Short term E-Tender Notice

POWER TRANSMISSION CORPORATION OF UTTARAKHAND LTD.
(A Govt. of Uttarakhand Enterprise)
CHIEF ENGINEER, OPERATION & MAINTENANCE
GARHWAL ZONE, PTCUL
26 - CIVIL LINES, ROORKEE – 247667

E-Tender for **"work of replacement of Cooling Radiator Bank (element / fins) of BHEL Make 80 MVA (132/33 KV) T/F- 2nd at 220 KV Substation SIDCUL, Haridwar" against E-Tender specification No. CE/GZR-02/2026-27**.

DOWNLOADED BY: -

M/s / Shri _____

Sr. No.	DESCRIPTION	
1.	Tender No.	**CE/GZR-02/2026-27**
2.	Name of Work	Work of replacement of Cooling Radiator Bank (element / fins) of BHEL Make 80 MVA (132/33 KV) T/F - 2nd at 220 KV Substation SIDCUL, Haridwar
3.	Completion Time	03 Months subject to availability of shutdown.
4.	Tender issuing office	Office of Chief Engineer (O&M) Garhwal Zone, Power Transmission Corporation of Uttarakhand Ltd. " 26-Civil Lines, Roorkee-247667
5.	Tender Fees	Rs. 5,000.00+ 900.00 (GST@18%) =Rs**. 5900.00** (Non refundable)
6.	EMD/Bid Security	**Rs. 1,70,000.00**
7.	Last date of Submission of Bid	**07.05.2026**
8.	Last Date and Time of Opening of Bid	**08.05.2026**
9.	Address & Place of Submission of Bid supporting documents.	Chief Engineer (O&M), Garhwal Zone, PTCUL, 26-Civil Lines Roorkee-247667.
10.	Type of Tender	**Short term open tender**
11.	Contact & Telephone No. of the Tender issuing office	Phone No.:- 01332-272256
12.	E-mail address of the tender issuing office	ce_oandmg@ptcul.org

(CHIEF ENGINEER (O&M)
GARHWAL ZONE,
ROORKEE

Pre-Qualifying Criteria

Scope of Work: Work of replacement of Cooling Radiator Bank (element / fins) of BHEL Make 80 MVA (132/33 KV) T/F - 2nd at 220 KV Substation SIDCUL, Haridwar.

Pre-Qualifying Criteria:

1. The tenders/bidders must have to visit site of work & have to submit site visit report issued by concerned .Executive Engineer alongwith technical bid, failing which the bid of the tender may be rejected summarily.
2. Executive Engineer (O&M)/Superintending Engineer (O&M) which check the following documents/ facts before issuing the site visit report.

(i) The bidder must have sufficient and trained manpower to execute the work.
(ii) Bidder will provide name/qualification and experience of its supervisor/worker along with their ID proof and their EPF details.
(iii) The bidder must have tested and calibrated T&P required to execute the work.
(iv) Bidder should have following the provision of EPF/ ESI/ WCP (Work Compensation Policy) and minimum labour act.
(v) All manpower of the bidder should have covered with sufficient insurance & group insurance against any untoward incidence, valid proof should be submitted.
(vi) Bidder/Tenderer should depute a supervisor at site of work who has knowledge of Electrical/ Civil Engineering (as the case may be) and who should have the knowledge of electrical safety rules issued by central government authorities and electrical safety manual of PTCUL.

TECHNICAL CRITERIA

1. The bidder should have successfully completed the work replacement of Cooling Radiator Bank (element / fins) of 40 MVA (132/33 KV) or above rating T/F / similar nature of work i.e supply, erection and commissioning of material at 400/220/132 KV Substations.
2. Copies of Work Orders (as per above criteria) from the Govt. Power Utilities/PSUs/Govt. Organizations/Other Govt. Department for similar work is required to be submitted along with the bid.
3. The Tenderers/bidders should have adequate experience during last 7 years ending last day of month previous to the one in which applications are invited should be either of the following:

a. One similar completed works costing not less than the amount equal to Rs. 39.36 Lakh.

Or

b. Two similar completed works costing not less than the amount equal to Rs. 24.60 Lakh.

Or

c. Three similar completed work costing not less than the amount equal to Rs. 19.68 Lakh.

4. Bidder should have "A" Class Electrical Licence (Uttarakhand only)
5. Bidder should have valid Labour license. Copy of License/ Registration Certificate should be submitted.

FINANCIAL CRITERIA

1. **Minimum Average Annual Turnover:-** The minimum average annual turnover of the tenderer **for the best three years (36 months) out of the last five years** should not be less than **Rs. 87.08 Lakh**
2. For Financial Qualification Criteria, Joint Venture Partners shall jointly / collectively meet 100% of Financial Qualification Requirement (FQR) of the respective tender.
   Note: The balance sheet and all other financial documents attested/certified by CAs to substantiate fulfillment of FQR should be with UDIN failing which the tender will be summarily rejected without any further reference.

Executive Engineer
220KV O & M Div
Sidcul, Haridwar

Superintending Engineer
Operation & Maintenance Circle
PTCUL 26, Civil Lines
ROORKEE-247667

3. A copy of PAN of the firm and all its partners.
4. A copy of GST Registration.
5. A copy of EPF Registration.
6. Solvency certificate from Bank (20% of bid value) should be submitted.

Executive Engineer
220KV 0 & M Div
Sidcul, Haridwar

Superintending Engineer
Operation & Maintenance Circle
PTCUL 26, Civil Lines
ROORKEE-247667

TECHNICAL SPECIFICATION

1.0 SCOPE

This specification covers the design, material selection, manufacturing, testing, and performance requirements for radiator limbs for 132/33 KV, 80 MVA oil-immersed power transformer. The radiator limbs are essential for dissipating heat generated during transformer operation, ensuring optimal performance and longevity.

The radiator limbs shall facilitate efficient heat dissipation from the transformer oil to the ambient air through natural convection or forced cooling (ONAN/ONAF). The design shall ensure adequate cooling to maintain the transformer's temperature within permissible limits under full load conditions.

2.0 Design Specifications/Standard

i. **IS: 10951** – Radiator Manufacturing
ii. **IS: 13971** – Pressure Testing for Radiators
iii. **Type**: Detachable radiator limbs/fins, mounted on the transformer tank.
iv. **Surface Area**: Sufficient to dissipate heat for 80 MVA transformer, calculated based on heat dissipation requirement: Approx. 0.1–0.15 kW/m² of radiator surface area (depending on cooling type).
v. **Spacing**: 48–50 mm between fins to optimize airflow and prevent clogging.
vi. **Mounting**: Bolted or welded to the transformer tank with flanged connections, ensuring oil-tight seals.
vii. **Valves**: Each radiator unit shall include inlet and outlet valves for oil flow control and maintenance.
viii. **Butter fly valve**: As per sample.

3.0 Material Specifications

Component	Material	Standard
Radiator Fin Plate	CRCA Steel, min. 1.2 mm thick	IS: 513 Gr. D
Header Pipes	Seamless ERW Mild Steel	IS: 1239
Gasket	Neoprene / Nitrile Rubber	IS: 11149
Fasteners	Hot Dip Galvanized MS / SS	IS: 1363 / IS: 1367

4.0 Radiator Limb Dimensions/Construction Details

i. Limb Width: 525 mm
ii. Limb Heights: 3000 mm
iii. Type: Pressed Steel Radiator limbs/Fins
iv. Thickness of steel :1.2 mm

Assistant Engineer
220 KV Sub Station
Power Trans Crop UK LTD
SIDCUL, Haridwar

Executive Engineer
220KV O & M Div.
Sidcul, Haridwar

Superintending Engineer
Operation & Maintenance Circle
PTCUL 26, Civil Lines
ROORKEE-247667

5.0 Radiator Quantity & Thermal Capacity

i. Number of Fins per Limb: As per existing.
ii. Heat Dissipation:
a. ONAN: ~750 W/m²/°C
b. ONAF: ~1000 W/m²/°C

6.0 Pressure Testing

i. Hydraulic Pressure Test: 2.5 kg/cm² (250 kPa)
ii. Test Duration: 30 minutes
iii. Result: No leakage or deformation permitted

7.0 Surface Treatment & Painting

i. Process: Degreasing → De-rusting → Phosphating → Rinsing → Drying
ii. Coating: Epoxy-Polyester hybrid powder
iii. Coating Thickness (DFT): 60–80 microns
iv. Finish: Smooth, glossy/semi-glossy

8.0 Quality Control & Testing

i. Dimensional Verification
ii. Hydraulic Pressure Test Report
iii. Paint DFT and Adhesion Test
iv. Surface Finish & Corrosion Check
v. Visual Inspection for Deformation or Damage

9.0 Packing & Transportation

i. Each radiator limb wrapped in protective plastic film
ii. Foam padding at contact points

Assistant Engineer
220 KV Sub Station
Power Trans Crop UK LTD
SIDCUL, Haridwar

Executive Engineer
220KV O & M Div
Sidcul, Haridwar

Superintending Engineer
Operation & Maintenance Circle
PTCUL 26, Civil Lines
ROORKEE-247667