



ISO 9001-2000,
ISO 140 01-1996
OHSAS 18001-1999



नॉर्थ ईस्टर्न इलेक्ट्रिक पावर कॉर्पोरेशन लिमिटेड

(भारतसरकारकाउद्यम)

NORTH EASTERN ELECTRIC POWER CORPORATION LTD

(A GOVT. OF INDIA ENTERPRISE)

CIN U40101ML1976GOI001658

OFFICE OF THE EXECUTIVE DIRECTOR (CONTRACTS & PROCUREMENT)

BROOKLAND COMPOUND:: LOWER NEW COLONY

SHILLONG-793003, MEGHALAYA

Website: www.neepco.gov.in Email: contract@neepco.gov.in FAX: +91 364-2222578

CORRIGENDUM No.01 Dated 03/07/2019

to

N.I.B. No.324 Dated: 14/06/2019

For

“Supply of 1 No. 7500 KVA, ONAN, 132/33 kV 3 phase Station Service Transformer for Pare H.E. Project (110MW), Arunachal Pradesh, India”. Amendment has been carried out to the Bid Document. Details of the amendment are as per Annexure-I to this corrigendum. The amendment are also available in the website <https://www.neepco.co.in> and <https://etenders.gov.in>

All other terms and conditions will remain unchanged.


03/07/19

✓ Chief General Manager
i/c, Contracts & Procurement



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ANNEXURE-I

Sl.No	Clause No	Existing Clause	Modified Clause
1	Clause No. 1.1 (v) (b) of Particular Technical Specifications, Sec-IV of Bid Doc	For erection, testing, commissioning of the transformer till the time of final handover to the purchaser.	The referred clause mentioned as "For erection, testing, commissioning of the transformer till the time of final handover to the purchaser" stands DELETED .
2	Clause No. 1.1.1 of Particular Technical Specifications, Sec-IV of Bid Doc	The bidder must clearly indicate and furnish the following along with the technical bid; (a) The name of the manufacturer and technical details of the equipment offered in the Technical Data Sheets, (b) Test Certificates / Reports of the following tests carried out successfully on similar type of transformers (Same or higher MVA rating, same voltage class etc.) not older than 10 (Ten) years from the date of bid opening; 1) Lightning Impulse Voltage Withstand Test; 2) Separate Source withstand voltage test; 3) Induced AC Over-voltage withstand test with partial discharge measurement; 4) Temperature Rise Test; 5) Short Circuit Withstand Test;	The clause shall be read as below: "1.1.1 INFORMATION/DOCUMENTS TO BE SUBMITTED WITH THE BID The bidder must clearly indicate and furnish the following along with the technical bid. a) The name of the manufacturer and all technical details of the equipment offered and accordingly furnish the Technical Data Sheets. b) Type Test and Special Test certificates i. For the type tests as specified in IS 2026 or equivalent and tests mentioned as below, the contractor shall submit test certificates of Tests conducted successfully on similar type of Transformers (same or higher MVA rating, same voltage class etc.) not older than 10 (ten) years from the date of bid opening, for acceptance of purchaser. • Lightning Impulse Voltage Withstand Test. • Separate Source Withstand Voltage Test. • Induced AC Over voltage withstand test with partial discharge measurement. • Temperature Rise Test. ii. For the Short circuit withstand test (special test) as specified in IS 2026 or equivalent, the contractor shall submit test certificates of Short circuit withstand test conducted on similar

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			type of transformers (same or higher MVA rating, same voltage class etc.), not older than 10 (ten) Years from the date of bid opening, for acceptance of purchaser".
3	Clause No.1.1.4 (Standards) of Particular Technical Specifications, Sec-IV of Bid Doc	Standards	Manual of Transformer CBIP Publication shall also be considered under the clause 1.1.4 (standards).
4	Clause No.1.2.1 of Particular Technical Specifications, Sec-IV of Bid Doc	Transformers with lower losses shall be preferred. The Contractor shall indicate the values of the no load loss in kW at the rated voltage and frequency and the load loss in kW at rated voltage, rated frequency, rated output and at 75 degree centigrade along with auxiliary losses including cooler losses and these figures shall be guaranteed. It shall be indicated whether losses are firm or subject to tolerance. If nothing is indicated regarding tolerance on losses, it will be considered that losses are subject to tolerance. In case no ceiling is specified, these will be taken as per IS and the offer shall be loaded as per Table 7 of latest issue of IS 2026, Part 1.	The first para under Clause No. 1.2.1 (CAPITALISATION OF LOSSES AND LIQUIDATED DAMAGES FOR EXCESSIVE LOSSES) shall be read as below: "Transformers with lower losses shall be preferred. The Contractor shall indicate the values of the no load loss in kW at the rated voltage and frequency and the load loss in kW at rated voltage, rated frequency, rated output and at 75 "centigrade along with auxiliary losses including cooler losses and these figures shall be guaranteed. It shall be indicated whether losses are firm or subject to tolerance. If nothing is indicated regarding tolerance or losses, it will be considered that losses are subject to tolerance. In case no ceiling is specified, these will be taken as per IS and the offer shall be loaded as per Table 7 of latest issue of IS 2026, Part 1. The bidder shall substantiate the above quoted figures (no load loss, load loss and auxiliary loss) with test figures of at least 2 (two) numbers of transformers of similar rating as manufactured and supplied by them with documentary evidences in the form of customer details, supply order, test certificates etc. for the same".
5	Clause No.1.16 of Particular	Factory Assembly & Tests 1.16.1 The transformers shall be completely tested before dispatch in accordance with the	The clause shall be read as below: "1.16 FACTORY ASEMBLY & TESTS



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	Technical Specifications, Sec-IV of Bid Doc	standards and with such other tests as may be necessary to ensure that the equipment is satisfactory and is in accordance with this specification. Tests shall be carried out to evaluate the performance of the transformer and its auxiliaries generally as per the provisions of IS: 2026 / IEC 60076 as detailed below. 1.16.2 Tests shall be performed in the presence of the purchaser and/or his authorized representative so as to be witnessed by him. Minimum 30 days' notice in advance shall be given to the purchaser to enable him to be present during the tests. No material shall be shifted until the test reports are duly approved by the purchaser or his representative, in writing. 1.16.3 Factory Tests The following tests (Routine, Type, Special and Additional test) shall be carried out, charges for which shall be included in the offered price. I) Routine test Transformer routine tests shall include tests stated in latest issue of IS 2026 / IEC 60076. These tests shall also include but shall not be limited to the following. - Measurement of winding resistance. - Measurement of voltage ratio on each tapping and check of voltage vector relationship. - Measurement of Impedance voltage at all tapings. - Measurement of Load losses. - Measurement of No load losses and excitation current. - Measurement of Absorption index i.e. Insulation resistance for 15 seconds and 60 seconds (R60/R15) and Polarisation index i.e. Insulation Resistance for 10 minutes and one minute (R10mt/R1mt). - Dielectric tests - Lightning Impulse Voltage Withstand Test	1.16.1 The transformer shall be assembled and completely factory tested before dispatch in accordance with the standards and with such other tests as may be necessary to ensure that the equipment is satisfactory and is in accordance with this specification. Test shall be carried out to evaluate the performance of the transformer and its auxiliaries generally as per the provisions of IS:2026/IEC 60076 (latest amendments) as detailed below. 1.16.2 Tests shall be performed in the presence of the purchaser and / or his authorized representative so as to be witnessed by him. Minimum 30 days notice in advance shall be given to the purchaser to enable him to present during the tests. No material shall be shifted until the test reports are duly approved by the purchaser or his representative, in writing. 1.16.3 Factory test The following Tests (Routine, Type, Special, Additional test shall be carried out Routine Test Transformer routine shall include tests stated in latest issue of IS:2026/IEC60076. These tests shall also include but shall not be limited to the following and shall be done without any extra charges. - Measurement of winding resistance. - Measurement of Voltage ratio on each tapping, polarity and check of voltage vector relationship. - Measurement of no load loss and excitation current. - Measurement of short-circuit impedance and load loss. - Measurement of impedance voltage at all tapings. - Measurement of insulation test.

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		II) Separate Source Withstand Voltage Test III) Induced AC Overvoltage withstand test II) Type test a) Temperature rise test III) Special test a) Measurement of acoustic noise level. b) Measurement of the harmonics of the no-load current c) Measurement of zero sequence impedance. IV) Additional test a) Magnetic circuit test. Each core shall be tested for 1 minute at 2 kV between all bolts, side plates and structural steel work. Immediately prior to the dispatch of the transformer, the magnetic circuit shall be pressure tested for 1 minute at 2 kV AC between the core and the earth. b) Determination of capacitance and dissipation factor between winding to earth and between windings (Tan Delta). c) Determination of capacitance and dissipation factor for condenser type bushing (Tan Delta). d) Magnetic Balance Tests e) Determination of Transient Voltage Transfer Characteristics f) DGA of Oil of the transformer before and after Temperature Rise Test g) Frequency Response Analysis (FRA) Test	g) Measurement of Absorption index i.e. insulation resistance for 15 seconds and 60 seconds (R60seconds/R15seconds) and polarization index i.e. insulation Resistance for 10 minutes and one minute (R10minute/R1minute). h) Dielectric test A) Separate Source Withstand Voltage Test. B) Induced AC Overvoltage Withstand Test. i) Tests on Associated Equipment: Porcelain bushings, bushing current transformers, winding temperature, indicating devices, dial thermometers, bucholz relays, off circuit tap changer, Auxiliary motors and motor starting contactors, coolers, control device, insulating oil and other associated equipment shall be routine tested by the contractor in accordance with relevant IS. If such equipment are purchased by the contractor on a sub-contract, he shall have them tested to comply with these requirements. II) Type test / Special Tests / Additional tests. The transformer shall be subjected to the following Type Tests, Special Tests and Additional Tests and the charges for conducting these tests shall be included in the offered prices for the transformer A) Type Test a) Lightning Impulse Voltage Withstand Test. b) Temperature Rise Test B) Special Tests

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			a) Lightning Impulse test on neutral terminal. b) Measurement of acoustic noise level. c) Measurement of the harmonics of the no-load current. d) Measurement of the power taken by oil pump motors. e) Measurement of zero sequence impedance. C) Additional tests a) Magnetic circuit test. Each core shall be tested for 1 minute at 2 kV between all bolts, side plates and structural steel work. Immediately prior to the dispatch of the transformer, the magnetic circuit shall be pressure tested for 1 minute at 2 kV AC between the core and the earth. b) Determination of capacitance and dissipation factor between winding to earth and between windings (Tan Delta). c) Determination of capacitance and dissipation factor for condenser type bushing (Tan Delta). d) Magnetic Balance Tests. e) DGA of Oil of the transformer before and after Temperature Rise Test. f) Frequency Response Analysis (FRA) Test. g) Oil pressure test on completely assembled transformer. h) Pressure relief device test"

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