

BIDDING DOCUMENT
FOR
**Supply of Diagnostic Tools and Related Services for
Various Substations of AEGCL under PSDF-D**



**ASSAM ELECTRICITY GRID
CORPORATION LIMITED**

**BID IDENTIFICATION NO:
AEGCL/MD/PSDF-017/DIAGTOOLS/D**

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Section – 1
Instruction to Bidders

Section 1 - Instructions to Bidders

This section specifies the procedures to be followed by Bidders in the preparation and submission of their Bids. Information is also provided on the submission, opening, and evaluation of bids and on the award of contract.

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Section 1 - Instructions to Bidders

1.1.0 General

1.1.1. Scope of Bid

- 1.1.1.1. In support of the Invitation for Bids indicated in the Bid Data Sheet (BDS), the **Chief General Manager** on behalf of **Assam Electricity Grid Corporation Limited (AEGCL)** (hereinafter referred to as "the Purchaser" or "AEGCL"), issues this Bidding Document for the supply of Goods and Related Services incidental there to as specified in Section 3 (Purchaser's Requirements). The name and identification nos. of this Competitive Bidding are provided in the Bid Data Sheet (BDS) attached as Appendix to ITB-1 of this Section.
- 1.1.1.2. Unless otherwise stated, throughout this Bidding Document definitions of terms shall be as prescribed in **Section 4** (Special Conditions of Contract).

1.1.2. Eligible Bidders

- 1.1.2.1. Subject to meeting the Qualifying Requirements, a Bidder may be a firm or company. When the bidder is a firm, the names and address of the partners should be indicated and a copy of the certificate of registration with the concerned Registrar of firms should be enclosed with the Bid.
- 1.1.2.2. When the bidder is a Company, the company registration document along with Memorandum of Association should be submitted.
- 1.1.2.3. When the bidder is an individual carrying on business in a firm's name, the tender should be submitted by the owner of the firm, who may describe himself as carrying on business in the firm's name.

1.2.0 Contents of Bidding Document

1.2.1. Sections of Bidding Document

- 1.2.1.1. The Bidding Document consists of following six Sections, and should be read in conjunction with any Addenda issued in accordance with ITB **Clause 1.2.3**.

Section 1 - Instructions to Bidders (ITB) with Appendix-1 and Appendix-2
Section 2 - Bidding Forms (BDF)
Section 3 - Purchaser's Requirements (PRQ)
Section 4 - "General Conditions of Supply and Erection of AEGCL"
(This section is supplied separately)
Section 5- Special Conditions of Contract (SCC)
Section 6 - Contract Forms (COF)

- 1.2.1.2. *The completed Section 6 shall constitute "the Contract".*
- 1.2.1.3. The Invitation for Bids issued by the Purchaser is not part of the Bidding Document.
- 1.2.1.4. The Purchaser is not responsible for the completeness of the Bidding Document and its addenda, if they were not obtained directly from the source stated by the Purchaser in the Invitation for Bids.
- 1.2.1.5. The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Document. Failure to furnish all information or documentation required by the Bidding Document may result in the rejection of the bid.

1.2.2. Clarification of Bidding Document, Site Visit, Pre-Bid Meeting

- 1.2.2.1. A prospective Bidder requiring any clarification of the Bidding Document shall contact the Purchaser in writing at the Purchaser's address indicated in the **BDS** or raise his enquiries during the pre-bid meeting if provided for in accordance with **ITB Clause 1.2.2.4**. The Purchaser will respond to any request for clarification, provided that such request is received no later than seven (7) days prior to the deadline for submission of bids. The Purchaser's response shall be in writing with copies to all Bidders who have

acquired the Bidding Document in accordance with **ITB Clause 1.2.1.4**, including a description of the inquiry but without identifying its source. Should the Purchaser deem it necessary to amend the Bidding Document as a result of a request for clarification, it shall do so following the procedure under **ITB Clause 1.2.3** and **ITB Clause 1.4.2.2**.

- 1.2.2.2. The Bidder is advised to visit and examine the sites where the works are to be carried out and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the bid and entering into a contract for the provision of plant and services. The costs of visiting the sites shall be at the Bidder's own expense.
- 1.2.2.3. The Bidder and any of its personnel or agents will be granted permission by the Purchaser to enter upon its premises and lands for the purpose of such visit, but only upon the express condition that the Bidder, its personnel, and agents will release and indemnify the Purchaser and its personnel and agents from and against all liability in respect thereof, and will be responsible for death or personal injury, loss of or damage to property, and any other loss, damage, costs, and expenses incurred as a result of the inspection.
- 1.2.2.4. The Bidder's designated representative is invited to attend a pre-bid meeting, if provided for in the **BDS**. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.
- 1.2.2.5. The Bidder is requested, as far as possible, to submit any questions in writing, to reach the Purchaser not later than **one week** before the pre-bid meeting.
- 1.2.2.6. Minutes of the pre-bid meeting, including the text of the questions raised, without identifying the source, and the responses given, together with any responses prepared after the meeting, will be transmitted promptly to all Bidders who have acquired the Bidding Document in accordance with **ITB Clause 1.2.1.4**. Any modification to the Bidding Document that may become necessary as a result of the pre-bid meeting shall be made by the Purchaser exclusively through the issue of an Addendum pursuant to **ITB Clause 1.2.3** and not through the minutes of the pre-bid meeting.
- 1.2.2.7. Nonattendance at the pre-bid meeting will not be a cause for disqualification of a Bidder.

1.2.3. Amendment of Bidding Document

- 1.2.3.1. At any time prior to the deadline for submission of bids, the Purchaser may amend the Bidding Document by issuing addenda.
- 1.2.3.2. Any addendum issued shall be part of the Bidding Document and shall be communicated in writing to all who have obtained the Bidding Document from the Purchaser in accordance with **ITB Clause 1.2.1.4**.
- 1.2.3.3. To give prospective Bidders reasonable time in which to take an addendum into account in preparing their bids, the Purchaser may, at its discretion, extend the deadline for the submission of bids, pursuant to **ITB Clause 1.4.2.2**.

1.3.0 Preparation of Bids

1.3.1. Cost of Bidding

- 1.3.1.1. The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the Purchaser shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

1.3.2. Language of Bid

- 1.3.2.1. The Bid, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Purchaser, shall be written in the English language. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages into the English language, in which case, for purposes of interpretation of the Bid, such translation shall govern.

1.3.3. Documents Comprising the Bid

- 1.3.3.1. The Bid shall comprise two envelopes submitted simultaneously, one called the 'Technical Bid' containing the documents listed in **ITB Clause 1.3.3.2** and the other the **Price Bid** containing the documents listed in **ITB Clause 1.3.3.3**, both envelopes must be submitted online through e-tendering portal <https://assamtenders.gov.in>.
- 1.3.3.2. The Technical Bid submitted by the Bidder shall comprise the following:
- (a) Letter of Technical Bid;
 - (b) Bid Security, in accordance with **ITB Clause 1.3.9**;
 - (c) Written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with **ITB Clause 1.3.10.1**;
 - (d) Documentary evidence in accordance with **ITB Clause 1.3.5** establishing the Bidder's eligibility and qualifications to perform the contract if its Bid is accepted;
 - (e) Documentary evidence establishing in accordance with **ITB Clause 1.3.6** that the plant and services offered by the Bidder conform to the Bidding Document;
 - (f) Documents as called for in **ITB Clauses 1.1.2.1, 1.1.2.2, and 1.1.2.3**;
 - (g) Any other document required in the **BDS**.
- 1.3.3.3. The Price Bid submitted by the Bidder shall comprise the following:
- (a) Letter of Price Bid;
 - (b) completed schedules as required, including Price Schedules, in accordance with **ITB Clauses 1.3.4 and 1.3.7**; and
 - (c) any other document required in the **BDS**

1.3.4. Letter of Bid and Schedules

- 1.3.4.1. The Letters of Technical Bid and Price Bid, and the Schedules, and all documents listed under **ITB Clause 1.3.3**, shall be prepared using the relevant forms furnished in Section 2 (Bidding Forms). The forms must be completed without any alterations to the text, and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested.

1.3.5. Documents Establishing the Eligibility and Qualifications of the Bidder

- 1.3.5.1. To establish its eligibility and qualifications to perform the Contract in accordance with Appendix 2 of ITB (Evaluation and Qualification Criteria), the Bidder shall provide the information requested in the corresponding information sheets included in Section 2 (Bidding Forms).

1.3.6. Documents Establishing Conformity of the Goods and Services

- 1.3.6.1. The documentary evidence of the conformity of the goods and services to the Bidding Document may be in the form of literature, drawings and data, and shall furnish:
- (a) a detailed description of the essential technical and performance characteristics of the goods and services, including the functional guarantees of the Goods, in response to the Specification;
 - (b) a commentary on the Purchaser's Specification and adequate evidence demonstrating the substantial responsiveness of the plant and services to those specifications. Bidders shall note that standards for workmanship, materials and equipment designated by the Purchaser in the Bidding Document are intended to be descriptive (establishing standards of quality and performance) only and not restrictive. The Bidder may substitute alternative standards, brand names and/or catalog numbers in its bid, provided that it demonstrates to the Purchaser's satisfaction that the substitutions are substantially equivalent or superior to the standards designated in the Specification.

1.3.7. Bid Prices

- 1.3.7.1. Unless otherwise specified in the **BDS** and/or Section 3 (Purchaser's Requirements), bidders shall quote for the entire scope of supply and services on a "single responsibility" basis such that the total bid price

covers all the Supplier's obligations mentioned in or to be reasonably inferred from the bidding document in respect of the design, manufacture, including procurement, delivery, and completion of the entire scope.

- 1.3.7.2. Bidders are required to quote the price for the commercial, contractual and technical obligations outlined in the bidding document. No deviation in this regard normally, shall be accepted.
- 1.3.7.3. Bidders shall give a breakdown of the prices in the manner and detail called for in the Price Schedules included in Section 2 (Bidding Forms). Separate numbered Schedules included in Section 2 (Bidding Forms) shall be used for each of the following elements. The total amount from each Schedule (1& 2) shall be summarized in a Grand Summary (Schedule 3) giving the total bid price(s) to be entered in the Bid Form.
- | | |
|-----------------|--|
| Schedule No. 1: | Supply of Goods |
| Schedule No. 2: | Related Services (Freight & Insurance) |
| Schedule No. 3: | Grand Summary |
- 1.3.7.4. In the Schedules, bidders shall give the required details and a breakdown of their prices as called for in these Schedules.
- 1.3.7.5. The prices shall be either fixed or adjustable as specified in the **BDS**.
- (a) In the case of Fixed Price, prices quoted by the Bidder shall be fixed during the Bidder's performance of the contract and not subject to variation on any account. A bid submitted with an adjustable price quotation will be treated **as non-responsive and rejected**.
- (b) In the case of Adjustable Price, prices quoted by the Bidder shall be subject to adjustment during performance of the contract to reflect changes in the cost elements such as labor, material, transport and contractor's equipment in accordance with the procedures specified in the corresponding Appendix to the Contract Agreement. A bid submitted with a fixed price quotation will not be rejected, but the price adjustment will be treated as zero. Bidders are required to indicate the source of labor and material indices in the corresponding Form in Section 2 (Bidding Forms).

1.3.8. Period of Validity of Bids

- 1.3.8.1. Bids shall remain valid for the period specified in the **BDS** after the bid submission deadline date prescribed by the Purchaser. A bid valid for a shorter period **shall be rejected** by the Purchaser as non-responsive.
- 1.3.8.2. In exceptional circumstances, prior to the expiration of the bid validity period, the Purchaser may request Bidders to extend the period of validity of their bids. The request and the responses shall be made in writing. If a bid security is requested in accordance with **ITB Clause 1.3.9**, it shall also be extended for a corresponding period. A Bidder may refuse the request without forfeiting its bid security. A Bidder granting the request shall not be required or permitted to modify its bid.

1.3.9. Bid Security

- 1.3.9.1. The Bidder shall furnish as part of its bid, in original form, a Bid Security as specified in the **BDS**. The amount of Bid Security shall be as specified in the **BDS**.
- 1.3.9.2. The bid security shall be a demand guarantee, in the forms of an unconditional bank guarantee from a Scheduled or Nationalized Bank. The bid security shall be submitted using the 'Bid Security Form' included in Section 3 (Bidding Forms). The form must include the complete name of the Bidder. The bid security shall be valid for thirty days (30) beyond the original validity period of the bid, or beyond any period of extension if requested under **ITB Clause 1.3.8.2**.
- 1.3.9.3. Bids not complying with **ITB Clause 1.3.9.1** and **ITB Clause 1.3.9.2**, **shall be rejected** by the Purchaser as **non-responsive**.
- 1.3.9.4. The bid security of the successful Bidder shall be returned as promptly as possible once the successful Bidder has signed the Contract and furnished the required performance security.
- 1.3.9.5. The bid security of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's furnishing of the performance security pursuant to **ITB Clause 1.6.4**.

- 1.3.9.6. The bid security may be forfeited:
- (a) if a Bidder withdraws its bid during the period of bid validity specified by the Bidder on the Letter of Bid Form, except as provided in **ITB Clause 1.3.8.2** or
 - (b) if the successful Bidder fails to:
 - (i) Sign the Contract in accordance with **ITB Clause 1.6.13**; or
 - (ii) Furnish a performance security in accordance with **ITB Clause 1.6.24**.

1.3.10. Format and Signing of Bid

- 1.3.10.1. The Bidder shall prepare one original of the Technical Bid and one original of the Price Bid comprising the Bid as described in **ITB Clause 1.3.3**
- 1.3.10.2. The original and all copies of the Bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a written confirmation as specified in the **BDS** and shall be attached to the bid. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the bid where entries or amendments have been made shall be signed or initialed by the person signing the bid.
- 1.3.10.3. A bid submitted by a JV shall be signed so as to be legally binding on all partners.
- 1.3.10.4. Any interlineations, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the bid.

1.4.0 Submission and Opening of Bids

1.4.1. On-line submission of Bids

- 1.4.1.1. The Technical as well as Price Bid should be submitted through online portal only.
- 1.4.1.2. For Technical bid, all forms and supporting documents as required by **ITB Clause 1.3.3.2** and duly signed and stamped as per **ITB Clause 1.3.10** are to be uploaded to the e-tendering portal. The documents are to be uploaded in pdf format. Bidder may refer to the Assam government e-procurement portal <https://assamtenders.gov.in>.
- 1.4.1.3. The Price Bid must be submitted in the Price Schedule provided on the e-tendering portal as per the online format.

1.4.2. Deadline for Submission of Bids

- 1.4.2.1. Bids shall be received ONLINE only on or before the date and time indicated in the **BDS**.
- 1.4.2.2. The Purchaser may, at its discretion, extend the deadline for the submission of bids by amending the Bidding Document in accordance with **ITB Clause 1.2.3**, in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.

1.4.3. Late Bids

- 1.4.3.1. The e-tendering portal shall allow the bidders to submit bids up to the date and time specified in **ITB Clause 1.4.2** as per Server Clock. Bidders are advised to submit their bids well in advance of the deadline for submission of bids to avoid any last minute difficulties.

1.4.4. Withdrawal, Substitution, and Modification of Bids

- 1.4.4.1. E-tendering portal shall allow modification of bids any time before the deadline for Bid Submission. A bidder may withdraw its bid, by sending a written notice duly signed by an authorized representative, and shall include a copy of the authorization in accordance with **ITB Clause 1.3.10.12**, Notices must be received by the purchaser prior to the deadline prescribed for submission of bids, in accordance with **ITB Clause 1.4.2**.
- 1.4.4.2. No bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Letter of Technical Bid or any extension thereof.

1.4.5. Bid Opening

- 1.4.5.1. The Purchaser shall conduct the opening of Technical Bids through online process at the address, date and time specified in the BDS. The Bid Opening Committee shall open the bids received online in the presence of Bidders` designated representatives who choose to attend. The Price Bids will remain unopened until the specified time of their opening.
- 1.4.5.2. First, physical envelopes marked "WITHDRAWAL" shall be opened and read out and the corresponding bid shall not be considered/ rejected with comments. No bid withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal duly signed by an authorized representative and is read out at bid opening.
- 1.4.5.3. All the Technical Bids shall be opened one at a time, and the following read out and recorded
- a. the name of the Bidder;
 - b. the presence of a Bid Security, if required; and
 - c. any other details as the Purchaser may consider appropriate.

Only Technical Bids and alternative Technical Bids read out and recorded at bid opening shall be considered for evaluation. No bid shall be rejected at the opening of Technical Bids except for withdrawn bids.

- 1.4.5.4. The Purchaser shall prepare a record of the opening of Technical Bids that shall include, as a minimum: the name of the Bidder and whether there is a withdrawal and alternate proposals and the presence or absence of a bid security or a bid securing declaration, if one was required. The Bidders` representatives who are present shall be requested to sign the record. The omission of a Bidder`s signature on the record shall not invalidate the contents and effect of the record
- 1.4.5.5. At the end of the evaluation of the Technical Bids, the Purchaser will invite bidders who have submitted substantially responsive Technical Bids and who have been determined as being qualified for award to attend the opening of the Price Bids. The date, time, and location of the opening of Price Bids will be advised in writing by the Purchaser. Bidders shall be given reasonable notice of the opening of Price Bids.
- 1.4.5.6. The Purchaser shall conduct the opening of Price Bids of all Bidders who submitted substantially responsive Technical Bids, in the presence of Bidders` representatives who choose to attend at the address, date and time specified by the Purchaser. The Bidder`s representatives who are present shall be requested to sign a register evidencing their attendance.
- 1.4.5.7. At All the Price Bids shall be opened one at a time and the following read out and recorded:
- a) the name of the Bidder;
 - b) the Bid Prices, including any discounts and alternative offers; and
 - c) any other details as the Purchaser may consider appropriate.

Only Bid Prices and discounts read out and recorded during the opening of Price Bids shall be considered for evaluation. No Bid shall be rejected at the opening of Price Bids.

- 1.4.5.8. The Purchaser shall prepare a record of the opening of Price Bids that shall include, as a minimum: the name of the Bidder, the Bid Price (per lot if applicable), any discounts. The Bidders` representatives who are present shall be requested to sign the record. The omission of a Bidder`s signature on the record shall not invalidate the contents and effect of the record
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1.5.0 Evaluation and Comparison of Bids

1.5.1 Confidentiality

- 1.5.1.1. Information relating to the evaluation of bids and recommendation of contract award shall not be disclosed to Bidders or any other persons not officially concerned with such process.

1.5.1.2. Any attempt by a Bidder to influence the Purchaser in the evaluation of the bids or Contract award decisions may result in the rejection of its bid.

1.5.1.3. Notwithstanding **ITB Clause 1.5.1.2**, from the time of bid opening to the time of Contract award, if any Bidder wishes to contact the Purchaser on any matter related to the bidding process, it should do so in writing duly signed by an authorized representative.

1.5.2. Clarification of Bids

1.5.2.1. To assist in the examination, evaluation, and comparison of the Technical and Price Bids, and qualification of the Bidders, the Purchaser may, at its discretion, ask any Bidder for a clarification of its bid. Any clarification submitted by a Bidder that is not in response to a request by the Purchaser shall not be considered. The Purchaser's request for clarification and the response shall be in writing. No change in the substance of the Technical Bid or prices in the Price Bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Purchaser in the evaluation of the bids, in accordance with **ITB Clause 1.5.9**.

1.5.2.2. If a Bidder does not provide clarifications of its bid by the date and time set in the Purchaser's request for clarification, its bid may be rejected.

1.5.3. Deviations, Reservations, and Omissions

1.5.3.1. During the evaluation of bids, the following definitions apply:

- a) "Deviation" is a departure from the requirements specified in the Bidding Document;
- b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Document; and
- c) "Omission" is the failure to submit part or all of the information or documentation required in the Bidding Document.

1.5.4. Preliminary Examination of Technical Bids

1.5.4.1. The Purchaser shall examine the Technical Bid to confirm that all documents and technical documentation requested in **ITB Sub-Clause 1.3.3.2** have been provided, and to determine the completeness of each document submitted. If any of these documents or information is missing, **the Bid may be rejected**.

1.5.4.2. The Purchaser shall confirm that the following documents and information have been provided in the Technical Bid. If any of these documents or information is missing, the offer **shall be rejected**.

- a) Letter of Technical Bid;
- b) written confirmation of authorization to commit the Bidder;
- c) Bid Security; and
- d) Technical Proposal in accordance with **ITB 1.3.65.1**.

1.5.5. Responsiveness of Technical Bid

1.5.5.1. The Purchaser's determination of a bid's responsiveness is to be based on the contents of the bid itself, as defined in **ITB Clause 1.3.3**.

1.5.5.2. A substantially responsive Technical Bid is one that meets the requirements of the Bidding Document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that,

- a) if accepted, would:
 - (i). affect in any substantial way the scope, quality, or performance of the plant and services specified in the Contract; or
 - (ii). limit in any substantial way, inconsistent with the Bidding Document, the Purchaser's rights or the Bidder's obligations under the proposed Contract; or
- b) if rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive bids.

1.5.5.3. The Purchaser shall examine the technical aspects of the Bid submitted in accordance with **ITB Clause 1.3.6**, Technical Proposal, in particular to confirm that all requirements of Section 3 (Purchaser's Requirements) have been met without any material deviation or reservation.

1.5.5.4. If a bid is not substantially responsive to the requirements of the Bidding Document, it shall be rejected by the Purchaser and may not subsequently be made responsive by correction of the material deviation, reservation, or omission.

1.5.6. Nonmaterial Nonconformities

1.5.6.1. Provided that a Bid is substantially responsive, the Purchaser may waive any nonconformity in the bid that does not constitute a material deviation, reservation or omission.

1.5.6.2. Provided that a Bid is substantially responsive, the Purchaser may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities in the Bid related to documentation requirements. Requesting information or documentation on such nonconformities shall not be related to any aspect of the Price Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.

1.5.6.3. Provided that a Bid is substantially responsive, the Purchaser shall rectify nonmaterial nonconformities related to the Bid Price. To this effect, the Bid Price shall be adjusted, for comparison purposes only, to reflect the price of a missing or non-conforming item or component. The adjustment shall be made using the method indicated in **Appendix to ITB-2 (Evaluation and Qualification Criteria)**.

1.5.7. Detailed Evaluation of Technical Bids

1.5.7.1. The Purchaser will carry out a detailed technical evaluation of the bids not previously rejected as being substantially non-responsive, in order to determine whether the technical aspects are in compliance with the Bidding Document. In order to reach such a determination, the Purchaser will examine and compare the technical aspects of the bids on the basis of the information supplied by the bidders, taking into account the following:

- a) overall completeness and compliance with the Purchaser's Requirements; deviations from the Purchaser's Requirements; conformity of the goods and services offered with specified performance criteria; suitability of the goods and services offered in relation to the environmental and climatic conditions prevailing at the site; and quality, function and operation of any process control concept included in the bid. The bid that does not meet minimum acceptable standards of completeness, consistency and detail will be rejected for non-responsiveness;
- b) type, quantity and long-term availability of mandatory and recommended spare parts and maintenance services; and
- c) other relevant factors, if any, listed in **Appendix to ITB-2 (Evaluation and Qualification Criteria)**.

1.5.8. Eligibility and Qualification of the Bidder

1.5.8.1. The Purchaser shall determine to its satisfaction during the evaluation of Technical Bids whether a Bidder meets the eligibility and qualifying criteria specified in **Appendix to ITB-2 (Evaluation and Qualification Criteria)**.

1.5.8.2. The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to **ITB Clause 1.3.5**.

1.5.8.3. ***An affirmative determination shall be a prerequisite for opening and evaluation of a Bidder's Price Bid. A negative determination shall result into the disqualification of the Bid, in which event the Purchaser shall not open the Price Bid of the Bidder.***

1.5.9. Correction of Arithmetical Errors

1.5.9.1. During the evaluation of Price Bids, the Purchaser shall correct arithmetical errors on the following basis:

- a) where there are errors between the total of the amounts given under the column for the price breakdown and the amount given under the Total Price, the former shall prevail and the latter will be corrected accordingly;
 - b) where there are errors between the total of the amounts of Schedule Nos. 1 and 2, and the amount given in Schedule No. 3 (Grand Summary), the former shall prevail and the latter will be corrected accordingly; and
 - c) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetical error, in which case the amount in figures shall prevail subject to (a) and (b) above.
- 1.5.9.2. If the Bidder that submitted the lowest evaluated bid does not accept the correction of errors, its bid shall be **disqualified and its bid security may be forfeited**.
- 1.5.10. Evaluation of Price Bids**
- 1.5.10.1. The Purchaser shall use the criteria and methodologies listed in this Clause. No other evaluation criteria or methodologies shall be used.
- 1.5.10.2. To evaluate a Price Bid, the Purchaser shall consider the following:
- a) the bid price, including taxes, as quoted in the Price Schedules;
 - b) price adjustment for correction of arithmetical errors in accordance with **ITB Clause 1.5.9.1**; and
 - c) the evaluation factors if any indicated in Appendix 2 (Evaluation and Qualification Criteria).
- 1.5.10.3. If price adjustment is allowed in accordance with **ITB Clause 1.3.7.5**, the estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be taken into account in bid evaluation.
- 1.5.11. Comparison of Bids**
- 1.5.11.1. The Purchaser shall compare all substantially responsive Bids to determine the lowest evaluated bid, in accordance with **ITB Clause 1.5.10.2**.
- 1.5.12. Purchaser's Right to Accept Any Bid, and to Reject Any or All Bids**
- 1.5.12.1. The Purchaser reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to Bidders. In case of annulment, all bids submitted and specifically, bid securities, shall be promptly returned to the Bidders.
- 1.6.0 Award of Contract**
- 1.6.1. Award Criteria**
- 1.6.1.1. The Purchaser shall award the Contract to the Bidder whose offer has been determined to be the lowest evaluated bid and is substantially responsive to the Bidding Document, provided further that the Bidder is determined to be eligible and qualified to perform the Contract satisfactorily.
- 1.6.2. Notification of Award**
- 1.6.2.1. Prior to the expiration of the period of bid validity, the Purchaser shall notify the successful Bidder, in writing, that its bid has been accepted. The notification letter (hereinafter and in the Conditions of Contract and Contract Forms called the "Letter of Acceptance") shall specify the sum that the Purchaser will pay the Contractor in consideration of the execution and completion of the plant and services (hereinafter and in the Conditions of Contract and Contract Forms called "the Contract Price").
- 1.6.2.2. Until a formal contract is prepared and executed, the notification of award shall constitute a binding Contract.
- 1.6.3. Signing of Contract**
- 1.6.3.1. Within **15(fifteen)** days of receipt of the Letter of Acceptance, the successful Bidder shall be required to sign the Contract Agreement.
- 1.6.3.2. The contract signing shall take place at the premises of the Purchaser.

1.6.4. Performance Security

- 1.6.4.1. Within **10(ten)**days of the receipt of notification of award from the Purchaser, the successful Bidder shall furnish the performance security in accordance with the conditions of contract, using for that purpose the Performance Security Form included in **Appendix – 3, Section 6 (Contract Forms)**, or another form acceptable to the Purchaser.
- 1.6.4.2. Failure of the successful Bidder to submit the above-mentioned Performance Security or sign the Contract shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security. In that event the Purchaser may award the Contract to the next lowest evaluated Bidder whose offer is substantially responsive and is determined by the Purchaser to be qualified to perform the Contract satisfactorily.

APPENDIX TO ITB - 1 Bid Data Sheet (BDS)

A. Introduction

ITB 1.1.1.1	<p>The number of the Invitation for Bid is : AEGCL/MD/Tech-649/PSDF/DIAGTOOLS/ D/IFB</p> <p>The Purchaser is: Assam Electricity Grid Corporation Limited.</p> <p>The name of the Bid is: Supply of Diagnostic Tools and Related Services for Various Substations of AEGCL under PSDF(D).</p> <p>The Identification Numbers of Bid is:</p> <p style="text-align: center;">AEGCL/MD/PSDF-017/DIAGTOOLS/ D</p>
ITB 1.2.2.1	<p>For clarification purposes only, the Purchaser's address is:</p> <p>Attention: The Managing Director, AEGCL Street Address: Bijulee Bhawan, Paltanbazar Floor/Room number: First Floor City: Guwahati PIN Code: 781001 Country: India Telephone: +91 361 2739520 Facsimile number: +91 361 2739513 Electronic mail address: managing.director@aegcl.co.in</p>
ITB 1.2.2.4	<p>Purchaser invites intending Bidders to a pre-bid meeting at 14.00 hrs on 17.01.2018. The intending bidders are required to submit their queries in hard as well as soft copy to the above mentioned addresses for communication two days ahead of the Pre-bid meeting. Soft copies may also be sent to psdfaegcl@gmail.com.</p>
ITB 1.3.3.2(g)	<p>The Bidder shall submit with its Technical Bid the following additional documents:</p> <ol style="list-style-type: none"> 1. Guaranteed and other Technical Particulars as required in Section 3, 'Purchaser's Requirements. The GTP must be furnished in the prescribed format only. No other format shall be acceptable. 2. Type Test Certificates 3. Manufacturer's Authorization (if applicable). 4. Performance certificate as per clause 2.3 of APPENDIX TO ITB - 2
ITB 1.3.7.1	<p>Unless otherwise specifically indicated in the Section 3 (Purchaser's Requirements), bidders shall quote for the entire plant and services on 'single responsibility basis'.</p>
ITB 1.3.7.5	<p>The prices quoted by the Bidder shall be FIXED for entire period of the Contract.</p>
ITB 1.3.8.1	<p>The bid validity period shall be 180 (one hundred eighty) days.</p>
ITB 1.3.9.1	<p>The Bidder shall furnish a bid security amounting to Rs.11,00,000.00 (Rupees Eleven Lakhs only).</p>

ITB 1.3.10.1	The bidding is through E-tendering portal and received online , a bidder has to submit any document in hard copy if asked by the Purchaser.
ITB 1.3.10.1	The written confirmation of authorization to sign on behalf of the Bidder shall consist of a written confirmation of Authorization to sign on behalf of the Bidder shall consist of Notarized Power of Attorney .
ITB 1.4.2.1	<p>For bid submission purposes only, (E-tenders shall be accepted through online portal https://assamtenders.gov.in only)</p> <p>The purchaser's address is: Attention: The Managing Director, AEGCL Street Address: BijuleeBhawan, Paltanbazar Floor/Room number: First Floor City: Guwahati PIN Code: 781001</p> <p>The deadline for bid submission is Date: 30.01.2018 Time: --12.00 Hours</p>
ITB 1.4.5.1	<p>The bid opening of Technical Bids shall take place at</p> <p>Office of The Managing Director, AEGCL Street Address: BijuleeBhawan, Paltanbazar Floor/Room number: First Floor City: Guwahati (Assam) PIN Code: 781001 Country: India Date: 31.01.2018 Time: 14.00 Hours</p>

APPENDIX TO ITB - 2

Evaluation and Qualification Criteria (ECQ)

This Appendix contains all the criteria that the Purchaser shall use to evaluate bids and qualify Bidders. In accordance with ITB 1.5.7 and ITB 1.5.8, no other methods, criteria and factors shall be used. The Bidder shall provide all the information requested in the forms included in Section 2 (Bidding Forms).

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1. Evaluation

1.1 Technical Evaluation

In addition to the criteria listed in ITB 1.5.7.1, **technical bids will be evaluated for the package as a whole. If any item does not satisfy the technical requirements as per bid specifications, the entire bid shall be considered as technically non-responsive.**

1.2 Economic Evaluation

Any adjustments in price that result from the procedures outlined below shall be added, for purposes of comparative evaluation only, to arrive at an "Evaluated Bid Price." Bid prices quoted by bidders shall remain unaltered.

1.2.1 Quantifiable Deviations and Omissions

Quantifiable Deviations and Omissions from the contractual obligations: No financial assessment shall be made by the Purchaser for deviations and omissions from the requirements of the Bidding Document. All such deviations, omissions or reservations shall be dealt with in accordance with ITB Clauses 1.5.5.2, 1.5.5.3, 1.5.5.4, 1.5.6.1, 1.5.6.2, 1.5.6.3, 1.5.7.1(a) and 1.5.9.

1.3 Time Schedule

Time to complete Works from the Commencement Date specified in **Article 3** of the Contract Agreement for determining time for completion the works is **6 (Six) months. Bids not meeting the above time schedule shall be rejected.** However, no credit will be given for earlier completion.

1.4 Specific additional criteria

In addition to the above, no additional criteria shall be considered for evaluation of Bids.

2 Qualification

Qualification of bidder will be based on meeting the minimum pass / fail criteria specified below

2.1 General

2.1.1 The Bidder must satisfy the requirement of ITB Sub-Clause 1.1.2 and shall submit necessary document as per the said Clause.

2.1.2 The Bidder may be either OEM (Original Equipment manufacturer) or an authorised dealer/distributor/agent/Indian representative of manufacturer, documentary evidence to this effect shall be furnished by the bidder along with bid. ***In case, the Bidder is an authorised dealer/distributor/agent or the Bidder is not a manufacturer of all the equipment, the bidder must submit with the bid, an undertaking using 'Form-MA' (Manufacturer's Authorisation) for equipment not manufactured by him, Section-4 (Bidding Form).*** In case a dealer is supplying equipments from overseas manufacturer, an authorisation from the country representative of the manufacturer along with notarised copy of Manufacturer's Authorisation by the overseas manufacturer to the country representative may be submitted.

2.1.3 Using the 'Form LIT – 1' (Section 4, Bidding Form), bidder shall list all Pending Litigation. All pending litigation shall be treated as resolved against the Bidder and so shall in total not represent more than **50% percent** of the Bidder's net worth.

2.2 Financial Situation

2.2.1 Submission of audited balance sheets or other financial statements acceptable to the Purchaser, for the last **3 (three)** financial years as annualized to demonstrate the current soundness of the Bidders financial position and its prospective long-term profitability. As a minimum, a Bidder's net worth calculated as the difference between total assets and total liabilities should be positive. Along with audited balance sheet bidder shall submit Form '**FIN-1**' (Section 4, Bidding Form), with the Bid duly filled up.

2.2.2 Minimum average annual turnover of **Rs.5,50,00,000.00 (Five Crore Fifty Lakhs only)** calculated as total certified payments received for contracts in progress or completed, within the last 3 years. The bidder shall furnish along with its bid the audited balance sheets and duly filled up Form '**FIN-2**' in support of this Clause.

- 2.2.3 Using Forms **FIN – 3** Section 2 (Bidding Forms) the Bidder must demonstrate access to, or availability of, financial resources such as liquid assets, unencumbered real assets, lines of credit, and other financial means, other than any contractual advance payments to meet the cash-flow requirement, of **Rs. 1,30,00,000.00 (Rupees One Crore Thirty Lakhs only)**.
- 2.2.4 A manufacturer already participating through an authorised dealer/distributor/agent, shall not be eligible for participation in this bidding process on its own.
- 2.3 Technical Qualifying Requirements**
- 2.3.1 **The Manufacturer** must have at least **5 (Five) years'** experience of design, manufacturing, Testing and supplying similar rated equipment as on the date of bid opening. Using Forms **EXP – 1** of Section 4 (Bidding Forms) the Bidder must furnish necessary information along with supporting documents (e.g., copy of contracts, performance & completion certificate, etc.) in support of this clause.
- 2.3.2 **The Manufacturer** of equipment must have designed, manufactured and supplied the offered equipment to **PGCIL/NHPC/NPCIL/NEEPCO/NTPC and other Indian Central and State sector Generation/Transmission Utilities** and these should be in satisfactory operation for at least **1 (One) year** as on the date of bid opening. Using Forms **EXP – 2** of Section 4 (Bidding Forms) the Bidder must furnish necessary information along with supporting documents (e.g., copy of contracts, performance & completion certificate, valid Type Test Reports etc.) in support of this clause. The **Performance & Completion certificates** should be recent & must not be older than **3 (three) years** on the date of opening of the Technical Bid. **The Type Test Report** shall not be older than **5(Five) years** on the date of opening of the Technical Bid.
- 2.3.3 The bidder/manufacturer must have **sufficient infrastructure and manpower in India** for providing complete after sales services including calibration of the offered items within reasonable time. **The proof in this regard to be enclosed in the offer.** In case the bidder is an authorized dealer of a foreign supplier, they shall have valid certificate for sales and service support in India from their respective foreign agency.
- 2.3.4 The Purchaser reserves the right to call the bidders/manufacturers meeting all other QR, for **field demonstration of performance of any or all items** in designated 400 KV GSS of AEGCL. The successful field demonstration of the required items shall be part of technical qualifying requirements of those items.

Section –2

BIDDING FORMS

Section 2 - Bidding Forms

This Section contains the forms which are to be completed by the Bidder and submitted as part of his Bid.

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1 Letter of Technical Bid

[Bidder's Letterhead]

Date:

Bid Identification No (s):

:

:

:

Invitation for Bid No.:

To:.....

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Bidders (ITB) 1.2.3;
- (b) We offer to design, manufacture, test and deliver, in conformity with the Bidding Document the following Goods and Related Services:
- (c) Our Bid consisting of the Technical Bid and the Price Bid shall be valid for a period of days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period

Name

In the capacity of

Signed

Duly authorized to sign the Bid for and on behalf of

Date

.....

2 Letter of Price Bid
(NOT REQUIRED FOR E-TENDERING)

[Bidder's Letterhead]

Date:

Bid Identification No:

Invitation for Bid No.:

To:.....

We, the undersigned, declare that:

- (i). We have examined and have no reservations to the Bidding Document, including Addenda issued in accordance with Instructions to Bidders (ITB) 1.2.3;
- (ii). We offer to design, manufacture, test and deliver in conformity with the Bidding Document the following Goods and Related Services:
- (iii). The total price of our Bid is the sum of:,
- (iv). Discount offered (if any) for (i) Supply (Schedule 1)%, and (ii) Related Services (Schedule 2, F& I,).....%
- (v). Our bid shall be valid for a period of days from the date fixed for the submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (vi). If our bid is accepted, we commit to obtain a performance security in accordance with the Bidding Document;
- (vii). We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed; and
- (viii). We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.

Name

In the capacity of

Signed

Duly authorized to sign the Bid for and on behalf of

Date

3 Price Schedules

PREAMBLE

General

1. The Price Schedules are divided into separate Schedules as follows:
Schedule No. 1: Supply of Goods
Schedule No. 2: Related Services (Freight & Insurance)
Schedule No. 3: Grand Summary
2. The entered rates and prices shall be deemed to cover the full scope as specified in the bidding document, including overheads and profit.
3. If bidders are unclear or uncertain as to the scope of any item, they shall seek clarification in accordance with **ITB 1.2.2** prior to submitting their bid.

Pricing

4. Prices shall be filled in indelible ink/ on-line and any alterations necessary due to errors, etc., shall be initialed by the Bidder if asked for hardcopy.
5. Bid prices shall be quoted on-line in the manner indicated in Schedules.
As specified in the Bid Data Sheet and Special Conditions of Contract, prices shall be fixed and firm for the duration of the Contract, or prices shall be subject to adjustment in accordance with the corresponding Appendix (Price Adjustment) to the Contract Agreement.
Prices given in the Schedules against each item shall be for the scope covered by that item as detailed in Section 6 (Purchaser's Requirements) or elsewhere in the Bidding Document.

NOTE: For E-Tendering, these forms are indicative only. All prices are to be filled in the price schedule provided in the e-tendering portal only. However, notes below the price schedule is to be considered while filling prices in e-tender portal.

Schedule-1 Supply of Goods

Sl. No.	Description	Measuring Unit	Qty	Unit Price (exclusive of taxes)	Total Price (exclusive of taxes)
1	2	3	4	5	6=4x5
	Destination of Delivery: Office of the AGM, MRT Division, AEGCL, Guwahati (Assam)				
1	Karl Fischer Moisture Oil Test Kit	Set	2		
2	Automatic Relay test kit suitable for testing electro mechanical /static /numerical relays	Set	6		
3	PLCC Tool Kit	Set	2		
4	Transmission line Response Analyser	Set	6		
5	Thermovision camera for detection of hot spots	Set	10		
6	Thermal scanner (for Transformer/ Reactor)	Set	6		
TOTAL of Column 6 to be carried forward to Schedule No. 3. Grand Summary					

¹**All amounts shall be in Rupees.**

²**Prices quoted shall be exclusive of taxes.**

³**The prices shall be inclusive that of all the accessories for successful commissioning, (including training of Purchaser's personnel at site) of the equipment.**

Schedule-2
Related Services (Freight & Insurance)

Sl.No.	Description	Measuring Unit	Qty.	Unit Price	Total Price
	2	3	4	5	6 = 4 x 5
	Destination of Delivery: Office of the AGM,MRT Division, AEGCL, Guwahati (Assam)				
1	Karl Fischer Moisture Oil Test Kit	Set	2		
2	Automatic Relay test kit suitable for testing electro mechanical /static /numerical relays	Set	6		
3	PLCC Tool Kit	Set	2		
4	Transmission line Response Analyser	Set	6		
5	Thermovision camera for detection of hot spots	Set	10		
6	Thermal scanner (for Transformer/ Reactor)	Set	6		
TOTAL (Columns 6 to be carried forward to Schedule No. 3. Grand Summary)					

¹**All amounts shall be in Rupees.**

²**Prices shall be exclusive of taxes.**

Schedule No. 3 - Grand Summary

Schedule No.	Column No.	Title	TOTAL (in Rs)
1	6	Supply of Goods	
2	6	Related Services (Freight & Insurance)	
GRAND TOTAL			

4 Form of Bid Security

Bank Guarantee

(To be stamped in accordance with Stamp Act)

(The non-Judicial Stamp Paper should be in the name of issuing Bank)

.....**Bank's Name, and Address of Issuing Branch or Office**.....

Beneficiary: **Name and Address of Purchaser**

Date:.....

Bid Security No.:.....

We have been informed that **name of the Bidder**. (Hereinafter called "the Bidder") has submitted to you its bid dated (Hereinafter called "the Bid") for the execution of **Name&Identification No of Bid** under Invitation for Bids No. ("the IFB").

Furthermore, we understand that, according to your conditions, bids must be supported by a bid guarantee.

At the request of the Bidder, we **name of Bank**. hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of **amount in figures** (. **amount in words**) upon receipt by us of your first demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder:

- (a) has withdrawn its Bid during the period of bid validity specified by the Bidder in the Form of Bid; or
- (b) does not accept the correction of errors in accordance with the Instructions to Bidders (hereinafter "the ITB"); or
- (c) having been notified of the acceptance of its Bid by the Purchaser during the period of bid validity, (i) fails or refuses to execute the Contract Agreement, or (ii) fails or refuses to furnish the Performance Security, in accordance with the ITB.

This guarantee will expire: (a) if the Bidder is the successful Bidder, upon our receipt of copies of the Contract Agreement signed by the Bidder and the performance security issued to you upon the instruction of the Bidder; and (b) if the Bidder is not the successful Bidder, upon the earlier of (i) our receipt of a copy your notification to the Bidder of the name of the successful Bidder; or (ii) twenty-eight days after the expiration of the Bidder's bid.

Consequently, any demand for payment under this guarantee must be received by us at the office on or before that date.

.....**Bank's seal and authorized signature(s)**

Note: All italicized text is for use in preparing this form and shall be deleted from the final document

5 Contract Execution Schedule

The Bidder shall indicate here his proposed Contract Execution Schedule if the contract is awarded to him. The Schedule shall match with the time for completion specified.

6 Bidders Qualification

To establish its qualifications to perform the contract in accordance with Appendix 2 of ITB (Evaluation and Qualification Criteria) the Bidder shall provide the information requested in the corresponding Information Sheets included hereunder.

6.1 Form ELI - 1: Bidder's Information Sheet

Bidder's Information	
Bidder's legal name	
Bidder's country of constitution	
Bidder's year of constitution	
Bidder's legal address	
Bidder's authorized representative (name, address, telephone numbers, fax numbers, e-mail address)	
Attached are copies of the following original documents. <input type="checkbox"/> 1. In case of single entity/firm, documents, in accordance with ITB 1.1.2.1. <input type="checkbox"/> 2. In case of single Company, documents, in accordance with ITB 1.1.2.2.	

6.2 Form LIT - Pending Litigation

Each Bidder must fill in this form

Pending Litigation			
<input type="checkbox"/> No pending litigation in accordance with Criteria 2.1.3 of Appendix 2 of ITB (Evaluation and Qualification Criteria) <input type="checkbox"/> Pending litigation in accordance with Criteria 2.1.3 of Appendix 2 of ITB(Evaluation and Qualification Criteria)			
Year	Matter in Dispute	Value of Pending Claim in Rupees	Value of Pending Claim as a Percentage of Net Worth

6.3 Form FIN - 1: Financial Situation

Each Bidder must fill in this form

Financial Data for Previous 3 Years [Rupees]		
Year 1:	Year 2:	Year 3:

Information from Balance Sheet

Total Assets			
Total Liabilities			
Net Worth			
Current Assets			
Current Liabilities			

Information from Income Statement

Total Revenues			
Profits Before Taxes			
Profits After Taxes			

- Attached are copies of financial statements (balance sheets including all related notes, and income statements) for the last three years, as indicated above, complying with the following conditions.
- All such documents reflect the financial situation of the Bidder, and not sister or parent companies.
 - Historic financial statements must be audited by a certified accountant.
 - Historic financial statements must be complete, including all notes to the financial statements.
 - Historic financial statements must correspond to accounting periods already completed and audited (no statements for partial periods shall be requested or accepted).

6.4 Form FIN - 2: Average Annual Turnover

Each Bidder must fill in this form

Annual Turnover Data for the Last 3 Years	
Year	Amount (Rupees)

Average Annual Turnover

The information supplied should be the Annual Turnover of the Bidder in terms of the amounts billed to clients for each year for contracts in progress or completed.

6.5 Form FIN – 3: Financial Resources

Specify proposed sources of financing, such as liquid assets, unencumbered real assets, lines of credit, and other financial means, net of current commitments, available to meet the total cash flow demands of the subject contract or contracts as indicated in **Appendix 2 of ITB** (Evaluation and Qualification Criteria) with necessary supporting documents.

Financial Resources		
No.	Source of financing	Amount (Rupees)
1		
2		
3		

6.6 Form EXP – 1: General Experience

Each Bidder must fill in this form

General Experience				
Starting Month Year	Ending Month Year	Years	Contract Identification and Name Name and Address of Purchaser Brief Description of the Works Executed by the Bidder	Role of Bidder

6.7 Form EXP – 2: Specific Experience

Fill up one (1) form per contract/work order.

Contract of Similar Size and Nature	
Contract No. of	Contract Identification
Award Date	Completion Date
Role in Contract	<input type="checkbox"/> Contractor <input type="checkbox"/> Subcontractor
Total Contract Amount	(Rupees)
Purchaser's Name Address Telephone/Fax Number E-mail	
Description of the similarity in accordance with Criteria 2.4.2 /2.5 of Section 3	
1. Brief Specification of Goods supplied 2. Date of commissioning.	
Attached are copies of the following original documents.	
<input type="checkbox"/> 1. Type Test Certificates. (Not older than five years on the date of Technical Bid opening) <input type="checkbox"/> 2. Recent performance certificates (Not older than five years on the date of Technical Bid opening) <input type="checkbox"/> 3. Copy of the Contract Document.	

Note: Document to be enclosed for past performance as per clause 1.3.3.2 (g).

7 Manufacturer's Authorization

[The Bidder, in pursuant to ECQ Clause 2.1.2 (if applicable) shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be signed by a person with the proper authority to sign documents that are binding on the Manufacturer. Please refer to notes at bottom]

(Manufacturer's Letterhead)

Date: *[insert date (as day, month and year) of Bid Submission]*

Bid No.: *[insert number of bidding process]*

To: *[Insert: full name of Purchaser]*

WE *[insert: name of Manufacturer]* who are established and reputable manufacturers of *[insert: name and/or description of the Goods]* having production facilities at *[insert: address of factory]* do hereby authorize *[insert: name & address of Bidder]* (hereinafter, the "Bidder") to submit a bid the purpose of which is to provide the following goods, manufactured by us, and to subsequently negotiate and sign the Contract:

1. _____
2. _____
3. _____

We hereby extend our full guarantee and warranty in accordance with **Clause 5.11.0** of the Special Conditions of Contract, for the above specified Goods supporting the Supply of specified Goods and fulfilling the Related Services by the Bidder against this Bidding Documents, and duly authorize said Bidder to act on our behalf in fulfilling these guarantee and warranty obligations. Further, we also hereby declare that we and, *[insert: name of the Bidder]* have entered into a formal relationship in which, during the duration of the Contract (**including related services and warranty / defects liability**) we, the Manufacturer or Producer, will make our technical and engineering staff fully available to the technical and engineering staff of the successful Bidder to assist that Bidder, on a reasonable and best effort basis, in the performance of all its obligations to the Purchaser under the Contract.

For and on behalf of the Manufacturer

Signed: _____

Date: _____

In the capacity of *[insert: title of position or other appropriate designation]* **(and this should be signed by a person having the power of attorney to legally bind the manufacturer).**

Date:.....

Place:.....

(Signature).....

(Printed Name).....

(Designation).....

(Common Seal).....

Notes:

1. The letter of Undertaking should be on the letterhead of the Manufacturer and shall be signed by a person competent and having **Power of Attorney to sign on behalf of the Manufacturer** (to be attached with this MA) to legally bind the Manufacturer. **It shall be included by the bidder in its bid.**
2. **Above undertaking shall be registered or notarized so as to be legally enforceable.**

Section - 3

Purchaser's Requirements

Section 3 - Purchaser's Requirements

This Section contains the Technical Requirements and supplementary information that describe the Goods and Related Services

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Section 3

Purchaser's Requirements

3.1.0 SCOPE

- 3.1.1. The brief description of scope of scope covered under this Bidding Document is furnished below:
- a) Design, manufacture, testing at manufacturer's works of various Diagnostic Tools with all fittings and accessories.
 - b) Loading at manufacturer's works, transportation and delivery at designated sites, including unloading at destination sites.
 - c) Installation, Testing and Commissioning of the Diagnostic Tools at designated locations with all the materials required for completion of the works.
 - d) Deputation of suitable personnel for demonstration and hands-on training of AEGCL personnel at designated sites.
 - e) Supply of necessary spare items.

Arranging Road Permit (if required) for supply of Materials shall be in the scope of the contractor.

3.1.2. List of Diagnostic Tools listed in this bid:

1. Karl Fischer Moisture Oil Test Kit
2. Automatic Relay test kit suitable for testing electro mechanical /static /numerical relays
3. PLCC Tool Kit
4. Transmission line Response Analyser
5. Thermovision camera for detection of hot spots
6. Thermal scanner (for Transformer/ Reactor)

3.1.3. It is also responsibility of the Contractor to obtain any road permits and any other permits or licenses as may be required to execute the works.

3.1.4. The supplier/contractor can participate in the bidding for any number of items from list provided in clause 3.1.2.

3.2.0 SERVICE CONDITIONS

3.2.1. The materials supplied shall be suitable for operation under the following climatic and other conditions:

- | | |
|--|--------------------------|
| a) Peak ambient day temperature in still air | : 45°C |
| b) Minimum night temperatures | : 0°C |
| c) Ground temperatures | : 40°C |
| c) Reference ambient day temperature | : 45°C |
| d) Relative Humidity a) Maximum | : 100 % |
| b) Minimum | : 10 % |
| e) Altitude | : Below 1000 M above MSL |

- f) Maximum wind pressure : As per IS: 802 latest code.
- g) Seismic Intensity : ZONE-V as per IS 1893.

3.3.0 TYPE TEST REPORTS

- 3.3.1. **Equipment, which have never been tested for critical performance, shall not be accepted.** In such cases, a promise or agreement by a bidder to have the equipment tested after award of a contract is not acceptable.
- 3.3.2. All Bids must be accompanied by the full Type Test Certificates of equipment offered. Such type test certificates shall be acceptable only if tested for Environmental Tests, EMI-EMC & Safety Tests)as per relevant IEC Standard with latest amendment at any accredited laboratory (accredited by NABL or recognised International accreditation body).
- 3.3.3. Test reports to be acceptable must be related directly to the materials offered. Test reports for higher class of items are acceptable with commitment to perform the type tests free of any charge on the particular items after the award of contract.
- 3.3.4. **Type Test Reports older than five (5) years on the date of Technical bid opening shall not be accepted.**
- 3.3.5. This clause has reference to bid document Clause 2.3.3, Appendix-2 of ITB, Section-1, 'Evaluation and Qualification Criteria'.

3.4.0 GUARANTEED TECHNICAL PARTICULARS

- 3.4.1. The Guaranteed Technical Particulars of the equipment shall be furnished by the Bidders in the prescribed Schedules of this Section with the Technical Bid. The Bidder shall also furnish any other information's as in their opinion is needed to give full description and details to judge the item(s) offered by them.
- 3.4.2. The data furnished in Guaranteed Technical Particulars should be the minimum or maximum value (as per the requirement of the specification) required. A Bidder may guarantee a value more stringent than the specification requirement. However, for testing purpose or from performance point of view, the material shall be considered performed successfully if it achieves the minimum/maximum value required as per the technical specification. No preference what so ever shall be given to the bidder offering better/more stringent values than those required as per specification except where stated otherwise.

3.5.0 TECHNICAL SPECIFICATION THE DIAGNOSTIC TOOLS

(1)Technical Specification for Karl Fischer Oil Testing Kit		
SI No	Parameters	Specifications
1	Method of measurement	Coulometric Karl Fischer Titration Method
2	Features	The Equipment offered should be rugged, portable, fully automated, user friendly and easy to use that measures the amount of water in mineral dielectric oil, complete with all the accessories required for successful commissioning of the instrument at the user end. Simple, one button press operation and easy test procedure requiring no specialist knowledge or training to use it effectively.
3	Display	40 character alphanumeric backlit display
4	Sample Volume	User programmable 0 to 100ml/as per standard
5	Specific Gravity Range	0.60 to 1.40
6	Moisture Range	1PPM 100 % with appropriate sample quantity
7	Measuring range	1 µg - 10 mg water
8	End point detection	AC polarization
9	End point indication	Visual display/printout/ acoustic beep
10	Titration speed	2 mg per minute
11	Maximum current	400 mA approx.
12	Drift compensation	Automatically controlled
13	Start delay	0-30 mins. selectable
14	Stirrer speed	Microprocessor controlled/fixed speed
15	Accuracy	+/- 0.01 mg
16	Calculation mode	Volume/density or weight/weight User programmable
17	Printer	42 character high speed thermal printer
18	Power supply	230V AC+/-10%, 50Hz +/- 3 %
19	Type Testing	The test kit shall be type tested for Environmental Tests, EMI-EMC& Safety Tests as per relevant IEC Standard with latest amendment at any accredited laboratory (accredited by NABL or recognised International accreditation body). The type test report should be submitted along with the offer.
20	Calibration certificate	Unit shall be duly calibrated at NABL accredited laboratory before supply and the date of calibration shall not be older than two months from the date of supply of the kit.
21	Training	Supplier shall have to ensure that the kit is made user friendly. Apart from detailed demonstration at site, the supplier shall also have to arrange necessary training to end-user's engineers.
22	Commissioning, Handing over the Instrument	Successful bidder will have to commission the instrument to the satisfaction of end-user.
23	After sale service	Bidder will have to submit the documentary evidence of having established mechanism in India for prompt services.
21	Warranty / Guarantee	30 months from the date of delivery or 24 months from the date of successful & complete commissioning at end-user's sub-station, whichever is earlier. All the materials, including accessories, cables, laptops (wherever supplied) etc. are to be covered under warranty/ guarantee period. If the kit needs to be shifted to supplier's/manufacturer's works for repairs within warranty/guaranty period, suppliers will have to bear the cost of repairs, spares

	and transportation of kit for repair at service center/works.
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(1) Guaranteed Technical Particular for Karl Fisher Oil Testing Kit The GTP must be furnished in the following format only and in full			
SI No	Parameters	Specifications	Bidder's particulars
A	Manufacturer's Name and Address		
B	Type/Model details of offered Equipment		
C	Applicable Indian/International Standards for the offered equipment		
1	Method of measurement	Coulometric Karl Fischer Titration Method	
2	Features	The Equipment offered should be rugged, portable, fully automated, user friendly and easy to use that measures the amount of water in mineral dielectric oil, complete with all the accessories required for successful commissioning of the instrument at the user end.	
		Simple, one button press operation and easy test procedure requiring no specialist knowledge or training to use it effectively.	
3	Display	Mention size	
4	Sample Volume		
5	Specific Gravity Range		
6	Moisture Range	In PPM	
7	Measuring range	In gram	
8	End point detection	AC polarization (Yes/No)	
9	End point indication	Visual display/printout/ acoustic beep	
10	Titration speed	In mg/ minute	
11	Maximum current	In mA	
12	Drift compensation	Automatically controlled (Yes/No)	
13	Start delay	0-30 mins. Selectable(Yes/No)	
14	Stirrer speed	Microprocessor controlled (Yes/No)	
15	Accuracy	+/- 0.01 mg	
16	Calculation mode	Volume/density or weight/weight/User programmable	
17	Printer		
18	Power supply (V & Hz)		
19	List of accessories		
20	Weight		
21	Type Testing	The test kit shall be type tested for	

		Environmental Tests, EMI-EMC& Safety Tests)as per relavent IEC Standardwith latest amendment at any accredited laboratory(accruited by NABL or recognised International accreditation body). The type test report should be submitted alongwith the offer.	
22	Warranty / Guarantee	30 months form the date of delivery or 24 months form the date of successful & complete commissioning at end-user's sub-station, whichever is earlier. All the materials, including accessories, cables, laptops (wherever supplied) etc. are to be covered under warranty/ guarantee period. If the kit needs to be shifted to supplier's/ manufacturer's works for repairs within warranty/guaranty period, suppliers will have to bear the cost of repairs, spares and transportation of kit for repair at service center/works.	
23	Calibration certificate	Unit shall be duly calibrated at NABL accredited laboratory before supply and the date of calibration shall not be older than two months from the date of supply of the kit.	
24	Training	Supplier shall have to ensure that the kit is made user friendly. Apart from detailed demonstration at site, the supplier shall also have to arrange necessary training to end-user's engineers.	
25	After sale service	Bidder will have to submit the documentary evidence of having established mechanism in India for prompt services.	

Note: The bidder shall furnish **complete & specific information** against Sl. No.(1) to (25).The Bidder shall also furnish any other information as in their opinion is needed to give full description and details to judge the item(s) offered by them **inaddition to the above given parameters.** (Listing Sl.No.26, 27,.....etc). **The GTP must be signed & sealed by the manufacturer/bidder.**

(2) Technical Specification For Automatic Relay Test kit suitable for testing Electro-mechanical/Static/Numerical Relay

SI No	Parameters	Specifications
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1	Functional Requirement	<p>i)The instrument should be suitable for testing poly phase and single phase electromechanical, static and numerical relays (used in protection schemes of transmission lines, transformer, reactor and bus bar etc.) of all the major manufacturers in fully automatic mode (including high-burden electromechanical relays) as well as transducers having accuracy class of 0.25 or better.</p> <p>ii)The test kit should be suitable for dynamic and transient testing with facility of transient (COMTRADE format) record playback for both analog and digital channels</p> <p>iii)The should be computer based fully automatic type and all functions shall be computer based.</p> <p>iv) The kit shall be suitable for testing of the relays in the substations having conventional protection as well as protection based on IEC 61850 protocol using GOOSE. The test results should have repeatability/consistency in results.</p> <p>v)Shall have modular design</p> <p>vi) Should be able to provide voltage and current sources along with logic inputs, outputs and times in a single compact unit.</p> <p>vii) Shall have minimum four(4) independent controlled current sources and four(4) independent controlled voltage sources.</p> <p>viii) Kit shall have multiple ranges on a current source.</p> <p>ix) The Output current and voltage sinewaves should be generated digitally to increase test accuracy and reduce the testing time.</p> <p>x) Independent control of magnitude, phase angle and frequency/harmonics of all sources should be available for testing and simulate power system condition.</p> <p>xi) Shall have adequate isolated inputs and outputs and outputs should be user configurable for NO or NC configuration.</p> <p>xii) The amplifier neutrals, measurement inputs and main power supply shall be galvanically isolated from each other.</p> <p>xiii) Shall be fully electronically overload and short circuit protected.</p> <p>xiv) The test equipment shall have built in DC source.</p>
2	Output	<p>All outputs shall have over voltage and short circuit protection. Specifically all the voltage and current generators shall have over overvoltage/shortcircuit protection. The instrument should not get overheated while supplying the rated output continuously. Further, the kit should be stable even during extensive continuous usage and should not get hanged or restarted.</p>
3	V/I Generator requirement	
3.1	Current Output	<ul style="list-style-type: none"> · Software controlled/configurable 4 (Four) phase current outputs · Current outputs Range: 0- 30A continuous minimum, each output · Resolution: 1mA or less. · Output Burden: 30A @ 200VA minimum per phase output. Should have more burden at lower current to perform Electromechanical relay testing.
3.2	Voltage Output	<ul style="list-style-type: none"> · Software controlled/configurable four (4) phase voltage outputs. · Voltage output Range: 0-300 Volts AC/DC (Ph-N), · Resolution: ≤10mV for AC Ranges; ≤100mV on 300VDC · Output Burden: 125A minimum per output.

		· The total current/voltage output channels should be at least 08 Nos.
3.3	Aux. DC Output	Software controlled, 5-250 V and 100 W min. (Continuous rating), with continuous / step-less control. The DC supply should have short circuit protection, galvanically isolated and over load indication. Battery backup auxiliary DC output is not acceptable.
4	Measuring Input	1.Voltage range : -10 V to+10 V DC
		2. Current range : -20mA to +20 mA DCA
		3. Accuracy : 0.05% or better
5	Test Frequency	V/I Generator/Amplifier shall have controlled frequency range from DC, 1 Hz to 1 kHz for sine signals and DC to 3 kHz (minimum) for transient signals. Frequency resolution of 1 mHz or better and accuracy 0.01% or better.
6	Phase Angles	Range: 0 to 359.9° lag/lead with resolution of 0.1 degree or better, with accuracy of 0.5 deg. (min.)
7	Accuracy of Current & Voltage Outputs	Accuracy shall be $\leq \pm 0.2\%$ f or better or voltage and current sources throughout the range . The total distortion shall also be less than 0.2% or better.
8	Accessories	Complete set of test leads,PC Cables,drawing ,manuals (both soft and hard copies), tools,Licensed OS software and antivirus for PC,licensed software for testing kit,combinationplugs,power supply cables,original carrying case (which should be robust /rugged enough for proper safety of thekit during transportation) etc. required for carrying out all types of testing.
9	Timer	i) Range: 0.0001 – 9999.9 sec ii) Accuracy: 0,001% iii) Resolution: 100 micro seconds
10	Binary Inputs	Minimum 8 Nos. of binary inputs with galvanic isolation. The software controlled inputs should be capable of sensing potential free relay contacts(NO/NC). Contact t Rating: 250V AC/DC
11	Binary Outputs	Minimum 4 binary outputs with galvanic isolation. The software controlled outputs should have potential free contacts(NO/NC). Contact Rating: 250VAC/DC, 1A continuous, 8Amax.
12	Interfaces	USB,Ethernet,Bluetooth/WiFi
13	Operating Environment	i)Operating Temp range: 0 to +50 deg C iii) Relative Humidity: Max 95% non-condensing
14	Cooling Arrangement	Necessary in built cooling arrangement shall be provided to dissipate the heat generated during testing. No external coolant/accessory shall haveto be required.
	Protection/Control	Against short circuit, overvoltage, improper ground connectipn, overload and transient charges the kit should have alarm/cut-off features settings to protect the instrument.
15	Weight	It should be easily portable for smooH movement
16	Design/Engg	The complete equipment along with completeaccessoriesmust be designed/engineered by the OEM.

17	Communication ports/IEC 61850 compatibility	Shall have ETHERNET connectivity as a standard feature.The Ethernet port shall be suitable for control through external PC as well as for IEC 61850 protocols .GOOSE/GSSE configuration software module should be provided with the kit for effective checking of protective relays/IED based on IEC61850 protocol.It shall read, write, poll and check data models/values in detail.It shall have the facility to transfer GOOSE information to suitable modulesduring testing of IECsDs. Specifically, it will be responsibility of the supplier to demonstrate the working of IEC 61850 module for input/output GOOSE messeging and capturing of live data.
18	Software	<p>i)The software shall be suitable for automatic testing & report generation and analysis.The software of thekit should be WINDOW based and should be operatedthrough suitable LapTop PC. All control task and data acquisition, processing and recording of test results shall be performed by the Operating soft ware on LapTop PC or controller. All graphics and text to be printable.</p> <p>ii)The software should be capable of creating customized relay characteristics as well as of importing relay characteristics from IED/Relay.</p> <p>iii) All binary I/P and O/P shall be configured through on-screen display.</p> <p>iv) Should have complete database testing procedure for all types of relay manufacturers.</p> <p>v) All advance softwares like advance distance, advance differential, special protection to test all types of relays to be supplied free of cost with theinstrument.</p> <p>vi) RIO file format for the transfer of relay setting parameters to be supported.</p> <p>vii) Characteristics (theoretical and actual) are to be displayed graphically (both quadrilateral and Mho or any combination.</p> <p>iii)The Kit should support GPS receiver with suitable port which shall enable carrying out end to end testing using GPS receiversavailableat both ends of the local and remote sub-stations.</p> <p>iv)Software should have facility to simulate line fault for end to end testing or kit should have in-built Time synch feature using IRIG-B signal..</p> <p>v)The software shall be able to get updated with respect to new relays and new operating techniques whenever they are introduced.The updating shall be intimated and done by supplier during theperiod of warranty.</p>
19	PC Interface	320GB or It shall include supply of one Laptop PC of reputed make with latest specifications of the processor,8GB or better RAM,320GB or better HDD, Combo DVD Drive, 15 inch TFT screen complete with required cables and connectors with preloaded operating MS Window 7/8 orbetter with latest version of application software required for storage , analysis and record manangement.
20	Type Testing	The test kit shall be type tested for Environmental Tests, EMI-EMC(EN61326 2-1) & Safety Tests (EN 61010-1)as per relavent IEC Standardwith latest amendment at any accredited laboratory(accredited by NABL or recognised International accreditation body). The type test report should be submitted alongwith the offer.
21	Warranty / Guarantee	30 months form the date of delivery or 24 months form the date of successful & complete commissioning at end-user's sub-station, whichever is earlier. All the materials, including accessories, cables, laptops (wherever supplied) etc. are to be covered under warranty/ guarantee period. If the kit needs to be shifted to supplier's/mnufacturer's works for repairs within warranty/guaranty period, suppliers will have to bear the cost of repairs, spares and transportation of kit for repair at service center/works.
22	Calibration certificate	Unit shall be duly calibrated at NABL accredited laboratory before supply and the date of calibration shall not be older than two months from the date of supply of the kit.

23	Training	Supplier shall have to ensure that the kit is made user friendly. Apart from detailed demonstration at site, the supplier shall also have to arrange necessary training to end-user's engineers.
24	Commissioning, Handing over the Instrument	Successful bidder will have to commission the instrument to the satisfaction of end-user.
25	After sale service	Bidder will have to submit the documentary evidence of having established mechanism in India for prompt services.

(2) Guaranteed Technical Particulars of Automatic Relay Test kit suitable for testing Electro-mechanical/Static/Numerical Relay.

The GTP must be furnished only in the following format and in full.

SI No	Parameters	Bidder's Particulars
A	Name and Address and country of manufacturer	
B	Type/Model details of offered equipment.	
C	Applicable Indian/International Standards for the offered equipment	
1	<p>i) The instrument should be suitable for testing poly phase and single phase electromechanical, static and numerical relays (used in protection schemes of transmission lines, transformer, reactor and bus bar etc.) of all the major manufacturers in fully automatic mode (including high-burden electromechanical relays) as well as transducers having accuracy class of 0.25 or better.</p> <p>ii) The test kit should be suitable to perform steady state ,dynamic state, transient simulation tests and automated (computer controlled) testing of all types of Relays, testing of protection equipment using any previously recorded or any generated transient signal.</p> <p>iii) The should be computer based fully automatic type and all functions shall be computer based.</p> <p>iv) The kit shall be suitable for testing of the relays in the substations having conventional protection as well as protection based on IEC 61850 protocol using GOOSE. The test results should have repeatability,</p> <p>v) Shall have modular design</p> <p>vi) Should be able to provide voltage and current sources along with logic inputs, outputs and times in a single compact unit.</p> <p>vii) Shall have minimum four (4) independent controlled current sources and four (4) independent controlled voltage sources.</p> <p>vii) Kit shall have multiple ranges on a current source.</p> <p>ix) The Output current and voltage sinewaves should be generated digitally to increase test accuracy and reduce the testing time.</p>	
	<p>x) Independent control of magnitude, phase angle and frequency/harmonics of all sources should be available for testing and simulate power system condition.</p> <p>xi) Shall have adequate isolated inputs and outputs and outputs should be user configurable for NO or NC configuration.</p> <p>xii) The amplifier neutrals, measurement inputs and main power supply shall be galvanically isolated from each other.</p> <p>xiii) Should work as a simulator. It should be provided with necessary software to generate dynamic state simulation data and it should be possible to replay digitally recorded faults and COMTRADE compliant transient data.</p> <p>xiv) Shall be fully electronically overload and short circuit protected.</p>	

	xv) The test equipment shall have built in DC source.	
2	V/I Generator	
2.1	Current Outputs	
	Nos. of Software controlled/configured current outputs	
	Current Output Range and power delivery for all configurable connections 6-phase AC(L-N), 3-Phase (L-N), 1-Phase AC(L-N) and DC	
	Resolution (for AC Ranges and DC)	
	Output Burden(minimum per output)	
2.2	Voltage Output	
	Nos. of Software controlled / configurable voltage outputs.	
	Voltage Output Range and power delivery for all configurable connections 4-phase AC(L-N), 3-Phase (L-N), 1-Phase AC(L-N) and DC	
	Resolution(for AC Ranges and DC)	
	Output Burden (minimum per output)	
	The total nos. current/voltage output channels	
2.3	Aux. DC Output Range	
	Whether the DC supply has short circuit protection, galvanically isolated and over load indication	
3	Measuring Input	
	i) Voltage range	
	ii) Current range	
	iii) Accuracy	
4	Test Frequency Range for i) Sine wave ii) Transient	
5	Phase Angles	
6	Accuracy of Current & Voltage Outputs	
7	Accessories	
8	Battery Simulator voltage	
9	Timer Range & Accuracy	
10	Binary Inputs (Nos and Rating)	
11	Binary Outputs (Nos. and contact rating)	
12	Interfaces	
13	Environment: i)Operating Temp range: ii) Storage Temp range iii) Relative Humidity	
14	Cooling Arrangement	
15	Weight	

16	Dimension	
17	Type of Carrying Case	
18	Software details	
19	PC Interface details	
20	Address and Documentary evidence of authorized Service Centre of the equipment in India.	
21	Warranty / Guarantee	
22	Type Test Report	
23	Calibration Certificate	
24	After Sales Service	

Note: The bidder shall furnish **complete and specific information** against Sl. No.(1) to (24).The Bidder may also furnish any other information as in their opinion is needed to give full description and details to judge the item(s) offered by them **in addition to the above given parameters**. (Listing Sl.No.23,24,.....etc). The GTP must be signed and sealed by the manufacturer/bidder.

(3) Technical Specification For PLCC Tool Kit

SI No	Parameters	Specifications
1	Functional Requirement	The Kit Should be able to Generate the Level Signal and will also be able to measure the same along with Return Loss Measurement Feature
2	Signal Generator	
	Frequency range	200 Hz to 620KHz
	Resolution	1 Hz
	Accuracy	$2 \times 10^{-5} \pm 1$ digit at 27 °C with frequency stability 10ppm/ °C
	Impedance value ranges	0,75,125,150 & 600Ω
	Output level	- Adjustable in 10dB steps : -60 to + 10 dB (dBm) - By means of the fine Control with reference to the built-in meter : -12 to +1 dB - 600 ohms balance (2KHz to 160KHz) : -60 to +20dB - Smallest Settable level : -72db(dBm)
	Accuracy class of the instrument in terms of dB	Accuracy at 0dB/dBm, 0 scale division after calibration at 20KHz is ± 0.15 dB for Generator
	Internal Calibration Facility	Yes
3	Signal /LevelMeter	
	Frequency range	300Hz to 620KHz
	Accuracy	$1 \times 10^{-5} \pm 1$ digit at 27 °C with frequency stability 10ppm/ °C
	Impedance value ranges	0,75,125,150 & 600Ω
	Balance of output of the level meter	≥ 40 dB
	Filters for noise measurement and for measuring of carrier leak, crosstalk and non-linear distortion	atbandwith of 3.1 KHz and 20 Hz respectively

(3) Technical Specification For PLCC Tool Kit		
Sl No	Parameters	Specifications
	Internal Calibration Facility	Yes
4	Return Loss Measurement	Forward power, Reflected power, % Reflected power & Frequency under test visible on one screen.
	Frequency Range	300Hz to 620KHz
	Impedance	60 ohms to 1000 ohms
	Accuracy	±1dB (up to 300 Hz) ± 2 dB (300-620 KHz)
5	Impedance Measurement	
	Frequency Range	300Hz to 620KHz
	Impedance	50 to 3000 ohm
	Accuracy	±10% (up to 300KHz) ±20% (300KHz to 620KHz)
6	Operating temperature range	0 to 50°C
7	Storage capacity	Storage of Nine user programmable side band frequencies.1 GB internal memory, storage facility up to 1000 setsof testing.
8	Standard accessories	All the necessary accessory / attachments must be supplied in totality to do the complete testing as mentioned above. This should include but not limited to <ul style="list-style-type: none"> • 3-core Power Cord - 1 No. • 2-core External Battery Connector with Jack - 1 No. • 3 Pin to 3 Pin Cable - 1 No. • BNC to BNC Cable - 1 No. • Instruction Manual - 1 No
9	Scope of supply	All necessary accessory, probes, connector, attenuator etc. for full testing must be supplied as standard.
10	Type Testing	The test kit shall be type tested for Environmental Tests, EMI-EMC & Safety Tests as per relevant IEC Standardwith latest amendment at any accredited laboratory(accredited by NABL or recognised International accreditation body). The type test report should be submitted alongwith the offer.
11	Warranty / Guarantee	30 months form the date of delivery or 24 months form the date of successful & complete commissioning at End User Site, whichever is earlier. All the materials, including accessories, cables, laptops (wherever supplied) etc. are to be covered under warranty/ guarantee period. If the kit needs to be shifted to supplier's/manufacturer's works for repairs within warranty/guaranty period, suppliers will have to bear the cost of repairs, spares and transportation of kit for repair at service center/works.
12	Calibration certificate	Unit shall be duly calibrated at NABL accredited laboratory before supply and the date of calibration shall not be older than two months from the date of supply of the kit.
13	Training	Supplier shall have to ensure that the kit is made user friendly. Apart from detailed demonstration at site, the supplier shall also have to arrange necessary training to End Users.
14	Commissioning, Handing over the Instrument	Successful bidder will have to commission the instrument to the satisfaction of End user.
15	After Sales Service	Bidder will have to submit the documentary evidence of having established mechanism in India for prompt services.

(3) Guaranteed Technical Particular For PLCC Tool Kit

The GTP must be furnished only in the following format and in full.

SI No	Parameters	Specifications	Bidder's Particulars
A	Name and Address and country of manufacturer		
B	Type/Model details of offered equipment.		
C	Applicable Indian/International Standards for the offered equipment		
1	Functional Requirement	The Kit Should be able to Generate the Level Signal and will also be able to measure the same along with Return Loss Measurement Feature	
2	Signal Generator		
	Frequency range	200 Hz to 620KHz	
	Resolution	1 Hz	
	Accuracy	2x10-5 ±1 digit at 27 °C with frequency stability 10ppm/ °C	
	impedance value ranges	0,75,125,150 & 600Ω	
	output level	- Adjustable in 10dB steps : -60 to + 10 dB (dBm) - By means of the fine Control with reference to the built-in meter : -12 to +1 dB - 600 ohms balance (2KHz to 160KHz) : -60 to +20dB - Smallest Settable level : -72db(dBm)	
	Accuracy class of the instrument in terms of dB	Accuracy at 0dB/dBm, 0 scale division after calibration at 20KHz is ±0.15dB for Generator	
Internal Calibration Facility	Yes		
3	Signal/Level Meter		
	Frequency range	300Hz to 620KHz	
	Accuracy	1x10-5 ±1 digit at 27 °C with frequency stability 10ppm/ °C	
	impedance value ranges	0,75,125,150 & 600Ω	
	Balance of output of the level meter	≥ 40 dB	
	Filters for noise measurement and for measuring of carrier leak, crosstalk and non-linear distortion	atbandwidth of 3.1 KHz and 20 Hz respectively	
	Internal Calibration Facility	Yes	

(3) Guaranteed Technical Particular For PLCC Tool Kit

The GTP must be furnished only in the following format and in full.

SI No	Parameters	Specifications	Bidder's Particulars
4	Return Loss Measurement	Forward power, Reflected power, % Reflected power & Frequency under test visible on one screen.	
	Frequency Range	300Hz to 620KHz	
	Impedance	60 ohms to 1000 ohms	
	Accuracy	±1dB (up to 300 Hz) ± 2 dB (300-620 KHz)	
5	Impedance Measurement		
	Frequency Range	300Hz to 620KHz	
	Impedance	50 to 3000 ohm	
	Accuracy	±10% (up to 300KHz) ±20% (300KHz to 620KHz)	
6	Operating temperature range	0 to 50°C	
7	Storage capacity	Storage of Nine user programmable side band frequencies. 1 GB internal memory, storage facility up to 1000 sets of testing.	
8	Standard accessories	All the necessary accessory / attachments must be supplied in totality to do the complete testing as mentioned above. This should include but not limited to <ul style="list-style-type: none"> • 3-core Power Cord - 1 No. • 2-core External Battery Connector with Jack - 1 No. • 3 Pin to 3 Pin Cable - 1 No. • BNC to BNC Cable - 1 No. • Instruction Manual - 1 No 	
9	Scope of supply	All necessary accessory, probes, connector, attenuator etc. for full testing must be supplied as standard.	
10	Type Testing	The test kit shall be type tested for Environmental Tests, EMI-EMC & Safety Tests)as per relevant IEC Standardwith latest amendment at any accredited laboratory(accredited by NABL or recognised International accreditation body). The type test report should be submitted alongwith the offer.	
11	Warranty / Guarantee	30 months form the date of delivery or 24 months form the date of successful & complete commissioning at End User Site, whichever is earlier.	

(3) Guaranteed Technical Particular For PLCC Tool Kit			
The GTP must be furnished only in the following format and in full.			
SI No	Parameters	Specifications	Bidder's Particulars
		All the materials, including accessories, cables, laptops (wherever supplied) etc. are to be covered under warranty/ guarantee period. If the kit needs to be shifted to supplier's/manufacturer's works for repairs within warranty/guaranty period, suppliers will have to bear the cost of repairs, spares and transportation of kit for repair at service center/works.	
12	Calibration certificate	Unit shall be duly calibrated at NABL accredited laboratory before supply and the date of calibration shall not be older than two months from the date of supply of the kit.	
13	Training	Supplier shall have to ensure that the kit is made user friendly. Apart from detailed demonstration at site, the supplier shall also have to arrange necessary training to End Users.	
14	Commissioning, Handing over the Instrument	Successful bidder will have to commission the instrument to the satisfaction of End user.	
15	After Sales Service	Bidder will have to submit the documentary evidence of having established mechanism in India for prompt services.	

Note: The bidder shall furnish **complete and specific** information against SI. No.(1) to (15).The Bidder may also furnish any other information as in their opinion is needed to give full description and details to judge the item(s) offered by them **in addition to the above given parameters**. (Listing SI.No.16, 17,.....etc). The GTP must be signed and sealed by the manufacturer/bidder.

(4) Technical Specification for Transmission Line Response Analyser		
SI. No	Parameters	Specifications

1.	Functional Requirement	<p>The instrument should be suitable to detect and locate the over headline Fault (including high resistive aults)/in homogeneous points etc. in off line mode, in multicircuit overhead transmission line upto 220kV level, as per applicable standards/testing procedure.</p> <p>The test results should have repeatability, consistency & immunity to electromagnetic interference in live switchyard/adjacent transmission lines upto 220kV levels in all-weather condition.</p>
2.	Operation/Control	The system should be controlled using touch screen function and single control knob for easy operation.
3.	Range of Operation	400Km(min)
4.	Accuracy	100M
5.	Test Leads and accessories	One complete set of cables of sufficient length (min 20 metre) with suitable clamps & connectors, compatible with the instruments should be provided for successfully carrying out the test in 220 kV sub-station/transmission line. Additionally all the required accessories, user guide & documents, tools etc. should be provided for the smooth functioning of kit. Further hard carrying case (which should be robust/rugged enough) for ensuring proper safety of the kit during transportation shall have to be provided.
6.	Design/Engg.	The entire equipment along with complete accessories must be designed/engineered by Original Equipment Manufacturer.
7.	Power Supply	Kit shall work on single phase 230 Volts $\pm 10\%$, 50 Hz supply with standard socket.
8.	Operating Temperature	-25 to +50°C
9.	Relative humidity	Max. 90% non-condensing
10.	Protection/Control	Against short circuit, over voltage, improper ground connection overload & transient surges, the kit should have alarm/cut-off features to protect the instrument.
11.	Cooling Arrangement	Necessary in built cooling arrangement should be provided to dissipate the heat generated during testing. No external coolant/accessory shall have to be required.
12.	Weight	It should be easily portable. Should be in two units and should not be weighing more than 50 Kg in total.
13.	Software	The software should be suitable for report generation and trend analysis. The kit should have facility to store and communicate with windows based computer for exporting the test data.
14.	Display	$\geq 15"$ Colour TFT with backlight .
15.	Data	Data should be saved automatically after measurement in internal memory in the test set. There should be a minimum of 2GB internal flash memory built into it. USB and Ethernet ports should be available for transfer of data to PC.

16.	Operating System	System should be working on Linux based operating system for fast, reliable operation and free from virus attacks.
17.	Environment	The test kit shall be compatible for EMI/EMC/safety environment requirement as per IEC.
18.	Type Testing	The test kit shall be type tested for Environmental Tests, EMI-EMC & Safety Tests as per relevant IEC Standard. The type test report from NABL accredited lab or internationally accredited lab should be submitted along with the offer.
19.	Calibration certificate	Unit shall be duly calibrated before supply and the date of calibration shall not be older than two months from the date of delivery/supply of the kit to the consignee.
20.	Warranty/Guarantee	30 months from the date of dispatch or 24 months from the date of successful & complete commissioning at site
		All the materials, including accessories, cables, laptops (wherever supplied) etc. are to be covered under warranty/guarantee period. If the kit needs to be shifted to supplier's works for repairs within warranty/guarantee period, suppliers will have to bear the cost of repairs, spares and transportation of kit
21.	Training	Supplier shall have to ensure that the kit is made user friendly. Apart from detailed demonstration at site, the supplier shall also have to arrange necessary training to AEGCL Engineers
22.	After Sales Service	Bidder will have to submit the documentary evidence of having established mechanism in India for prompt services.

(4) Guaranteed Technical Particular For Transmission Line Response

The GTP must be furnished only in the following format and in full.

SI No.	Parameters	Specifications	Bidder's Particulars
A	Name and Address and country of manufacturer		
B	Type/Model details of offered equipment.		
C	Applicable Indian/International Standards for the offered equipment		
1	Functional Requirement	The instrument should be suitable to detect and locate the overhead fault (including high resistive faults) in homogeneous points etc. in off line mode, in multicircuit overhead transmission line upto 220kV level, as per applicable standards/testing procedure.	

(4) Guaranteed Technical Particular For Transmission Line Response

The GTP must be furnished only in the following format and in full.

SI No.	Parameters	Specifications	Bidder's Particulars
2	Operation/Control	The system should be controlled using touch screen function and single control knob for easy operation.	
3	Range of Operation	400Km(min)	
4	Accuracy	100M	
5	Test Leads and accessories	One complete set of cables of sufficient length (min 20 metre) with suitable clamps & connectors, compatible with the instruments should be provided for successfully carrying out the test in 220 kV sub-station/transmission line. Additionally all the required accessories, user guide & documents, tools etc. should be provided for the smooth functioning of kit. Further hard carrying case (which should be robust/rugged enough) for ensuring proper safety of the kit during transportation shall have to be provided.	
6	Design/Engg.	The entire equipment along with complete accessories must be designed/engineered by Original Equipment Manufacturer.	
7	Power Supply	Kit shall work on single phase 230 Volts \pm 10%, 50Hz supply with standard socket.	
8	Operating Temperature	-25 to +50°C	
9	Relative humidity	Max. 90% non-condensing	
10	Protection/Control	Against short circuit, over voltage, improper ground connection overload & transient surges, the kit should have alarm/cut-off features to protect the instrument.	
11	Cooling Arrangement	Necessary in built cooling arrangement should be provided to dissipate the heat generated during testing. No external coolant/accessory shall have to be required.	
12	Weight	It should be easily portable. Should be in two units and should not be weighing more than 50 Kg in total.	
13	Software	The software should be suitable for report generation and trend analysis. The kit should have facility to store and communicate with windows based computer for exporting the test data.	
14	Display	≥ 15" Colour TFT with backlight .	

(4) Guaranteed Technical Particular For Transmission Line Response

The GTP must be furnished only in the following format and in full.

SI No.	Parameters	Specifications	Bidder's Particulars
15	Data	Data should be saved automatically after measurement in internal memory in the test set. There should be a minimum of 2GB internal flash memory built into it. USB and Ethernet ports should be available for transfer of data to PC.	
16	Operating System	The GTP must be signed and sealed by the manufacturer/bidder. System should be working on Linux based operating system for fast, reliable operation and free from virus attacks.	
17	Environment	The test kit shall be compatible for EMI/EMC/safety environment requirement as per IEC.	
18	Type Testing	The test kit shall be type tested for Environmental Tests, EMI-EMC & Safety Tests as per relevant IEC Standard. The type test report from NABL accredited lab or internationally accredited lab should be submitted along with the offer.	
19	Calibration certificate	Unit shall be duly calibrated before supply and the date of calibration shall not be older than two months from the date of delivery/supply of the kit to the consignee.	
20	Warranty/Guarantee	30 months from the date of dispatch or 24 months from the date of successful & complete commissioning at site All the materials, including accessories, cables, laptops (wherever supplied) etc. are to be covered under warranty/guarantee period. If the kit needs to be shifted to supplier's works for repairs within warranty/guarantee period, suppliers will have to bear the cost of repairs, spares and transportation of kit	
21	Training	Supplier shall have to ensure that the kit is made user friendly. Apart from detailed demonstration at site, the supplier shall also have to arrange necessary training to AEGCL Engineers	
22	After Sales Service	Bidder will have to submit the documentary evidence of having established mechanism in India for prompt services.	

Note: The bidder shall furnish **complete & specific information** against Sl. No.(1) to (22).The Bidder shall also furnish any other information as in their opinion is needed to give full description and details to judge the item(s) offered by them **in addition to the above given parameters**. (Listing Sl.No.23, 24,.....etc). The GTP must be signed and sealed by the manufacturer/bidder.

(5) Technical Specification For Thermo Vision Camera		
SI No	Parameters	Specifications
1	Functional Requirement	Thermo Vision Camera for detection of hot spots of EHV Sub-station and Transmission / Overhead Lines, should be capable of working satisfactorily in environment up to 400KV live switchyard.
2	Detector type	Uncooled FPA
3	IR resolution	320 X 240 pixels
4	Thermal Sensitivity (NETD)	≤0.03°C at +30°C target temp.
5	Spectral range	8 to 14µm
6	Lens	Tiltable Infrared lens
7	Min focus distance/FOV	40 cm /24° x 18°
8	I FOV(Spatial Resolution)	1.2mrad
9	Display Size & Type	3.5" Colour Touchscreen VGA LCD with backlight
10	Visual Camera	3.1 mega pixel (Min)
11	Frequency / Refresh Rate	50Hz/60Hz
12	Focus	Maual /Motor/ Auto
13	Digital Zoom	1 to 4X Continuous
14	Image Modes	Thermal image , visual images, P-I-P, thermal fusion
15	Temperature range	-20°C to 600°C
16	Temperature accuracy	±2°C or ± 2% of reading
17	Measurement correction	Auto/Manual
18	Spot Meter	4 adjustable spot
19	Area Profile	5 boxes with Max / Min & Avg Temp
20	Line Profile	Vertical / Horizontal
21	Isothermal analysis	Capture High/Low temperature/ Interval
22	Delta T	Yes
23	Emissivity correction	Selectable. 0.01 to 1.0 in steps of 0.01
24	Temp Alarm	Voice, Colour (High temp, Low temp and isotherm)
25	Colour Pallets	7 Nos (Min)
26	Image Adjustment	Contrast & Brightness
27	Settings	Language, Date, Time, Temp (C / F / K)
28	Background temp correction	Automatic

29	Atmospheric trans correction	Automatic
30	Storage Type	Built-in 4 GB flash memory, 4GB SD memory save to USB flash drive capability
31	Storage Capacity	Upto 700 images in built-in flash card Upto 5600 images in 256 MB SD Card
32	Storage Format	JPEG with Temperature Data (14 bit) or fully radiometric IS2
33	Periodic Image Storage	User defined 10s atleast
34	Voice Annotation	60 sec Recording / Replay per Image
35	Laser Pointer	Yes
36	USB	Yes for Image Transfer
37	Video O/P	Yes
38	Audio O/P	Yes
39	Tripod Mounting	1/4" – 20
40	AC operation	230 ± 10% VAC, 50±5% Hz, 1 Ph
41	Battery Type	Minimum 2 Rechargeable Li-Ion rechargeable batteries.
42	Battery operating time	3 Hrs (Minimum) continuous use per battery pack.
43	Operating temperature, humidity	0°C to 50°C, 95% non-condensing
44	Interfaces	USB, Bluetooth, Video & Audio output
45	Weight	Should be light weight and handy.
46	Standards	IP 54, IEC 60068-2-29, IEC 60068-2-6
47	Laptop Specs	Min Specs will be as 500GB HDD, 4 GB Ram, Windows 8 64 Bit, Core i5, USB - 2 Nos, Ethernet, DVD Drive
48	Scope of supply	Camera with standard lens, Telephoto Lens (6° X 4°/ 4 m with IFOV <0.35mRad), 2 rechargeable Battery, Battery Charger, Adaptor, USB Cable, SD Card (2 GB), SD Card reader (USB), Original Carrying Case, Tripod, Software CD, Laptop with Bag
49	Type Testing	The test kit shall be type tested for Environmental Tests, EMI-EMC& Safety Tests)as per relevant IEC Standard with latest amendment at any accredited laboratory (accredited by NABL or recognised International accreditation body). The type test report should be submitted along with the offer.
50	Warranty/ Guarantee	30 months from the date of delivery or 24 months from the date of successful & complete commissioning at end-user's sub-station, whichever is earlier. All the materials, including accessories, cables, laptops (wherever supplied) etc. are to be covered under warranty/ guarantee period. If the kit needs to be shifted to supplier's/manufacturer's works for repairs within warranty/guaranty period, suppliers will have to bear the cost of repairs, spares and transportation of kit for repair at service center/works.
51	Calibration certificate	Unit shall be duly calibrated at NABL accredited laboratory before supply and the date of calibration shall not be older than two months from the date of supply of the kit.
52	Training	Supplier shall have to ensure that the kit is made user friendly. Apart from detailed demonstration at site, the supplier shall also have to arrange necessary training to end-user's engineers.

53	Commissioning, Handing over the Instrument	Successful bidder will have to commission the instrument to the satisfaction of end-user.
54	After sale service	Bidder will have to submit the documentary evidence of having established mechanism in India for prompt services.

(5) Guaranteed Technical Particular for Thermo Vision Camera
The GTP must be furnished in the following format only and in full

SI No	Parameters	Specifications	Bidder's particulars
A	Manufacturer's Name and Address		
B	Type/Model details of offered Equipment		
C	Applicable Indian/International Standards for the offered equipment		
1	Functional Requirement	Thermo Vision Camera for detection of hot spots of EHV Sub-station and Transmission / Overhead Lines, should be capable of working satisfactorily in environment up to 400KV live switchyard.	
2	Detector type	Uncooled FPA	
3	IR resolution	320x240 pixels	
4	Thermal Sensitivity (NETD)	≤0.03°C at +30°C target temp.	
5	Spectral range	8 to 14µm	
6	Lens	Tiltable Infrared lens	
7	Min focus distance/FOV	40 cm /24° x 18°	
8	IFOV(Spatial Resolution)	1.2mrad	
9	Display Size & Type	3.5" Colour Touchscreen VGA LCD with backlight	
10	Visual Camera	3.1Mega pixel(Min)	
11	Frequency / Refresh Rate	50Hz/60Hz	
12	Focus	Maual /Motor/ Auto	
13	Digital Zoom	1 to 4X Continuous	
14	Image Modes	Thermal image , visual images, P-I-P, thermal fusion	
15	Temperature range	-20°C to 600°C	
16	Temperature accuracy	±2°C or ± 2% of reading	
17	Measurement correction	Auto/Manual	
18	Spot Meter	4 adjustable spot	
19	Area Profile	5 boxes with Max / Min & Avg Temp	
20	Line Profile	Vertical / Horizontal	
21	Isothermal analysis	Capture High/Low temperature/ Interval	
22	Delta T	Yes	

23	Emissivity correction	Selectable. 0.01 to 1.0 in steps of 0.01	
24	Temp Alarm	Voice, Colour (High temp, Low temp and isotherm)	
25	Colour Palettes	7Nos(Minimum)	
26	Image Adjustment	Contrast & Brightness	
27	Settings	Language, Date, Time, Temp (C / F / K)	
28	Background correction	temp Automatic	
29	Atmospheric correction	trans Automatic	
30	Storage Type	Built-in 4 GB flash memory, 4GB SD memory save to USB flash drive capability	
31	Storage Capacity	Upto 700 images in built-in flash card Upto 5600 images in 256 MB SD Card	
32	Storage Format	JPEG with Temperature Data (14 bit) or or fully radiometric IS2	
33	Periodic Image Storage	User defined 10s atleast	
34	Voice Annotation	60 sec Recording / Replay per Image	
35	Laser Pointer	Yes	
36	USB	Yes for Image Transfer	
37	Video O/P	Yes/No	
38	Audio O/P	Yes/No	
39	Tripod Mounting	1/4" – 20	
40	AC Opertion	230 ± 10% VAC, 50±5% Hz, 1 Ph	
41	Battery Type	Minimum 2 Rechargeable Li-Ion rechargeable batteries.	
42	Battery operating Time	3 Hrs (Minimum) continuous use per battery pack	
43	Operating temperature/humidity	0°C to 50°C and 95% non condensing	
44	Interfaces	USB, Bluetooth, Video & Audio output	
45	Weight(in Kg)		
46	Standards	IP 54, IEC 60068-2-29, IEC 60068-2-6	
47	Laptop Specs	Min Specs will be as 500GB HDD, 4 GB Ram, Windows 8 64 Bit, Core i5, USB - 2 Nos, Ethernet, DVD Drive	
48	Scope of supply	Camera with standard lens, Telephoto Lens (6° X 4°/ 4 m with IFOV < 0.35mRad),2 rechargeable Battery, Battery Charger, Adaptor, USB Cable, SD Card (2 GB), SD Card reader (USB), Original carrying Case, Tripod, Software CD, Laptop with Bag etc.	

49	Type Test	The test kit shall be type tested for Environmental Tests, EMI-EMC & Safety Tests as per relevant IEC Standard with latest amendment at any accredited laboratory (accredited by NABL or recognised International accreditation body). The type test report should be submitted along with the offer.	
50	Calibration certificate	The equipment shall be duly calibrated in NABL accredited Lab before supply and the date of calibration shall not be older than two months from the date of inspection/supply of the kit.	
51	Warranty / Guarantee	30 months from the date of delivery or 24 months from the date of successful & complete commissioning at end user sites, whichever is earlier. All the materials, including accessories, cables, laptops (wherever supplied) etc. are to be covered under warranty/ guarantee period If the equipment needs to be shifted to supplier's/manufacturer's works for repairs within warranty/guarantee period, suppliers will have to bear the cost of repairs, spares and transportation of kit for repair at service center/works.	
52	Training	Supplier shall have to ensure that the kit is made user friendly. Apart from detailed demonstration at site, the supplier shall also have to arrange necessary training to end user engineers.	
53	Commissioning, Handing over the Instrument	Successful bidder will have to commission the instrument to the satisfaction of end-user.	
54	After sale service	Bidder will have to submit the documentary evidence of having established mechanism in India for prompt services.	

Note: The bidder shall furnish **complete & specific information** against Sl. No.(1) to (54). The Bidder shall also furnish any other information as in their opinion is needed to give full description and details to judge the item(s) offered by them **in addition to the above given parameters**. (Listing Sl.No.55,56,.....etc). The GTP must be signed and sealed by the bidder/manufacturer.

(6) Technical Specification For Thermal Scanner (for Transformer/ Reactor)		
Sl No	Parameters	Specifications
1	Functional Requirement	Thermo Vision Camera for detection of hot spots of Transformer/ Reactor should be capable of working satisfactorily in environment up to 400KV live switchyard.
2	Detector type	Uncooled FPA
3	Detector Resolution	640x480 (307,200 pixels)
4	Thermal Sensitivity (NETD)	≤ 0.03 °C at +30°C
5	Spectral range	8 to 14 μ m
6	Lens	Tilttable Infrared lens
7	FOV / Min focus distance	25° HX 19°V / 40 cm (Standard Lens)
8	IFOV	1.2mRad or more
9	Display Size & Type	4" Colour Touchscreen VGA (640x480) LCD with backlight
9	Visual Camera	5 mega pixel (Min)
10	Frequency / Refresh Rate	50Hz/60Hz
11	Focus	Maual /Motor/ Auto
12	Digital Zoom	2x , 4x and 8x
13	Image Modes	Thermal image , visual images, P-I-P, thermal fusion
14	Temperature range	-20°C to +800°C
15	Temperature accuracy	± 2 °C or $\pm 2\%$ of reading
16	Measurement correction	Auto/Manual
17	Spot Meter	5 adjustable spot
18	Area Profile	5 adjustable boxes with Max / Min & Avg Temp
19	Line Profile	Vertical / Horizontal
20	Isothermal analysis	Capture High/Low temperature/ Interval
21	Delta T	Yes
22	Emissivity correction	Selectable. 0.01 to 1.0 in steps of 0.01
23	Temp Alarm	Voice, Colour (High temp, Low temp and isotherm)
24	Colour Pallets	7 Nos(Min)
25	Image Adjustment	Contrast & Brightness
26	Settings	Language, Date, Time, Temp (C / F / K)
27	Background temp correction	Automatic
28	Atmospheric trans correction	Automatic
29	Storage Type	Built-in 4 GB flash memory, 4GB SD memory save to USB flash drive capability.
30	Storage Capacity	Upto 700 images in built-in flash card Upto 5600 images in 256 MB SD card
31	Storage Format	JPEG with Temperature Data (14 bit) or fully radiometric (is2)
32	Periodic Image Storage	User defined 10s atleast
33	Voice Annotation	60 sec recording / replay time per Imagerevieable playback on camera.
34	Laser Pointer	Yes
35	USB	Yes for Image Transfer

36	Video recording	Standard and radiometric.
37	Audio O/P	Yes
38	Tripod Mounting	1/4" – 20
39	AC Supply	230 ±10% VAC, 50±3% Hz 1Ph
40	Battery Type	Minimum 2 Rechargeable Li-Ion rechargeable batteries.
41	Battery Operating Time	2Hrs (Min) continuous use per battery pack
42	Operating temperature	0°C to 50°C
43	Interfaces	USB, Video & Audio output
44	Weight	Should be light weight and handy.
45	Standards	IP 54 or better , IEC,IEC 61010-1,IEC 61326-1
46	Laptop Specs	Min Specs will be as 500GB HDD, 4 GB Ram, Windows 8 64 Bit, Core i5, USB - 2 Nos, Ethernet, DVD Drive with analysing software and reporting software.
47	Scope of supply	Camera with standard lens, 2 rechargeable Battery, Battery Charger, Adaptor, USB Cable, SD Card (8GB), SD Card reader (USB), original transport Case, Tripod, Software CD, Laptop with Bag etc.
48	Type Testing	The test kit shall be type tested for Environmental Tests, EMI-EMC& Safety Tests as per relevant IEC Standard with latest amendment at any accredited laboratory (accredited by NABL or recognised International accreditation body). The type test report should be submitted along with the offer.
49	Warranty / Guarantee	30 months from the date of delivery or 24 months from the date of successful & complete commissioning at end-user's sub-station, whichever is earlier. All the materials, including accessories, cables, laptops (wherever supplied) etc. are to be covered under warranty/ guarantee period. If the kit needs to be shifted to supplier's works for repairs within warranty/guaranty period, suppliers will have to bear the cost of repairs, spares and transportation of kit for repair at service center/works.
50	Calibration certificate	Unit shall be duly calibrated at NABL accredited laboratory before supply and the date of calibration shall not be older than two months from the date of supply of the kit.
51	Training	Supplier shall have to ensure that the kit is made user friendly. Apart from detailed demonstration at site, the supplier shall also have to arrange necessary training to end-user's engineers.
52	Commissioning, Handing over the Instrument	Successful bidder will have to commission the instrument to the satisfaction of end-user.
53	After sale service	Bidder will have to submit the documentary evidence of having established mechanism in India for prompt services.

(6) Guaranteed Technical Particular for Thermal Scanner (for Transformer/ Reactor)
The GTP must be furnished in the following format only and in full

SI No	Parameters	Specifications	Bidder's particulars
A	Manufacturer's Name and Address		
B	Type/Model details of offered Equipment		
C	Applicable		

	Indian/International Standards for the offered equipment		
1	Functional Requirement	Thermo Vision Camera for detection of hot spots of Transformer/ Reactor should be capable of working satisfactorily in environment up to 400KV live switchyard.	
2	Detector type	Uncooled FPA	
3	IR resolution	640x480 (307,200 pixels)	
4	Thermal Sensitivity (NETD)	≤ 0.03 °C at +30°C	
5	Spectral range	8 to 14 μ m	
6	Lens	Tiltable Infrared lens	
7	FOC / Min focus distance	25° HX 19°V / 40cm (Standard Lens)	
7	IFOV	1.2mRrad	
8	Display Size & Type	4" Colourtouchscreen VGA (640x480) LCD with backlight	
9	Visual Camera	5Mega pixel(Min)	
10	Frequency / Refresh Rate	50Hz/60Hz	
11	Focus	Maual /Motor/ Auto	
12	Digital Zoom	2x, 4x and 8x	
13	Image Modes	Thermal image , visual images, P-I-P, thermal fusion	
14	Temperature range	-20°C to 800°C	
15	Temperature accuracy	± 2 °C or $\pm 2\%$ of reading	
16	Measurement correction	Auto/Manual	
17	Spot Meter	5 adjustable spot	
18	Area Profile	5 adjustable boxes with Max / Min & Avg Temp	
19	Line Profile	Vertical / Horizontal	
20	Isothermal analysis	Capture High/Low temperature/ Interval	
21	Delta T	Yes	
22	Emissivity correction	Selectable. 0.01 to 1.0 in steps of 0.01	
23	Alarm	Voice, Colour (High temp, Low temp and isotherm)	
24	Colour Pallets	7Nos (Min)	
25	Image Adjustment	Contrast & Brightness	
26	Settings	Language, Date, Time, Temp (C / F / K)	
27	Background temp correction	Automatic	
28	Atmospheric trans correction	Automatic	
29	Storage Type	Built-in 4 GB flash memory, 4GB SD memory save to USB flash drive capability	

30	Storage Capacity	Upto 700 images in built-in flash card Upto 5600 images in 256 MB SD card	
31	Storage Format	JPEG with Temperature Data (14 bit) or radiometric (is2)	
32	Periodic Image Storage	User defined 10s atleast	
33	Voice Annotation	60sec recording / replay time per Imagerevieable playback on camera.	
34	Laser Pointer	Yes	
35	USB	Yes for Image Transfer	
36	Video O/P	Yes	
37	Audio O/P	Yes	
38	Tripod Mounting	1/4" - 20	
39	AC Supply	230 ± 10% VAC, 50±5% Hz	
40	Battery Type	Minimum 2 Rechargeable Li-Ion rechargeable batteries.	
41	Battery Operating Time	2Hrs (Min) continuous use per battery pack	
42	Operating temperature	0°C to 50°C	
43	Interfaces	USB, Video & Audio output	
44	Weight (in Kg)		
45	Standards	IP 54 or better, IEC,IEC 61010-1,IEC 61326-1	
46	Laptop Specs	Min Specs will be as 500GB HDD, 4 GB Ram, Windows 8 64 Bit, Core i5, USB - 2 Nos, Ethernet, DVD Drive with analysing software and reporting software.	
47	Scope of supply	Camera with standard lens, 2 rechargeable Battery, Battery Charger, Adaptor, USB Cable, SD Card (8GB), SD Card reader (USB), Original transport Case, Tripod, Software CD, Laptop with Bag etc.	
48	Type Test	The test kit shall be type tested for Environmental Tests, EMI-EMC & Safety Tests as per relavent IEC Standardwith latest amendment at any accredited laboratory(accredited by NABL or recognised International accreditation body). The type test report should be submitted alongwith the offer.	
49	Calibration certificate	The equipment shall be duly calibrated in NABL accredited Lab before supply and the date of calibration shall not be older than two months from the date of inspection/supply of the kit.	
50	Warranty / Guarantee	30 months form the date of delivery or 24 months form the date of successful & complete commissioning at end user sites,	

		<p>whichever is earlier.</p> <p>All the materials, including accessories, cables, laptops (wherever supplied) etc. are to be covered under warranty/ guarantee period</p> <p>If the equipment t needs to be shifted to supplier's/manufacturer's works for repairs within warranty/guaranty period, suppliers will have to bear the cost of repairs, spares and transportation of kit for repair at service center/works.</p>	
51	Training	Supplier shall have to ensure that the kit is made user friendly. Apart from detailed demonstration at site, the supplier shall also have to arrange necessary training to end user engineers.	
52	Commissioning, Handing over the Instrument	Successful bidder will have to commission the instrument to the satisfaction of end-user.	
53	After sale service	Bidder will have to submit the documentary evidence of having established mechanism in India for prompt services.	

Note: The bidder shall furnish **complete & specific** information against Sl. No.(1) to (53).The Bidder shall also furnish any other information as in their opinion is needed to give full description and details to judge the item(s) offered by them **in addition to the above given parameters**. (Listing Sl.No.54, 55,.....etc). The GTP must be signed and sealed by the bidder/manufacturer.

Section - 4

General Conditions of Supply and Erection of AEGCL

This Section 'General Conditions of Supply and Erection of AEGCL' is supplied separately and supplementary to Section -5 'Special Conditions of Contract' of this document. Whenever there is a conflict, the provisions in SCC or the other Sections of this document shall prevail over those in the 'General Conditions of Supply and Erection of AEGCL'.

Section- 5 Special Conditions of Contract

This Section 'SCC' is supplementary to Section -4 'General Conditions of Supply and Erection of AEGCL'.

Whenever there is a conflict, the provisions in this Section shall prevail over those in the 'General Conditions of Supply and Erection of AEGCL'.

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Section - 5

Special Conditions of Contract

5.1.0 DEFINITION OF TERMS

“Contract” means the Contract Agreement entered into between the Purchaser and the Supplier, together with the Contract Documents referred to therein; they shall constitute the Contract, and the term “the Contract” shall in all such documents be construed accordingly.

“Contract Documents” means the documents listed in Article 1.1 (Contract Document) of the Contract Agreement (including any amendments thereto).

“Contract Price” means the price payable to the Supplier as specified in the Agreement, subject to such additions and adjustments thereto or deductions therefrom, as may be made pursuant to the Contract.

“Day” means calendar day

“Year” means 365 days.

“Month” means calendar month.

“Party” means the “Purchaser” or the “Supplier”, as the context requires.

“Purchaser” means the Assam Electricity Grid Corporation Limited (in short AEGCL) and its assignees.

The “Supplier” shall mean the tenderer / bidder whose tender/ bid has been accepted by the “Purchaser” and shall include the bidder’s legal representatives, successors and assignees.

“Goods” means all of the commodities, raw material, machinery and equipment, and/or other materials that the Supplier is required to supply to the Purchaser under the Contract.

“Delivery” means the transfer of the Goods from the Supplier to the Purchaser in accordance with the terms and conditions set forth in the Contract.

“Completion” means the fulfilment of the Related Services by the Supplier in accordance with the terms and conditions set forth in the Contract.

“Related Services” means the services incidental to the supply of the goods, such as insurance, installation, training and initial maintenance and other similar obligations of the Supplier under the Contract.

The “Specification” shall mean the “Purchaser’s Requirements”.

“Supplier” means the natural person, a company/firm, or a combination of these, whose bid to perform the Contract has been accepted by the Purchaser and is named as such in the Agreement, and includes the legal successors or permitted assigns of the Supplier.

5.2.0 CONTRACT DOCUMENTS

- 5.2.1. Subject to Article 1.2 (Order of Precedence) of the Contract Agreement, all documents forming part of the Contract (and all parts thereof) are intended to be correlative, complementary and mutually explanatory. The Contract shall be read as a whole.

5.3.0 LEGAL JURISDITCTION

- 5.3.1. For any litigation arising out of the contract which cannot be resolve through mutual agreement or through Arbitration the honorable Guwahati High Court will have sole jurisdiction of all settlement.

5.4.0 LANGUAGE

- 5.4.1. The ruling language of the Contract shall be English.

5.5.0 SCOPE OF SUPPLY

- 5.5.1. The Goods and Related Services to be supplied shall be as specified in Schedule No. 1 and Schedule No. 2 of Section -2, Bidding Forms.
- 5.5.2. Unless otherwise stipulated in expressly limited in the **Purchaser's Requirements**, the Scope of Supply shall include all such items not specifically mentioned in the Contract but that can be reasonably inferred from the Contract as being required for attaining Delivery and Completion of the Goods and Related Services as if such items were expressly mentioned in the Contract.

5.6.0 DELIVERY SCHEDULE

- 5.6.1. For the purpose of determining the completion time of the Contract, the date fifteen days from issue of LoA, shall be taken as Commencement Date of the contract.
- 5.6.2. The Delivery of the Goods and Completion of the Related Services shall be in accordance with the Delivery and Completion Schedule specified in the Article 3 of the Contract Agreement (Contract Forms) or within such extended time to which the Supplier shall be entitled under SCC **Clause 5.17.0** hereof.

5.7.0 CONTRACT PRICE

- 5.7.1. The Contract Price shall be as specified in **Article 2 (Contract Price)** of the Contract Agreement.
- 5.7.2. Unless an escalation clause is provided for in the **Article 2 (Contract Price)**, the Contract Price shall be a firm shall not subject to any alteration, except in the event of a Change in the Works or as otherwise provided in the Contract.

5.8.0 TERMS OF PAYMENT

- 5.8.1. The Contract Price shall be paid as specified in subsequent sub-clauses, if not provided in Contract Forms, Section-6.
- 5.8.2. Payment against Goods and F&I (Price Schedule 1 & 1A) shall be made as follows: -
- 100% payment would be admissible within six (6) weeks from the date of receipt of the plants/ materials /equipment at site in full and good condition less deduction of Retention Money (as per **SCC Clause 5.10.0**) and advance (if and as applicable as per **SCC Clause 5.8.3**) and as per terms and conditions stipulated in the Contract Agreement (subject to availability of Fund).

Payments as above will be made under following conditions: -

- a. Advance copy of bills in duplicate and following documents are received sufficiently in advance:
- Suppliers invoice showing LOA reference, Goods description, quantity dispatched, unit price, total amount (6 Copies);
 - Packing List;
 - Railway receipt/ LR;
 - Manufacturer's guarantee certificate of Quality;
 - Material inspection Clearance Certificate for dispatch issued by Purchaser;
 - Insurance certificate;
 - Physical verification certificate of material received at site by Purchaser/Purchaser's site representative.
 - Certificate of successful commissioning of equipments duly verified by the AGM, T&C Division.
- b. Any charges on account of late intimation and/or delivery of documents by the Bank are to be borne by the Supplier.

- c. The supplier should intimate the dispatch of each and every consignment to the “Purchaser” and the Consignee.
- d. All Bank charges are to be borne by the Supplier.

5.8.3. ADVANCE PAYMENT

No advance payment is applicable for this contract.

5.9.0 PERFORMANCE SECURITY DEPOSIT

- 5.9.1. The successful bidder shall have to deposit to the extent of **10% (ten percent)** of the total value of the order as performance security (Bank Guarantee), within ten (10) days of receipt of notification of award, duly pledged in favor of the Purchaser and such security deposits shall be valid up to 30 days beyond the warranty period.
- 5.9.2. If the Supplier fails or neglects to observe, perform any of his obligations under the contract, it will be lawful for the “Purchaser” to forfeit either in full or in part at his absolute discretion, the security deposit furnished by the supplier.
- 5.9.3. No interest shall be payable on such deposits.

5.10.0 RETENTION MONEY

- 5.10.1. In addition to above Performance Security deposit, 10% value of each progressive bill will be retained by the Purchaser as ‘Retention Money’. The amount will be held by the Purchaser till the supply and related services under the contract is completed.
- 5.10.2. No interest shall be payable on such retentions.

5.11.0 WARRANTY

- 5.11.1. The Supplier/Manufacturer warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.
- 5.11.2. The Supplier/Manufacturer further warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in the country of final destination.
- 5.11.3. The warranty shall remain valid for **30** months form the date of delivery or **24** months form the date of successful & complete commissioning, whichever is earlier, at the final destination indicated in the Purchaser’s Requirement.
- 5.11.4. If during the Period Warranty any defect should be found, the Purchaser shall give Notice to the Supplier/Manufacture stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Purchaser shall afford all reasonable opportunity for the Supplier/Manufacturer to inspect such defects.
- 5.11.5. If having been notified, the Supplier/Manufacturer fails to remedy the defect within a period of 15 (fifteen) days, the Purchaser may, following notice to the Supplier/Manufacturer, proceed to do such work, and the reasonable costs incurred by the Purchaser in connection therewith shall be paid to the Purchaser by the Supplier or may be deducted by the Purchaser from any monies due the Supplier or claimed under the Performance Security.

5.12.0 COPY RIGHT ETC

- 5.12.1. The Supplier shall indemnify the purchaser against all claims actions, suits and proceedings for the infringement or alleged infringement of any patent, design or copyright protected either in the country of origin or in India by the use of any equipment supplied by the Supplier but such indemnity shall not cost any use of the equipment other than for the purposes indicated by or reasonably to be inferred from the specification.

5.13.0 QUANTITY VARIATION

- 5.13.1. "Purchaser" shall have the right to increase the ordered quantity by 20% within 50 days of the period of completion and the same shall be carried out at the same rates /prices and terms and conditions stipulated in the order except in regard to completion schedule, which shall be mutually agreed upon in case of enhancement of the ordered quantity.

5.14.0 INSPECTION AND TESTING

- 5.14.1. The Supplier shall at its own expense and at no cost to the Purchaser carry out all such tests and/or inspections of the Goods and Related Services as are specified in Sections 3, Purchaser's Requirements.
- 5.14.2. The inspections and tests may generally be conducted on the premises of the Supplier/Manufacture, at point of delivery. Subject to Sub-Clause 5.14.3, The Supplier shall furnish, all reasonable facilities and assistance, including access to drawings and production data to the inspectors at no charge to the Purchaser.
- 5.14.3. The Purchaser or its designated representative shall be entitled to attend the tests and/or inspections referred to in SCC Sub-Clause 5.14.2, provided that the Purchaser bear all of its own costs and expenses incurred in connection with such attendance including, but not limited to, all traveling and board and lodging expenses.
- 5.14.4. Whenever the Supplier is ready to carry out any such test and/or inspection, the Supplier shall give a reasonable advance notice (not less than 30 days) of such test and/or inspection and of the place and time thereof to the Purchaser. The Supplier shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Purchaser or its designated representative to attend the test and/or inspection.
- 5.14.5. The Supplier/manufacture shall provide the Purchaser with a certified report of the results of any such test and/or inspection.
- 5.14.6. The Purchaser may reject any Goods or any part thereof that fail to pass any test and/or inspection or do not conform to the specifications. The Supplier shall either rectify or replace such rejected Goods or parts thereof or make alterations necessary to meet the specifications at no cost to the Purchaser, and shall repeat the test and/or inspection, at no cost to the Purchaser, upon giving a notice pursuant to SCC Sub-Clause 5.14.4
- 5.14.7. If it is agreed between the Purchaser and the Supplier that the Purchaser shall not attend the test and/or inspection, then the Supplier may proceed with the test and/or inspection, and should provide the Purchaser with a certified report of the results thereof.
- 5.14.8. The Supplier agrees that neither the execution of a test and/or inspection of the Goods or any part thereof, nor the attendance by the Purchaser or its representative, nor the issue of any report pursuant to SCC Sub-Clause 5.14.5&5.14.7, shall release the Supplier from any warranties or other obligations under the Contract.

5.15.0 INSURANCE

- 5.15.1. The "Supplier" shall, have, unless, otherwise specified by the Purchaser, insure the materials through their underwrites at their cost and shall keep it insured against any loss/ damaged/ pilferage in transit, destruction or damage by fire/ flood, without exposure to vagaries of weather or through riot, civil commotion, war or rebellion, for the full value of the materials until the materials are received at the purchaser's destination store.
- 5.15.2. The "Supplier" shall be responsible for safe arrival at destination, unloading and receipt of the materials by the consignee. The Purchaser will discharge consignee's responsibilities only and shall not be responsible for any damage/ loss/ pilferage/ non-delivery by the carriers.
- 5.15.3. In case of any loss/ damage/ pilferage/ non-delivery/ short delivery by carriers etc.; the Supplier shall replace free of cost missing / damaged / lost materials within 30(thirty) days from the receipt of report thereof from the consignee(s) without waiting for settlement of their claims with their carriers / under-writers. Normally, such reports from the consignee(s) to the supplier shall be initiated within a period of 30(thirty) days from the date of receipt of each consignment by him /them.

- 5.15.4. If it is considered necessary that the damaged equipment either in part or in full to be sent back to the manufacturer's works for repair, the manufacturer/suppliers will furnish the Bank Guarantee for the full value of equipment needing repairs and such Bank Guarantee shall remain valid till such time, the equipment are repaired and returned to the consignee in good condition. The to and fro freight, handling and insurance charges in such cases will be borne by the Supplier.
- 5.15.5. Unless, otherwise mutually agreed upon, in case of failure by the Supplier to replenish /make good of the loss /damage /short supplied quantities, within the stipulated period, the Purchaser reserves the right to forfeit the security deposit and/ or adjust any outstanding payment to the "Supplier" with the Purchaser or take any other appropriate action.

5.16.0 FORCE MAJEURE

- 5.16.1. "Force Majeure" shall mean any event beyond the reasonable control of the Purchaser or of the Supplier, as the case may be, and which is unavoidable notwithstanding the reasonable care of the party affected, and shall include, without limitation, the following:
- (a) war, hostilities or warlike operations whether a state of war be declared or not, invasion, act of foreign enemy and civil war
 - (b) rebellion, revolution, insurrection, mutiny, usurpation of civil or military government, conspiracy, riot, civil commotion and terrorist acts
 - (c) confiscation, nationalization, mobilization, commandeering or requisition by or under the order of any government or de jure or de facto authority or ruler or any other act or failure to act of any local state or national government authority
 - (d) strike, sabotage, lockout, embargo, import restriction, port congestion, lack of usual means of public transportation and communication, industrial dispute, shipwreck, shortage or restriction of power supply, epidemics, quarantine and plague
 - (e) earthquake, landslide, volcanic activity, fire, flood or inundation, tidal wave, typhoon or cyclone, hurricane, storm, lightning, or other inclement weather condition, nuclear and pressure waves or other natural or physical disaster
 - (f) shortage of labor, materials or utilities where caused by circumstances that are themselves Force Majeure.
- 5.16.2. If either party is prevented, hindered or delayed from or in performing any of its obligations under the Contract by an event of Force Majeure, then it shall notify the other in writing of the occurrence of such event and the circumstances thereof within fourteen (14) days after the occurrence of such event.
- 5.16.3. The party who has given such notice shall be excused from the performance or punctual performance of its obligations under the Contract for so long as the relevant event of Force Majeure continues and to the extent that such party's performance is prevented, hindered or delayed. The Time for Completion shall be extended in accordance with **SCC Clause 5.17.0**.

5.17.0 EXTENSION OF TIME FOR COMPLETION

- 5.17.1. The Time(s) for Completion specified in the Article 3 of the Contract Agreement (Contract Forms) shall be extended if the Supplier is delayed or impeded in the performance of any of its obligations under the Contract by reason of any of the following:
- (a) any Change in the scope of works by the Purchaser; which justifies extension of completion time as provided in **SCC Clause 5.13.0**; and
 - (b) any occurrence of Force Majeure as provided in **SCC Clause 5.16.0**.
- 5.17.2. Except where otherwise specifically provided in the Contract, the Supplier shall submit to the Purchaser's Representative a notice of a claim for an extension of the Time for Completion, together with particulars of the event or circumstance justifying such extension as soon as reasonably practicable after the commencement of such event or circumstance. As soon as reasonably practicable after receipt of such notice and supporting particulars of the claim, the Purchaser and the Supplier shall agree upon the period of such extension. In the event that the Supplier does not accept the Purchaser's estimate of a fair and

reasonable time extension, the Supplier shall be entitled to refer the matter to a Dispute Board, pursuant to **SCC Sub-Clause 5.20.0**.

5.18.0 LIQUIDATED DAMAGE

- 5.18.1. The Supplier guarantees that it shall attain Completion of the Works within the Time for Completion specified in the Contract Agreement pursuant to **SCC Sub-Clause 5.6.2**, or within such extended time to which the Supplier shall be entitled under **SCC Clause 5.17.0** hereof.
- 5.18.2. If the Supplier fails to attain Completion of the Works within the Time for Completion or any extension thereof under **SCC Clause 5.17.0**, the Supplier shall pay to the Purchaser liquidated damages at the rate of $\frac{1}{2}$ % (**half percent**) of the total Contract Price per week or part thereof delay. The aggregate amount of such liquidated damages shall in no event exceed **10% (ten percent)** of the total contract price.
- However, the payment of liquidated damages shall not in any way relieve the Supplier from any of its obligations to complete the Works or from any other obligations and liabilities of the Supplier under the Contract.
- 5.18.3. Once the aggregated "Liquidated damage" reaches 10% of the total contract price, the Purchaser may consider following actions:
- (a) Procure the undelivered material/ equipment and/or complete the balance works from elsewhere giving notice to the supplier and to recover any extra expenditure incurred thereby for having to procure these materials and works at higher price, at the risk and responsibility of the Supplier; or
 - (b) Cancel the contract wholly or in part and to complete the works at the full risk and cost of the Supplier and forfeit the security deposit.
 - (c) Declare it as a "Contractual Failure" and act in accordance with **SCC Clause 5.19.0**.

5.19.0 CONTRACTUAL FAILURE

- 5.19.1. In the event of contractual failure of any respect on the part of the Supplier, the Purchaser shall be entitled to operate security deposit or any deposit or any payment due to supplier irrespective of whether his default relates to the particular orders or not towards the Purchaser's claim for damages arising out of the failure. In addition, the Purchaser may black-list or bans the "Supplier" or pending enquiry, suspend him or take any other steps considered suitable.

5.20.0 ARBITRATION

- 5.20.1. If at any time, any question, disputes or differences whatsoever shall rise between the Purchaser and the Supplier, upon or in relation to or in connection with the contract, either party may forthwith give notice to the other in writing of the existence of such question of dispute or difference and the same shall be referred to the adjudication of three Arbitrators, one to be nominated by the Purchaser the other by the Supplier and the third by the President of the Institution of Engineers, India/ Retired or Sitting Judge not below the status of a retired Judge of High Court of India. If either of the parties fail to appoint its arbitrators within 60(sixty) days after receipt of notice of the appointment of arbitrators then the President of the Institution of Engineers /retired or sitting Judge of India, as the case may be, shall have the power at request of either of the parties, to appoint an Arbitrator. A certified copy of the "President" making such an appointment shall be furnished to both parties
- 5.20.2. The arbitration shall be conducted as per provisions of the Indian Arbitration Act, shall be held at Guwahati or any other place as may be decided by the Purchaser. The decision of the majority of Arbitrators shall be final & binding upon the parties and the expenses of the arbitration shall be paid as may be determined by the Arbitrator. However, any dispute arising out of this contract will first be discussed and settled bilaterally between Purchaser and the Supplier.

Section - 6

Contract Forms

(This Section contains the Letter of Acceptance, the Contract Agreement and Appendices to the Contract Agreement which, once completed, will form the Contract along with the Section 4 and Section 5. The Bidder should note that this Section shall be completed fully at the time of Contract signing)

Section 6 - Contract Forms

This Section contains the Letter of Acceptance, the Contract Agreement and Appendices to the Contract Agreement which, once completed, will form the Contract along with the Section 4 and Section 5. The Bidder should note that this Section shall be completed fully at the time of Contract signing.

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1. Notification of Award

[AEGCL's letter head]

**Letter of Acceptance
Supply of Goods and Related Services**

[date]

To: [Name and address of the Supplier]

This is to notify you that your Bid dated [date] for execution of the [name of the Contract and identification number, as given in the Contract Data] for the Contract Price in the aggregate of [amounts in numbers and words] [name of currency] (as per Price Schedule-1), as corrected and modified in accordance with the Instructions to Bidders is hereby accepted, and it is decided to award on you the 'Supply and Delivery Contract' covering inter-alia Ex-works supply and Delivery of all Goods including Related Services.

You are requested to furnish the Performance Security within ten (10) days in accordance with the Conditions of Contract, using for that purpose one of the Performance Security Forms included in Section 8 (Contract Forms) of the Bidding Document

[Authorized Signature]
[Name and Title of Signatory]
Assam Electricity Grid Corporation Limited

Attachment: Contract Agreement

2. Contract Agreement

THIS AGREEMENT made the _____ day of _____, _____,

BETWEEN

Assam Electricity Grid Corporation Limited (herein after referred to as AEGCL), a corporation incorporated under the laws of Company Act, 1956 and having its registered office at First Floor, BijuliBhawan, Paltanbazar, Guwahati-781001, Assam and **[name of Supplier]**, a firm/company incorporated under the laws of Company Act, 1956 and having its principal place of business at **[address of Supplier]** (hereinafter called "the Supplier"). **[in case of JV insert name and address of the Lead Partner as well as other Partners]**

WHEREAS AEGCL desires to engage the Supplier to the 'Supply and Related Service Contract' covering "Supply of Diagnostic Tools and Related Services for various sub-stations of AEGCL under PSDF(A)" with all accessories and delivery to various Substation Sites of AEGCL, as detailed in the Contract Document and the Supplier has agreed to such engagement upon and subject to the terms and conditions hereinafter appearing.

NOW IT IS HEREBY AGREED as follows:

Article 1 Contract Documents

- 1.1 **Contract Documents** (Reference SCC Clause 5.2.0)
The following documents shall constitute the Contract between the Purchaser and the Supplier, and each shall be read and construed as an integral part of the Contract:
- (a) This Contract Agreement and the Appendices hereto
 - (b) Letter of Price Bid and Price Schedules submitted by the Supplier
 - (c) Letter of Technical Bid and Technical Proposal submitted by the Supplier
 - (d) Special Conditions of Contract
 - (e) General Conditions of Supply and Erection.
 - (f) Specification(Purchaser's Requirements)
 - (g) Other completed Bidding Forms submitted with the Letters of Technical and Price Bids
 - (h) Guaranteed and other Technical Particulars (as submitted with the Bid).
 - (i) Any other documents (if necessary) shall be added here
- 1.2 **Order of Precedence** (Reference SCC Clause 5.2.0)
In the event of any ambiguity or conflict between the Contract Documents listed above, the order of precedence shall be the order in which the Contract Documents are listed in Article 1.1 (Contract Documents) above.
- 1.3 **Definitions** (Reference SCC Clause 5.1.0)
Capitalized words and phrases used herein shall have the same meanings as are ascribed to them in the SCC.

Article 2 Contract Price and Terms of Payment

- 2.1 **Contract Price** (Reference SCC Clause 5.7.0)
The Purchaser hereby agrees to pay to the Supplier the Contract Price in consideration of the performance by the Supplier of its obligations hereunder. The Contract Price shall [. . . **amounts in rupees in words** . . .], [. . . **amounts in figures** . . .] as specified in Price Schedule No. 3 (Grand Summary).

The Contract Price is FIXED for entire period of the Contract.

- 2.2 **Terms of Payment** (Reference SCC Clause 5.8.0)
The terms and procedures of payment according to which the Purchaser will pay the Supplier are given in the Appendix (Terms and Procedures of Payment) hereto.
- Article 3**
Commencement Date and Completion Time
- 3.1 **Commencement Date** (Reference SCC Clause 5.6.1)
The Commencement Date upon which the period until the Time for Completion of the total scope under the Contract shall be counted from is the date fifteen days from issue of LoA.
- 3.2 **Completion Time** (Reference SCC Clause 5.6.2)
The whole scope under this Contract shall be completed within **Six (6)** months from Contract Commencement Date.
- Article 4. Appendices**
- 5.1 The Appendices listed in the attached List of Appendices shall be deemed to form an integral part of this Contract Agreement.
- 5.2 Reference in the Contract to any Appendix shall mean the Appendices attached hereto, and the Contract shall be read and construed accordingly.

IN WITNESS WHEREOF the Purchaser and the Supplier have caused this Agreement to be duly executed by their duly authorized representatives the day and year first above written.

Signed by, for and on behalf of the Purchaser

[**Signature**]

[**Title**]

in the presence of

[**Signature**]

[**Title**]

Signed by, for and on behalf of the Supplier

[**Signature**]

[**Title**]

in the presence of

[**Signature**]

[**Title**]

APPENDICES

Appendix 1 - Terms and Procedures of Payment

Appendix 2 - Time Schedule

Appendix 3 - Performance Security.

Appendix 4- PriceSchedules.

Appendix 5- Guaranteed and Other Technical Particulars.

Appendix 1 – Terms and Procedure of Payment

In accordance with the provisions of SCC Clause 5.8.0 (Terms of Payment), the Purchaser shall pay the Supplier in the following manner and at the following times, on the basis of the Price Breakdown given in the section on Price Schedules.

(A) Terms of Payment

Schedule No. 1& 2 –Payment for Goods Supplied and Related Services (F & I)

100% payment would be admissible within six (6) weeks from the date of receipt of the Goods at site in full and good condition less deduction of Retention Money (as per **SCC Clause 5.10.0**) and advance (if and as applicable as per **SCC Clause 5.8.3**) and as per terms and conditions stipulated in the Contract Agreement.

(B) Payment Procedures

The procedures to be followed in applying for certification and making payments shall be as follows:

1. Progressive Payment for Supply of Goods:

Application for interim payment shall be made once in a calendar month subject to that the total net amount payable under all such payment certificate is at least 40% or more of the total contract price.

(A) EXW Price and F & I (Schedule- 1&2):

Upon receipt of plants and equipment at site, the Supplier shall notify the Purchaser and submit the following documents in advance:

- (i) Application for payment
- (ii) Suppliers invoice showing LOA reference, Goods description, quantity dispatched, unit price, total amount (6 Copies)
- (iii) Packing List
- (iv) Railway receipt/ LR
- (v) Manufacturer's guarantee certificate of Quality
- (vi) Material inspection Clearance Certificate for dispatch issued by Purchaser
- (vii) Insurance certificate.
- (viii) Physical verification certificate of material received at site by Purchaser/Purchaser's site representative
- (ix) Certificate of successful commissioning of equipments duly verified by the AGM, T&C Division.

The above documents shall be received by the Purchaser before arrival of the Goods and if not, the Suppliers will be responsible for any consequent expenses.”

(B) Taxes and Duties (Schedule-1):

Taxes in respect of transaction between Purchaser and the Supplier as applicable for destination site on all items of supply including bought-out finished items (as identified in the Contract), which shall be dispatched directly from the sub-vendor's works to the Purchaser's site (sale-in-transit) will be paid after each shipment against documentary evidence. This payment shall be released by Purchaser directly to the Supplier against invoices to be submitted by the Supplier.

Appendix 2 - Time Schedule

(Bidders shall furnish with bids a construction schedule in form of bar chart. The time schedule should match with the completion time mentioned elsewhere in the Bidding Document)

Appendix 3 - Form of Performance Security**Bank Guarantee**

(To be stamped in accordance with Stamp Act)

To: _____ [name of Purchaser]
 _____ [address of Purchaser]

WHEREAS _____ [name and address of Supplier/Manufacturer] has undertaken, in pursuance of Contract No. _____ dated _____ to execute _____ [name of Supplier/Manufacturer and brief description of Scope] (hereinafter called "the Contract");

AND WHEREAS it has been stipulated by you in the said Contract that the Supplier/Manufacturer shall furnish you with a Bank Guarantee by a recognized/scheduled bank for the sum specified therein as security for compliance with its obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Supplier/Manufacturer such a Bank Guarantee;

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Supplier/Manufacturer, up to a total of _____ [amount of Guarantee]¹ _____ [in words], such sum being payable in the currencies in which the Contract Price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ [amount of Guarantee] as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Supplier/Manufacturer before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the scope to be performed thereunder or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until the date, 30 days beyond the Warranty Period as per the Contract.

Signature and Seal of the Guarantor _____
 Name of Bank _____
 Address _____
 Date _____

¹ An amount is to be inserted by the Guarantor, representing the percentage of the Contract Price specified in the Contract.

Appendix 4–Price Schedules

Appendix 5—Guaranteed and other Technical Particulars