

# THE WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED



(A Govt. of West Bengal Enterprise)  
OFFICE OF THE GENERAL MANAGER  
SANTALDIH THERMAL POWER STATION  
P.O. - SANTALDIH THERMAL PLANT  
DIST. PURULIA - 723 146  
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## **((Tender Notice for Website))**

<b>NIT No. : WBPDC/Adv/CC/14-15/218/STPS</b>
<b>Date: 26.02.2015</b>
<b>Tender Ref. No. : STPS/M&amp;C/Press Tender/318/EM(OPH)/14-15/58</b>
<b>Date: 21.02.2015</b>

Tenders are invited from eligible, experienced and resourceful manufacturers only working under Govt. Organizations / Semi Govt. Organizations / PSUs / Reputed Organizations for procurement of Transformer Oil under EM(OPH) & EM(AHP) Depts., Santaldih T.P.S. as per item description mentioned below:

**Name of the Procurement:** Procurement of Transformer Oil under EM(OPH) & EM(AHP) Depts., Santaldih T.P.S.

Sl. No.	Item Code	Item Description	Quantity	Order Unit
1	04T060300	Mineral Transformer Oil conforming to IS: 335/1993 with latest Amendments: EHV Grade.	35530	LTR

**Information to the bidders:** This is a four part bidding system containing **Earnest Money (Part-I), Qualifying Requirements (Part-II), Techno-commercial Bid (Part-III) and Price Bid (Part-IV)**. Tenders will be received and evaluated by Santaldih T.P.S., WBPDC from technical and financial point of view to make the best selection for the interest of the WBPDC for the complete procurement covered under the Tender Document. Material specification and other Technical particulars are as per **Annexure-II & Annexure-A**. Other Terms & Conditions in detail will be mentioned in the Tender Document.

**Earnest Money:** The Earnest Money of **Rs. 80,000/-** (Rupees Eighty Thousand only) shall be deposited along with Tender Document in the form of Bank Draft/Pay Order issued by any nationalized Bank from India in favour of **“THE WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED”** payable at United Bank of India, Santaldih branch or State Bank of India, Purulia branch or payable at Kolkata for other Banks. Govt. Organizations/Undertakings, NSIC/SSI Units are exempted from submission of Earnest Money. Necessary certificate is to be submitted for NSIC/SSI units.

**Estimated Cost:** Around **Rs. 23,10,000/-** (Rupees Twenty Three Lac Ten Thousand only)

**Cost of Tender Document:** **Rs. 2,300/-** (Rupees Two Thousand Three Hundred only)

### **Qualifying Requirements (Q.R.):**

- 1) The bidder must be a manufacturer of EHV grade Transformer Oil.
- 2) Experience of having successfully completed similar supply in any Govt. Organization / Semi Govt. Organization / PSU / EHT Transformer manufacturing company like BHEL/CGL/ABB/TELK works only, during last 07 (Seven) years ending 31<sup>st</sup> January, 2015 must be either of the following:
  - a) One similar completed supply order costing not less than the amount equal to 80% of the estimated cost i.e. Rs. 18,48,000/- (Rupees Eighteen Lac Forty Eight Thousand only)
  - Or,
  - b) Two similar completed supply orders each costing not less than the amount equal to 50% of the estimated cost i.e. Rs. 11,55,000/- (Rupees Eleven Lac Fifty Five Thousand only)
  - Or,

- c) Three similar completed supply orders each costing not less than the amount equal to 40% of the estimated cost i.e. Rs. 9,24,000/- (Rupees Nine Lac Twenty Four Thousand only).

Here, ‘**Similar Supply**’ means supply of EHV grade Transformer Oil and ‘**Completed Supply**’ means the executed / completed portion of the supply.

- 3) The average annual turnover of the bidder during the last 03 (Three) years, ending 31<sup>st</sup> March of the previous financial year, should be at least 30% of the estimated cost.
- 4) The bidder shall submit copies of relevant purchase order(s) & other documentary evidence as proof of satisfactory completion of similar supply & delivery.

Legible photocopies of all the documents as stated below countersigned by the tenderer need to be submitted accordingly in a separate sealed envelope super-scribing ‘**Qualifying Requirements**’, **Tender Notice No. with date, Due date of Opening** and ‘**Name of the Procurement**’, otherwise the tender will be treated as invalid. Original copies of the documents are to be produced on demand.

- a) Credentials regarding Qualifying Requirements (e.g. Purchase Orders etc.),  
 b) P&L Account and Balance Sheets for last 03 (Three) years,  
 c) PAN Card,  
 d) VAT/CST Return,  
 e) Trade License.

**Important Dates:**

<b>Sale of Tender Document:</b>	From 02.03.2015 up to 18.03.2015 between 11:00 Hrs. and 14:30 Hrs.	
<b>Last Date of Offer Submission:</b>	25.03.2015 within 15:00 Hrs.	
<b>Opening of Tender:</b>	Part I, II & III	25.03.2015 at 15:15 Hrs.
	Part IV	25.03.2015 or later duly intimated to the bidders.

**Sale of Tender Document:**

Tenders Document shall be obtained from Sr. Manager (M&C), STPS or his authorized representative against written application on any working day except Saturday and holiday between 11:00 Hrs. and 14:30 Hrs. after deposit the cost against the Tender Document at Cash counter, S.T.P.S. by cash only. Tender paper must be sold by each of the applicants.

**Opening of Tender:**

- a) The tenders shall be opened in presence of representative of the prospective bidders, if available, at the time and date set for opening of tender as mentioned above. In case any extension has been given thereto on the extended tender opening date and time will be notified to all the prospective bidders who have purchased the Tender Documents. Authorized representatives (maximum two persons) of the prospective bidder may attend the opening.
- b) After opening the main cover, the envelopes containing E.M.D. (Part-I), Q.R. (Part-II) & Techno-commercial Bid (Part-III) will be opened first.
- c) Price Bid (Part-IV) of the prospective bidders, qualified in all the three parts (i.e. Part-I, Part-II & Part-III) as stated above, will be considered only by the WBPDCCL for subsequent opening of Part-IV at same or later date eliminating other participants.

**Evaluation of Tender:**

- a) Issuance of tender document to the participants will not qualify him automatically for the entire tender process.
- b) The WBPDCCL reserves the right to itself to accept any tender or reject any or all tenders or cancel / withdraw the invitation for tender without assigning any reason for such decision. Such decision by the WBPDCCL shall not be subject to question by any prospective bidder and the WBPDCCL shall bear no liability consequent upon such decision and the prospective bidders shall have no claim in this regard against the WBPDCCL.
- c) Evaluation by the WBPDCCL shall be based on the information and documentary evidence submitted by the prospective bidders in response to the tender documents. The requirements as stipulated in the tender notice and documents are the minimum and the WBPDCCL has the right to request for additional information. The WBPDCCL

reserves the right to reject any tender, if in the opinion of the WBDCL the qualification data / documentary evidence submitted by the prospective bidders are incomplete or prospective bidders are found not qualified to satisfactorily perform the job. The WBDCL reserve the right to reject any tender if the prospective bidder is found to be disqualified by giving incorrect and / or false information.

- d) The WBDCL does not bind itself to accept the lowest tender and also reserves the right to split the procurement amongst more than one prospective bidder and also reserves the right to reject any or all tender or cancel the tender without assigning any reason whatsoever.
- e) Notwithstanding, anything stated above or elsewhere, the WBDCL reserves the right to assess the capability and capacity of the prospective bidders, should the circumstances warrant such assessment in the overall interest of the WBDCL.

**Encl:** 1) Annexure-II  
2) Annexure-A

Sd/-  
(S. Maity)  
**General Manager**  
**STPS, The WBDCL**

## ANNEXURE-II

### TECHNICAL SPECIFICATION FOR EHV GRADE TRANSFORMER OIL

#### **1. SCOPE:**

The Specification covers manufacture, testing, supply & delivery and the requirements of new insulating oil of petroleum origin suitable for use as insulating and heat transfer medium and are quenching medium in Power/Distribution transformers and other equipments used in West Bengal by the WBPDCCL.

The oils covered by this standard are of low viscosity type and completely free from additives. The oil should contain minimum amount of impurities including moisture, sludge and should have some specified physical and chemical properties as detailed in the specification.

#### **2. COMPOSITION:**

The oil shall be pure hydrocarbon mineral oil, without any additive, clean and sufficiently free from moisture and other foreign materials likely to impair its properties. Mineral insulating oil is made from selected 'fraction' of crude oil. The crude oil composed of mainly hydrocarbon, which may differ in their content of the main classes or types of hydrocarbons along with non-hydrocarbons as impurities like paraffin's, naphthenic and aromatics. The transformer oil should be free from aromatic hydrocarbons as they are unsaturated and hence less stable. By proper refining, the crude oil consisting of above constituents, the desired characteristics are obtained.

#### **3. CHARACTERISTICS:**

The characteristics of the oil when it is sampled at the manufacturer's works and/or at the point of delivery and tested in accordance with ISS: 335-1993 should comply with the results given in the IS specification (ISS: 335-1993 along with its latest amendment will be applicable) except for certain characteristics for which the value applicable will be as shown in the specification sheet.

#### **4. SAMPLING AND TESTING:**

Sampling of the oil shall be done in accordance with IS: 6855-1973 and the tests shall be carried out in accordance with the test methods referred to IS: 335-1993 with latest amendments and modified limit of moisture content only, in the manufacturer's laboratory arranged by them. Any test, which cannot be carried out in their laboratory, should be clearly stated in the offer. For determination of rate of sludge formation by accelerated ageing test at which sludge is formed at 115<sup>0</sup>C in the presence of the copper catalyst at controlled rates of airflow, the WBPDCCL shall prefer the test to run for 96 hours.

The manufacturer may submit their own method of test referring to any national/international standard in the guaranteed technical particulars.

All the tests will be conducted by the vendor at their works as per IS Specification except for the following tests:

- (a) Corrosive Sulfur
- (b) Accelerated ageing &
- (c) Oxidation stability.

The above tests have to be done from any unit of Central Power Research Institute (CPRI) and all the cost to be borne by the vendor.

#### **5. PACKING:**

The bidder should indicate in their offer whether they could supply transformer oil in ISI marked barrels. If they are not in a position to supply transformer oil in ISI marked barrels, their offer may not be considered. The transformer oil should be delivered in sealed non-returnable epoxy coated new steel barrels each containing 209/210 Litres of oil. The barrels should conform to Type A or B of ISS: 1783-1974.

#### **6. TEST REPORTS AND TYPE TESTS:**

The bidder shall submit complete test reports of all tests (including Type Test) as stipulated in relevant IS with complete identification and date, carried out in CPRI / ERDA / own NABL approved Laboratory on the tendered item. Copies of Type Test Report as per latest IS, carried out within three (03) years from due date of Tender, from CPRI / ERDA shall be submitted along with the offer as pre-requisites. Otherwise the offer may be rejected.

Before supply of the material, the bidder should submit the complete test reports as per relevant IS of the related lot/batch (which have to supply) from own NABL approved Laboratory or from CPRI / ERDA. Dispatch clearance should be taken from the purchaser (User dept.) after submitting the test reports and taking approval of the same.

**7. CALIBRATION:**

According to General Conditions of Contract, the instruments/equipments required for Inspection & Testing should have valid calibration as per following guideline:

(a) Calibration Certificate issued by Laboratory accredited by NABL should be accepted only.

**8. INSPECTION:**

The bidder has to arrange for inspection and testing of Transformer Oil, if required, at their works at their own cost in presence of the WBPDCCL Engineers prior to dispatch. The date of inspection has to be intimated at least 03 (Three) weeks in advance. The WBPDCCL Engineers will not inspect incomplete materials. If the WBPDCCL Engineers returned without inspection due to non-readiness of offered materials at their works, the financial loss to the WBPDCCL for deputing Engineering representatives will be recovered from the concerned supplier.

**9. GUARANTEE:**

The Transformer Oil shall be guaranteed for its quality and conform to the specification specified in the NIT. In case of any defect, same shall be replaced by you within a reasonable time without any extra cost to the WBPDCCL. The Transformer Oil shall also be guaranteed in favour of its satisfactory performance/operation for a period of 12 (Twelve) months from the date of commissioning or 18 (Eighteen) months from the date of receipt of materials at STPS Site. A guarantee certificate shall be submitted along with the supply.

**10. CONSUMERS:**

List of reputed concerns to whom the transformer oils have been previously supplied along with order nos. and quantities should be clearly mentioned in the offer.

**11. SOURCE OF SUPPLY:**

Name & address of the supplier of base product is to be mentioned in the offer.

**12. REFINERY CENTRE:**

Name and address of refinery where the base product is processed are also to be mentioned in the offer.

**13. MARKING:**

Each drum shall be legibly and indelibly marked with the following:

- (a) Manufacturer's name,
- (b) Name of the material,
- (c) Quantity in Litre,
- (d) The words "Low Viscosity Type",
- (e) Date and Lot of manufacture,
- (f) ISI Certification mark,
- (g) Name of Consignee as "STPS, the WBPDCCL".

**14. PRICE VARIATION FORMULA:**

For calculation of Price variation, the bidder should furnish documents indicating necessary dates viz. Price of TOBS/TOFS, Price of oil barrels, base date effective for the quoted prices etc.

**15. The following documents to be submitted by the bidder to the consignee Stores at the time of delivery of the material:**

- (a) Test Certificate,
- (b) Guarantee Certificate along with Seal list and Packing list.

## ANNEXURE-A

### IMPORTANT TECHNICAL PARTICULARS OF TRANSFORMER OIL TO BE SUPPLIED

Sl. No.	Description	Requirement
1.	Appearance	Clear & transparent free from suspended materials or sediments
2.	Density at 29.5°C (Max.)	0.89 gm/cc
3.	Kinematic Viscosity at 27°C (Max.)	27 cSt
4.	Interfacial Tension at 27°C (Min.)	0.04 N/m
5.	Flash point, Pensky Marten (closed) (Min.)	140°C
6.	Pour point (Max.)	(-) 6°C
7.	Neutralisation value: a) Total acidity (Max.) b) Inorganic acidity/alkalinity	0.01 mg KOH/gm Nil
8.	Corrosive Sulfur (In terms of classification of Copper strip)	Non-corrosive
9.	Electric strength (Break down voltage) a) New unfiltered oil (Min.) b) After filtration (Min.)	40 kV rms 70 kV rms
10.	Dielectric dissipation factor (Tan Delta) at 90°C (Max.)	0.002
11.	Specific resistance (resistivity) a) At 90°C (Min.) b) At 27°C (Min.)	$35 \times 10^{12} \Omega \cdot \text{cm}$ $1500 \times 10^{12} \Omega \cdot \text{cm}$
12.	Presence of oxidation inhibitor	shall not contain any Anti-oxidant additives
13.	Water content (Max.)	30 ppm by weight
14.	Oxidation stability: a) Neutralisation value after oxidation (Max.) b) Total sludge after oxidation (Max.)	0.2 mg KOH/gm 0.05 % by weight
15.	S.K. value (Max.)	6%
16.	Ageing characteristic after accelerated ageing test: a) Specific resistance (resistivity) i) At 27°C (Min.) ii) At 90°C (Min.) b) Dielectric dissipation factor (Tan Delta) at 90°C (Max.) c) Total acidity (Max.) d) Total sludge (Max.)	$2.5 \times 10^{12} \Omega \cdot \text{cm}$ $0.2 \times 10^{12} \Omega \cdot \text{cm}$ 0.15 0.05 mg KOH/gm 0.05% by weight
17.	Viscosity of TOBS/TOFS at 37.8°C (Min.)	50 Redwood seconds
18.	Antioxidants additives	Non-detectable
19.	PCA content	< 1%
20.	Impulse Withstand Level	$\geq 145 \text{ kVp (Min.)}$
21.	Gassing tendency at 50 Hz after 120 min.	$\leq 5 \text{ mm}^3/\text{min.}$