by MSETCL; the contractor will be the required to submit the account of transformer oil issued to him.

A) FILTRATION:

Filtration of transformer Oil is to be carried out in respect of EHV power transformers installed at various sub-stations under this Division. Filter machine of adequate capacity, necessary manpower, relevant T&P and also the testing equipment's shall be arranged by the contractor. The Oil shall be tested before commencement of the filtration and also after completion of the same. Also adequate capacity of the filter machine shall be utilized by considering the oil capacity of transformer.

The filtered Oil shall be tested for:

Sr.No.	Name of test	Permissible value.
1.	Electric strength (B.D.V.) across a gap of 2.5mm.	65KV Min.(RMS value)
2.	Acidity	0.1 Mg KOH / g (Max.)
3.	Water content.	15 PPM (Max.)

The handling of the transformer Oil shall be strictly as per the provisions of the clause viz. "Handling and Treatment of Oil" of ISS 1866/1961 as amended up to date. Utmost care should be taken to ensure that there is minimum possible aeration, while handling the Oil. The Oil quantity filtered will be that mentioned on the nameplate of the transformer and shall include the Oil in the main tank, OLTC, conservator and radiators.

The daily hourly chart for the progress duly signed by the representative of the MSETCL and Contractor is to be maintained as below & should be submitted along with Bill:-

Sr. No.	Date	Time	Temperature	Megger Values		
				HV - LV	HV - E	LV - E

B) OIL REPLACEMENT (If required):

Draining out the Oil from the transformer and pushing-in the fresh Oil under vacuum after giving adequate vacuum cycle as detailed hereinafter. M.S.E.T.C.L. will provide the storage facility like Oil tank or barrels. Barrel handling will have to be done by the contractor

This provision is specifically for total oil replacement of power transformers. Oil draining for applying vacuum & pushing- in thereafter shall not be construed as Oil replacement, and will not be paid for.

C) APPLYING HEATING CYCLES (If required).

Alternate heating and vacuum cycle should be applied to the transformer (only main tank) after blanking the radiators. For heating purpose only used oil is to be circulated. The temperature shall vary in steps of 5^o C differences, starting from 65^oC. The core & winding temperature attained (measured with an electronic probe) shall be the same as the circulating oil temperature during the heating cycle for 3-4 hrs.

The vacuuming intervening the successive heating cycles should be as detailed above.

D) VACUUMING (If required):

The Oil should be drained out from the main tank in the tankers / barrels provided. Blanking of radiators header pipes with the blanking plates provided. Applying vacuum to the main tank with HV and LV bushings in place so as to remove all moisture.

The vacuum applied should be of the order of 760 bar for 24 hours continuously. During vacuum period, it should be ensured that no external air is leaking in to the transformer tank. If any leakage is observed, the same should be immediately brought to the notice of the Engineer – in – Charge.

IMP: The work A is carried out first till the satisfactory oil test result & if required – B, C, D process are to be executed to the satisfaction of the Engineer – in – Charge. No guarantee is prescribed for these works.

**Executive Engineer,
EHV O&M Dn Kolhapur**