



सत्यमेव जयते



To

25.09.2026

The Vendors

Sub: **Expression of Interest (EOI), Inviting Technical firm for Establishment of “Short Circuit Testing laboratory (On-Line) as an End-to-End solution/turn key for Distribution Transformers up to 630 kVA” at National Test House (Southern Region), Taramani, Chennai- reg.**

Respected Sir/Madam

1. Introduction

The National Test House (NTH) is a premier scientific organization under the Ministry of Consumer Affairs, Food & Public Distribution, Government of India, specializing in testing, calibration, and quality evaluation of materials and products. With more than 115 years of experience, NTH functions as a multi-location laboratory network supporting industries, trade, and consumers across India.

At present, NTH-Southern Region (NTH-SR), Chennai is serving industries and consumers with comprehensive testing facilities as per IS & IEC standards of National and International standards on Transformers, High Voltage, switchgear equipment, and associated accessories except short circuit test facility on transformers.

The demand for reliable testing of High Voltage equipment to ensure operational reliability prior to field installation has increased significantly in recent years.

Based on continuous requests received from Transformer Manufacturers' Associations in Tamil Nadu & Puducherry, utilities, industries, and consumers for the creation of a Short Circuit Test Facility for transformers, NTH-SR proposes to establish a dedicated “Short Circuit Testing (On-Line) Facility for Distribution Transformers up to 630 kVA”.

At present, customers are carrying out partial testing at NTH-SR and approaching other laboratories for Short Circuit Testing facilities. Hence, customers have requested NTH-SR to create integrated High Voltage and Short Circuit testing facilities for distribution transformers at Chennai.

1. Short Circuit Testing Facility on Distribution Transformers up to 630 kVA

1.1 Establishment of Testing Laboratory

The National Test House – Southern Region, Chennai is in the process of establishing a new laboratory facility for: **“Short Circuit Testing (On-Line) on Distribution Transformers up to 630 kVA”** In this regard, NTH-SR invites Expressions of Interest (EOI) from eligible, experienced, and qualified technical firm for creating short circuit test Laboratory as an End-to-End solution/ Turn key project at NTH(SR).

1.1.b. Testing standards for Short Circuit Testing on Distribution Transformers.

The NTH-SR is proposed to conduct the Short Circuit Testing (On-Line) on Distribution Transformers upto 630 KVA tests in accordance with the relevant national and international standards including, but not limited to: **IS 1180 (Part 1):2014, IS 2026 (Part 1):2011, IS 2026 (Part 11):2021, IEC 60076-11: 2018, IS 2026 (Part 3):2018 IEC 60076-3: 2000.**

Standard for creation of short circuit test facility- IS 2026 (Part 5), IEC 60076-5.

1.2 Infrastructure

NTH-SR has identified suitable land for infrastructure development (Refer Annexure-I / Annexure-II). The implementing agency shall design the proposed laboratory and associated facilities to suit the identified land area and future operational requirements.

2. Objective of the Assignment

The objective of this assignment is to engage a competent technical firm who shall provide end-to-end technical services for planning, design, supply & commissioning, and accreditation support for the establishment of the “Short Circuit Testing (On-Line) Facility as an End-to-End solution/ Turn key for Distribution Transformers up to 630 kVA” at NTH-SR, Chennai.

3. Scope of Work:

3.0 The scope of technical consultant is to provide end to end solution/ turn key project includes:

a) Preliminary Engineering Design:

- i) To study the existing land and machinery with reference to latest technology, interfacing issues and propose suitable solutions in order to explore the maximum.
- ii) To study, review and examine the suitability/adequacy of the existing Power Supply by the State Electricity Board in the area.

a) At Tidal Park Sub Station, has a 33 kV feeder is emerging from 110/33kV, 50 MVA Transformer with a Fault level of 33kV Feeder Line is 629 MVA.

b) At 400KV GIS – SS, Taramani, Chennai during the laboratory operation at full capacity with fault level 9977 MVA.

- iv). To study the requirement with reference to BIL (Basic Insulation Level) and electromechanical aspects and propose suitable solution to operate the test facility to test up to 630KVA distribution transformer
- b) Feasibility study with available land (Refer Annexure-II- land information/ rough drawings) for creation of short circuit test facility (On-Line) for Distribution Transformers upto 630 KVA.**
- c) Software / Feasibility study including fault level calculation with available TNEB power from nearby substation for creation of short circuit test facility (On-Line) for Distribution Transformers upto 630 KVA.**
- d) Preparation of the master plan for short circuit test laboratory.**
- e) Preliminary and detailed engineering of the laboratory for creation of short circuit test laboratory (On-Line).**
- f) Proposed list of equipment and Estimated expenditure with detailed technical specifications as per specified standards.**
- g) Supply and commissioning of required equipment and machineries as complete package.**
- h) To guide and assist NTH on Supervision of erection, installation and commissioning of short circuit test laboratory (On-Line) and also to meet the desired test capability / requirements as per specified standards.**
- i) Technical on-site support shall be provided to NTH and staffs to carryout short circuit test on new transformer samples (at least 3 numbers) after completion of erection and commissioning of the project.**
- j) Imparting training to NTH scientists and supporting staff on Testing, safety, handling of equipment and operational procedures to perform short circuit test on transformer samples.**

4. Deliverables: The firm shall submit:

Detailed Project Report (DPR), Laboratory layout drawings, Building and space requirements, technical specifications BOQ, Supply, Installation & commissioning reports, Safety audit report, Trial test reports, Training completion reports, Final project completion report.

5. Duration of Assignment:

The project period shall be for an initial period of 12 months, extendable based on project requirements. (However, the Project is planned to be inaugurated in the month of October -2027)

8. General Terms & Conditions

The consultant shall work in close coordination with the client (NTH) organization. All documents and data shall remain the property of the NTH. Confidentiality shall be strictly maintained. Payment shall be milestone-based.

9 Submission of EOI documents:

The EOI shall be submitted in the prescribed format given in the Annexure-I along with the tentative quote for the End-to-End solution.

Last date of submission: The EOI and Quotation shall reach by 15.10.2026

Mode of submission: E-Mail

10. Contact Information:

All the correspondences shall be addressed to The Director
National Test House-Southern region, Taramani, Chennai -60013.

“This issues with the approval of the Director-NTH, SR.”

Yours faithfully



S. Janardhanam
Scientist-B(Electrical)/
Nodal Officer for Short Circuit Lab
NTH(SR)

ANNEXURE-I

- a) **Expression of Interest as firm for creation of Short circuit test facility (On-Line) as an end to end / turn Key project for Distribution Transformers upto 630 KVA. at National Test House(Southern Region), Taramani, Chennai**

BIODATA

Name		<u>Photo</u>
Date of Birth & Age		
Mailing address		
Permanent address		
Contact Numbers		
Email ID		
Occupation-Present		
Nature of Job		
Educational Qualification	Discipline	University
UG		
PG		
PhD		
<u>Others</u>		
Experience		
Experience in Fire Testing Lab creation		
Experience in Fire Testing-Building materials		
Budgetary Quote for the consultancy service		

- b) **Declaration: I declare that upon selection as firm, I will render my service to National Test House-SR in Chennai for creation of Short circuit test facility (On-Line) as an end to end / turn Key project for Distribution Transformers upto 630 KVA.**

Signature
Name

Annexure-II (Land details for SC Test facility)

