# BIDDING DOCUMENT

**Name of Work:**
**Supply of 145 kV Isolators at 132 kV Switchyard of Lakwa Thermal Power Station, APGCL.**

**NATIONAL COMPETITIVE BIDDING**

**(e-Procurement)**

**Tender No.:** APGCL/CGM (Gen)/2025-26/ 145 kV Isolator- LTPS /22

***Issued by:***
The Chief General Manager (Generation),
Assam Power Generation Corporation Limited
3rd Floor, Bijulee Bhawan, Paltan Bazar, Guwahati-781001

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# SECTION-I

## 1. NOTICE INVITING TENDER *(NIT)*

**Assam Power Generation Corporation Limited**
**3rd Floor, Bijulee Bhawan, Paltan Bazar, Guwahati-781001**
**Website: - www.apgcl.org**

### Notice Inviting Tender

**Tender Ref. No.** APGCL/CGM(Gen)/2025-26/145 kV Isolator- LTPS /22

The Chief General Manager (Generation) APGCL hereby invites online Bids from eligible Bidders following two-bid system of bidding for **"Supply of 145 kV Isolators at 132 kV Switchyard of Lakwa Thermal Power Station, APGCL".**

(i) Open Competitive Bidding method shall be followed for selection of the most preferred bidder for the tendered Item(s).

(ii) The Bidding Documents can be downloaded by any prospective bidders from the Procurement portal i.e., http://assamtenders.gov.in, free of cost.

(iii) All Bids must be accompanied by **Bid Processing Fee** of **Rs. 2,226.00 (Rupees Two Thousand Two Hundred Twenty-Six Only)** and **Bid Security** (EMD) of the amount of **Rs. 2,22,600.00 (Rupees Two Lakh Twenty-Two Thousand Six Hundred only).**

**No Exemptions to Bid Security (EMD) is allowed.**

**Exemptions from bid security (EMD) and tender fees are not allowed under this tender; every participating bidder must submit both without exception. The EMD exemption option displayed on the e-tender portal is intended solely to enable submission of the EMD by Bank Guarantee (BG). Bidders must neither regard this portal option as a valid exemption nor use it to avoid submitting the EMD. Any bid submitted without payment of the applicable fee or without a valid BG uploaded through this designated mechanism will be rejected summarily.**

(iv) Pre-bid Meeting shall be conducted in the Office of CGM (Gen), APGCL, 3rd Floor, Bijulee Bhawan, Paltan Bazar, Guwahati-1. The date and time of the Pre-bid Meeting shall be **12.00 Hours of 28.10.2026.**

(v) Start date of online Bid submission on the e-Procurement portal (i.e., http://assamtenders.gov.in) shall be **10.00 Hrs. of 02.11.2026.**

**(vi)** Bids must be submitted online at the e-Procurement portal (i.e., http://assamtenders.gov.in) on or before the due date for submission i.e. up to **12:00 Hrs. of 09/11/2026.**

**(vii)** The Technical Bid will be opened online on **16:00 Hrs. of 12/11/2026.** and the Price Bid shall be opened online only for the technical qualified bidders. **(The date of opening of the price bid shall be intimated later on the Portal).**

--Sd--
Chief General Manager (Gen)
APGCL, Bijulee Bhawan, Guwahati-1

# SECTION-II

## 2. ***INSTRUCTION TO BIDDERS (ITB)***

(Note: The Terms – 'Bidder', 'Contractor', 'Supplier' has been used interchangeably in this document.)

### *2.1 Introduction*

2.1.1 Assam Power Generation Corporation Ltd. (APGCL) is a state GENCO operating in the state of Assam and with the vision of availability of reliable and quality power at competitive rates and on a sustainable basis.

APGCL has various gas based thermal power plants as well as hydro power plants. The Thermal Power Plants of APGCL are Lakwa Thermal Power Station, located in the District of Charaideo and Namrup Thermal Power Station, located in the District of Dibrugarh in the State of Assam. The various Hydro Plants of APGCL are Karbi Langpi Hydro Electric Power Project and Myntriang Small Hydro Electric Project, both located in the District of Karbi Anglong in the State of Assam. In addition, there are a few hydro and solar projects in pipeline/under construction of APGCL.

2.1.2 The Procuring Entity (i.e., APGCL) has issued this Bidding Document for the supply of goods (and incidental services, if any) as specified in "**Section IV- Schedule of Requirement**" in connection with the notice inviting tenders from the eligible bidders.

2.1.3 This Section provides the relevant information as well as instructions to assist prospective bidders in preparation and submission of bids. It also includes the mode and procedure to be adopted by the Procuring Entity (APGCL) for receipt and opening as well as scrutiny and evaluation of bids and subsequent placement of award of contract.

2.1.4 Before preparing and submitting the bids (Technical & Price) online at the e-Procurement portal in the prescribed manner, the bidder should read and examine all the terms and conditions, instructions, etc., contained in this Bidding Document. Failure to provide the required information or to comply with the instructions incorporated in this Bidding Document may result in rejection of bid.

2.1.5 The Bidder shall bear all costs and expenditure incurred and/or to be incurred by it in connection with its bid including preparation, mailing and submission of its bid and subsequently processing the same. The Procuring Entity shall, in no case be responsible or liable for any such cost, expenditure, etc., regardless of the conduct or outcome of the bidding process.

### *2.2 Language of Bids*

Bid submitted by the Bidder and all subsequent correspondences and documents relating to the bid exchanged between the Bidder and the Procuring Entity (APGCL), shall be written in English language. However, the language of any printed literature furnished by the bidder in connection with its bid may be written in any other language, provided the same is accompanied by a self-certified English translation and, for purposes of interpretation of the bid, the English translation shall prevail.

### *2.3 Code of Integrity*

2.3.1 The Procuring Entity (APGCL) and all its officials or employees, whether involved in the procurement process or otherwise, or bidders and their representatives or consultants or service providers participating in a procurement process or other persons involved, directly or indirectly in any way in a procurement process shall maintain an unimpeachable standard of integrity.

2.3.2 Govt. of Assam prescribes to uphold the Code of Integrity, which prohibits officials or employees of a Procuring Entity or any person(s) participating in the bidding process, as bidder or otherwise, the following:

(i) any offer, solicitation or acceptance of any bribe, reward or gift or any material benefit, either directly or indirectly, in exchange for an unfair advantage in the procurement process or to otherwise influence the procurement process;
(ii) any omission, including a misrepresentation that misleads or attempts to mislead so as to obtain a financial or other benefit or avoid an obligation;
(iii) any collusion, bid rigging or anti-competitive behavior to impair the transparency, fairness and progress of the procurement process;
(iv) improper use of information shared between the procuring entity and the bidders with an intent to gain unfair advantage in the procurement process or for personal gain;
(v) any financial or business transactions between the bidder and any officer or employee of the Procuring Entity, who are directly or indirectly related to the tender or execution process of contract;
(vi) any coercion including impairing or harming or threatening to do the same, directly or indirectly, to any party or to its property to influence the procurement process;
(vii) any obstruction of any investigation or audit of a procurement process;
(viii) making false declaration or providing false information for participation in

a) tender process or to secure a contract;
b) disclosure of Conflict of Interest;
c) disclosure by the bidder of any previous transgressions with any entity in India or any other country during the last three years or of any debarment by any other Procuring Entity.

2.3.3 In case of any breach of the Code of Integrity by a bidder or a prospective bidder, as the case may be, the TIA (Tender Inviting Authority)/APGCL after giving a reasonable opportunity of being heard, may take appropriate measures including –

(i) exclusion of the bidder from the procurement process;
(ii) calling off pre-contract negotiations and forfeiture or encashment of bid security;
(iii) forfeiture or encashment of any other security or bond relating to procurement;
(iv) recovery of payments made by the Tender Inviting Entity (APGCL) along with interest thereon at bank rate;
(v) cancellation of the relevant contract and recovery of compensation for loss incurred by it;
(vi) Initiate available legal actions available under different laws in India.
(vii) debarment of the bidder from participation in any tender issued by the Procuring Entity (APGCL) for a period not exceeding three years.

### *2.4 Conflict of Interest*

2.4.1 Conflict of Interest for a Procuring Entity or its personnel (i.e., officials or employees) and bidders is a situation in which a party has interests that could improperly influence that performance of its duties or responsibilities, contractual obligations, or compliance with applicable laws and regulations.

2.4.2 Govt. of Assam describes the situations in which a Procuring Entity or its personnel maybe considered to be in a situation of Conflict of Interest include, but are not limited to the following-

(i) Conflict of Interest occurs when the private interests of a Procuring Entity or its personnel, such as personal, non-official, extra-professional or other relationships or personal financial assets, interfere or appear to interfere with the proper performance of its professional functions or obligations as a procurement official.
(ii) within the procurement environment, a Conflict of Interest may arise in connection with such private interests as personal investments and assets, political or other social activities and affiliations while in the service of the Procuring Entity, employment after retirement from service or of relatives or the receipt of a gift that may place the Procuring Entity or its personnel in a position of obligation;
(iii) Conflict of Interest also includes the use of assets of the Procuring Entity including human, financial and material assets, or the use of the office of the Procuring Entity or knowledge gained from official functions for private gain or to prejudice the position of someone the Procuring Entity or its personnel does not favour;
(iv) Conflict of Interest may also arise in situations where the Procuring Entity or any of its personnel is seen to benefit directly or indirectly or allow a third party, including family, friends, or someone they favour, to benefit directly or indirectly from the decision or action of the Procuring Entity.

2.4.3 The situations in which bidders participating in a procurement process or their representatives may be in Conflict of Interest include, but are not limited to the following:

(i) If they or their personnel or representatives or agents have any relationship or financial or business transactions or interests with any official of the Procuring Entity that are directly or indirectly involved in or related to the procurement process or execution of contract;
(ii) If they receive or have received any direct or indirect subsidy from any other bidder;
(iii) If they have the same legal representative for purposes of the bid;
(iv) If they have a relationship with each other, directly or through common third parties that puts them in a position to have access to information about or influence on the bid of another;
(v) If they participate in more than one bid in the same bidding process;
(vi) If they have controlling partners in common;
(vii) If a bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the subject matter of procurement of the bidding process or were involved in such preparation in anyway.

2.4.4 In case of a holding company having more than one independently manufacturing/processing/producing unit or more than one unit having common business ownership or management, only one unit shall be allowed to submit bid or quote to prevent any Conflict of Interest. Similar restrictions shall apply to closely related sister or subsidiary companies. Such bidders must proactively declare such sister or subsidiary company or common business or management units in similar lines of business.

### *2.5 Bidders' Eligibility*

2.5.1 Bidder shall be a single business entity or JV/Corporation, having a formal intent and legal competency to enter into an agreement or contract.

2.5.2 The Bidder shall be one of the following categories of entities to be eligible to participate in the bidding process:
(i) Manufacturer of the 145 KV Isolator; or
(ii) Authorised Dealer or Distributors of the Manufacturer of the 145 KV Isolator;

2.5.3 Bidder should not have a Conflict of Interest as prescribed and specified in ITB Para 2.4, which materially affects fair competition.

2.5.4 In addition, any bidder participating in the bidding process shall–

(i) Have fulfilled his obligation to pay such of the tax payable to the Central Government or the State Government or any local authority.

(ii) not be insolvent, in receivership, bankrupt or being wound up, not have its affairs administered by a court or a judicial officer, not have its business activities suspended and must not be the subject of legal proceedings for any of the foregoing reasons;

(iii) not have, and their directors and officers do not have, been convicted of any criminal offence related to their professional conduct or the making of false statements or misrepresentations as to their qualifications to enter into a procurement contract within a period of three years preceding the commencement of the procurement process, or not have been otherwise disqualified pursuant to debarment proceedings.

(iv) not be debarred by any Procuring Entity under the State Government, the Central Government, Autonomous body, Authority by whatever name called under them.

### *2.6 Bidders' Qualification*

2.6.1 Bidders should substantially meet the qualification criteria as stipulated in the "**Section III - Evaluation and Qualification Criteria".**

2.6.2 Bidders should fill and submit the Forms provided in **"Section V - Bidding Forms"** with relevant information and supporting evidence of fulfillment of their qualification, along with the technical bid.

## *BIDDING DOCUMENT*

### *2.7 Content of this Bidding Document*

2.7.1 The Bidding Documents include the following Sections, which should be read in conjunction with any amendment issued in accordance with ITB Para 2.10.

| | |
|---|---|
| (i) Section I | Notice Inviting Tender (NIT) |
| (ii) Section II | Instructions to Bidders (ITB) |
| (iii) Section III | Evaluation and Qualification Criteria |
| (iv) Section IV | Schedule of Requirements |
| (v) Section V | Bidding Forms |
| (vi) Section VI | General Terms and Conditions (GTC) |
| (vii)Section VII | Special Terms and Conditions (STC) |

2.7.2 Unless downloaded directly from the e-Procurement portal, the Procuring Entity (APGCL) shall not be responsible for the correctness of the Bidding Document, responses to requests for clarification, the Minutes of the Pre-bid meeting, if any, or amendment(s) to the Bidding Documents in accordance with ITB Para 2.10.

2.7.3 Bidders are expected to examine all instructions, forms, terms, and specifications in the Bidding Documents and to furnish with its Bid all relevant information and documents as required by the Bidding Documents.

### *2.8 Clarifications of Bidding Documents*

2.8.1 A Bidder requiring any clarification of the Bidding Document shall communicate in writing to the Procuring Entity through e-mail with reference to the Bidding Document at the following email Ids:

- **md.zakir@apgcl.org**

with a copy to the following email ids:

- **aklantika.saikia@apgcl.org**

- **abhijit.saha@apgcl.org**
- **migom.mili@apgcl.org**

The Procuring Entity (APGCL) will respond in writing to any request for clarification, provided that such a request is received well before the end date of bid submission date.

2.8.2 The Procuring Entity shall also promptly publish a brief description of the enquiry but without identifying its source and its response at the official website/e-Procurement portal.

2.8.3 Should the clarification result in changes to the essential elements of the Bidding Documents, the Procuring Entity shall amend the Bidding Documents following the procedure given under ITB Para 2.10.

### *2.9 Pre-Bid Meeting*

Pre-bid Meeting shall be conducted in the Office of CGM (Gen), APGCL, 3rd Floor, Bijulee Bhawan, Paltan Bazar, Guwahati-1. The date and time of the Pre-bid Meeting shall be **12.00 Hours of 28/10/2026.**

**Note:**

- **All queries from Bidders shall be submitted to APGCL not later than 03 (three) days prior to the Pre-bid Meeting.**
- **All queries related to the tender must be sent to the following email ids:**
  - **md.zakir@apgcl.org**

  **with a copy to the following email ids:**
  - **aklantika.saikia@apgcl.org**
  - **abhijit.saha@apgcl.org**
  - **migom.mili@apgcl.org**

### *2.10 Amendments to Bidding (Tender) Document*

2.10.1 At any time prior to the due date for submission of bid, the Procuring Entity (APGCL) may amend or modify the Bidding Document by issuing amendment(s) pursuant to ITB Para 2.8 and 2.9 or for any other reason, it deemed fit.

2.10.2 Such amendment(s) will be published at the e-Procurement portal and the same shall be binding on all prospective Bidders.

2.10.3 To give reasonable time to prospective bidders to take necessary action in preparing their bids, the Procuring Entity may, at its discretion, extend the deadline for the submission of bids and other allied time frames, which are linked with that deadline.

2.10.4 Any Bidder who has downloaded the Bidding Documents should check the amendment(s), if any, issued on the Procurement portal. **The Procuring Entity (APGCL) shall not be responsible, in any manner, if any prospective Bidder misses any amendment(s) published on the portal.**

## PREPARATION OF BIDS

### *2.11 Documents Comprising the Technical Bid*

2.11.1 The bid shall be submitted online in two parts (i.e., Technical Bid & Price Bid) at the e-Procurement portal by the bidder within due date and time. The Technical Bid shall consist of the following documents.

i) **"Letter of Bid"** as per Form provided in Section V – Bidding Forms (Form-B1);
ii) "**Bidder Information"** as per Form provided in Section V: Bidding Forms (Form-B2);

iii) **"Manufacturer's Authorization Letter",** in case the bidder is not the Manufacturer of the quoted item(s), as per Form given in Section V: Bidding Forms (Form-B3);
iv) **"Details of Supply and Work Done by Bidder"** as per format given in Section V: Bidding Form along with supporting documents (Form-B4);
v) "**Certificate on Financial Strength**" of the Bidder as per format given in Section V: Bidding Forms (Form-B5);
vi) Duly Executed "**Power of Attorney**" for the Authorized Signatory of the Bid as per format given in Section V: Bidding Forms (Form-B6);
vii) "**Undertakings by the Bidder**" as per format given in Section V: Bidding Forms (Form-B7)
viii) "**Self-Undertaking on Statutory Tax Compliance**" as per format given in Section V: Bidding Forms (Form-B9).
ix) "**GST Rules, Act etc. Compliance Undertaking**" as per format given in Section V: Bidding Forms (Form- B10)
x) "**Bid Processing Fee**" in accordance with ITB Para 2.19;
xi) "**Bid Security**" furnished in accordance with ITB Para2.20;
xii) Documents establishing compliance to the required quality standards of the product offered and of the process followed by the manufacturer in accordance with ITB Para 2.16 and Section-IV: Schedule of Requirements; Technical Specifications of the Offered Products (and Services) in compliance with APGCL Bid requirement shall be submitted.
xiii) Bidder's Certificate of Incorporation/Registration, Article and Memorandum of Association or any such registration document.
xiv) Copy of PAN;
xv) Copy of GST Registration Certificate.
xvi) Audited Statement of Accounts/Chartered Accountant Certified Financial Documents (Balance Sheet, P&L Statement, Cash Flow Statement) for last three financial years ending on 31/03/2025.
xvii) All other documents as per this Bid requirement.
xviii) "**Checklist of Documents**" submitted along with the Bid in the Format (Form-B11) as given in Section V: Bidding Forms.

### *2.12 Price Bid*

2.12.1 **The blank Price Bid in the form of BoQ should be downloaded from the portal https://assamtenders.gov.in and saved on Bidder's computer without changing filename otherwise price bid will not get uploaded.** The Bidder should fill in the details in the same file (BOQ) and upload the same back to the portal. **Hardcopy of Price bid will not be accepted.**

2.12.2 **Price Bid (BoQ1) must be submitted online (soft copies) only on the Portal.** The BoQ (excel sheet available in e-procurement portal) is specific to the Bidder and is not interchangeable. The BoQ file shall be downloaded from the e-procurement portal and prices shall be quoted in the respective fields before uploading it. The Price bids submitted in any other formats will be treated as non-responsive and not considered for tabulation and comparison. The BoQ should be submitted online on the portal i.e., https://assamtenders.gov.in.

2.12.3 Price Bid shall be prepared in accordance with ITB Para 2.14.

### *2.13 Preparation and Submission of Bid*

2.13.1 The Bidder shall prepare the Technical Bid comprising of all documents as mentioned in ITB-2.11 and any other document as required. **The bid shall be typed with all pages serially numbered**. Signed APGCL bid document shall be submitted as token of acceptance of the Bid terms and conditions. **APGCL bid document along with all documents submitted by bidders against this tender shall be signed and sealed on all pages by the competent person as named in the Power of Attorney document provided in Form-B6.**

**Also, all documents submitted by bidder against any request for shortfall documents/clarifications on the portal must be signed and sealed by the competent person as named in the Power of Attorney document Form-B6**. Corrections in the bid such as interlineations, erasures, or overwriting shall be valid only if they are duly signed or initialed by such person signing the bid.

2.13.2 The Bidder shall submit **both Technical and Price Bid online** at the e-Procurement portal within due date and time for submission.

2.13.3 The bidding documents issued by the Procuring Entity in the e-procurement portal (i.e., https://assamtenders.gov.in) will appear in the "Latest Active Tender". The Bidders/ Guest users can download the Bidding documents only after the due date & time of issue. The publication of the Bidding Document (i.e., Tender) will be for specific period till the due date for submission of bids after which the same will be removed from the list of "Latest Active Tender".

2.13.4 **Portal Registration**: The bidder intending to participate in the bid is required to register in the e-Procurement portal using an active personal/ official e-mail ID as his/her Login ID and attach his/her valid Digital Signature Certificate (DSC) - Class II or III to his/her unique Login ID. He/ She must submit the relevant information as asked for about the bidder. The portal registration of the bidder is to be authenticated by the State Procurement Cell after verification of original valid certificates/documents.

**For further details the bidder may visit the Assam Tender Portal** https://assamtenders.gov.in.

2.13.5 The bidder can download the bidding document and undertake the necessary preparatory work and thereafter upload the completed bid at their convenience before due date and time for submission.

2.13.6 The bidder shall upload technical bid in **".pdf"** format.

### *2.14 Bid Prices*

2.14.1 The prices quoted by the Bidder in the Price Bid (Price Schedule i.e., BoQ1) shall conform to the requirements specified below.

2.14.2 **The Bidder must quote for all items in the price schedule (BOQ). No part offer of the tender shall be accepted.**

2.14.3 The price quoted by the Bidder shall be fixed (remain firm) during the Bidder's performance of the Contract and shall not be subject to variation on any account, unless otherwise specified in this Bidding Document. The bid submitted with adjustable price quotation shall be treated as nonresponsive and shall be rejected.

**2.14.4 The price offered in the Price Bid (BoQ) for the item(s) shall be based on FOR consignee location/ DDP (Place of destination) price. (Any c*harges against Freight, Transit Insurance, Packing and Forwarding etc. shall be inclusive*)**

**2.14.5 The price quoted by bidder shall also be inclusive of any charges against loading/unloading, travelling expenses of Contractor's Personnel, boarding & lodging of Contractor's Personnel at site etc.**

2.14.6 The bidder must unconditionally offer in the Bid to supply the goods and other associated services as specified for each item in Section-IV: Schedule of Requirements.

### *2.15 Bid Currency*

2.15.1 The bidder should submit its quote in Indian Rupees only.

2.15.2 Bids, where prices are quoted in any other currency, shall be treated as non-responsive and rejected.

### *2.16 Documents Establishing Compliance*

2.16.1 The Bidder shall furnish as part of its Bid the documentary evidence that the item(s) offered by it conforms to the required specifications, quality standard and

other criteria as specified in Section-IV: Schedule of Requirements and elsewhere in the APGCL Bid document.

2.16.2 The documentary evidence may be in the form of literature, drawings, certificate, or data, and shall consist of a detailed item by item description of the essential technical and performance characteristics of the item(s) offered, demonstrating substantial responsiveness of the quality standards & other requirements as per Section-IV: Schedule of Requirements.

### *2.17 Documents Establishing Eligibility & Qualification of the Bidder*

2.17.1 To establish their eligibility in accordance with ITB Para 2.5, Bidders shall fill up and submit all bidding forms and shall submit all requisite documents etc. as per APGCL requirement.

2.17.2 The documentary evidence of the Bidder's qualifications to participate in the bid and own the contract, shall establish to the Bid Evaluation Committee's satisfaction that the Bidder meets the qualification criteria specified in Section-III: Evaluation and Qualification Criteria and any other criteria/clause mentioned in APGCL Bid Document.

### *2.18 Period of Validity of Bids*

2.18.1 Bids shall remain valid for the period **180 (one hundred eighty days) counting from the final deadline specified for the submission of bid**. A bid valid for a shorter period shall be rejected as non-responsive.

2.18.2 In exceptional circumstances, prior to the expiration of the bid validity period, the Procuring Entity may request bidders to extend the period of validity of their bids. The request and the responses shall be made in writing. A Bidder may refuse the request without forfeiting its Bid Security.

2.18.3 The Bidder who agrees to the extension of the period of validity of bids so requested by the Procuring Entity (APGCL) shall also extend the period of validity of bid securities submitted by them or submit new bid security to cover the extended period of validity of their bids. A bidder whose bid security is not extended, or new bid securities not submitted shall be considered to have refused the request to extend the period of validity of its bids and rejected as non-responsive. The decision of the Procuring Entity will be final and binding in this regard.

### *2.19 Bid Processing Fee*

2.19.1 The Bidder shall furnish as part of its bid, **the Bid Processing Fee (non-refundable), of the amount Rs. 2,226.00 (Rupees Two Thousand Two Hundred Twenty-Six Only)** which shall be collected online from Bidder during bid submission at https://assamtenders.gov.in.

### *2.20 Bid Security (EMD)*

2.20.1 The Bidder shall furnish as part of its bid, **a Bid Security (EMD) of Rs. 2,22,600.00 (Rupees Two Lakh Twenty-Two Thousand Six Hundred only)** which shall be deposited online during bid submission at https://assamtenders.gov.in.

2.20.2 The bid security can also be submitted in the form of Bank Guarantee issued by a Scheduled Bank in India.

(i) If EMD is submitted through BG, the bidder will be required to upload the scan copy of the BG during online Bid submission and the original Hard Copy of the BG should reach APGCL HQ on or before bid opening. **For details regarding submission of EMD through BG, bidders are requested to refer clause 2.20.12.**

2.20.3 In case, bid security is submitted in form of Bank Guarantee, it should be submitted using the form provided below in this document. The Bank Guarantee

submitted as Bid Security shall be verified and confirmed from the competent authority of the concerning issuing Bank.

2.20.4 The Bid Security must remain valid for a period of one year from the start date of online submission of bid.

**2.20.5 Any bid not accompanied by a Bid Security (EMD) as specified in ITB Para 2.20 shall be rejected as non-responsive.**

2.20.6 The Bid Security of unsuccessful bidder (Technically Rejected) shall be released upon completion and declaration of Technical Evaluations of the submitted bids.

2.20.7 The Bid Security of unsuccessful bidder (Technically Accepted but is/are not the L1 bidder) shall be released within 30 working days after signing of Agreement and deposit of performance security by the successful bidder.

2.20.8 The Bid Security of successful Bidders shall be released within 30 working days upon the successful Bidder's signing the contract and furnishing the Performance Security pursuant to ITB Para 2.33 and ITB Para 2.34.

2.20.9 In case Procuring Entity (APGCL) decides to cancel the procurement process, it shall return the bid security of all bidders after the decision to cancel procurement process.

2.20.10 The Bid Security of the bidder, who withdraws its bid prior to deadline for submission of bids, in case bid withdrawal is permitted, shall be returned after the opening of the bids.

2.20.11 The Bid Security deposited by a Bidder may be forfeited in the following cases:

i) when the bidder withdraws or modifies its bid after due date for submission.
ii) when the bidder does not deposit the required performance security and/or sign the contract within the specified period; and
iii) if the bidder breaches any provisions of Code of Integrity prescribed for bidders as per ITB Para 2.3.

**2.20.12 Instructions to bidder who intends to pay the EMD (Bid Security) amount of the tender through Bank Guarantee (BG).**

For bidders opting for payment of EMD through BG, the bidder shall follow the below steps at online portal https://assamtenders.gov.in

- The bidder shall select the EMD exemption option as "**Yes**" and in the following steps shall upload the Scanned BG documents and proceed.
- If the bidder selects the EMD exemption option as "**No**" then the system shall prompt to pay the EMD fees online. There shall be no option to upload the scanned BG document against EMD in that case and the bidder has to pay the EMD online only. This is due to limitation/restriction of the portal. The bidder may not be able to proceed further or revert to the former menu. Hence for BG payment of EMD, the bidder shall select "**YES**" option.
- Since EMD exemption is not given for this tender and due to the limitation/restriction of the portal, the bidder may not be able to proceed with BG as EMD by selecting the "No EMD exemption option" of the portal, **hence, the bidders are advised to proceed by selecting the EMD exemption as "Yes" in case EMD is submitted though BG.**

  **The "EMD Exemption" option available on the e-Tender portal is provided solely to enable bidders to submit the Bid Security (EMD) in the form of a Bank Guarantee (BG). The availability of this option shall not be construed as permitting or granting any exemption from the requirement of submission of the EMD. Although bidders submitting the EMD through a Bank Guarantee must select "Yes" under the portal's EMD exemption option, this selection is only a procedural requirement and does not confer any exemption. Every bidder must submit the prescribed EMD and tender fee.**

**No exemption from the Bid Security (EMD) or Tender Fee shall be permitted under this tender. Accordingly, any bid not accompanied by the requisite EMD, in the prescribed form and manner, shall be treated as non-responsive and liable for rejection.**

Address to which the **Original Hard Copy of EMD BG** is to be submitted on or before Bid Opening:

The Deputy General Manager (Procurement),
Assam Power Generation Corporation Ltd.,
3rd Floor, Bijulee Bhawan, Paltan Bazar,
Guwahati-1.

The BG shall be duly pledged in favour of the Chief General Manager (Gen), APGCL and shall be valid for 01 (one) year period from the Start Date of online Bid submission.

No interest shall be payable on such deposits.

**Note**: The bidder is requested to advice the Bank Guarantee Issuing Bank to comply with the following and ensure to submit, the receipt of the copy of SFMS message as sent by the issuing bank branch, along with the original bank Guarantee in APGCL's tender issuing office:

The Bank Guarantee issued by the Bank must be routed through SFMS platform as per the following details:

I. MT/IFN760/MT/IFN760 COV for issuing of Bank Guarantee.
II. MT/IFFN 760/MT/IFN 767 COV for amendment of Bank Guarantee.

The above message/intimation shall be sent through SFMS by the BG issuing bank branch to Axis Bank, Paltan Bazar Branch, A/C no. 375010200007573, IFS code-UTIB0000375, Branch Address- AXIS Bank Ltd, Commercial Building, A.T. Road, Guwahati-781001, India.

BG format for EMD is given below in Section V: of this document.

**Note: No EMD Exemption is provided for this Tender**.

## OPENING OF BIDS

***2.21 Extension of Due Date for Submission of Bids***

**2.21.1 Bids must be submitted (online on e-tender portal) within due date and time for submission of bid.**

2.21.2 The date of submission and opening of bids shall not be extended except when–

i) Sufficient number of bids have not been received within the given time and the Purchase Committee of the Procuring Entity is of the opinion that further bids are likely to be submitted if time is extended; or
ii) The Bidding Documents are required to be substantially modified because of discussions in pre-bid meeting or otherwise for any other reason and the time for preparations of bids by the prospective bidders appears to be insufficient for which such extension is required.

2.21.3 In cases where the time and date of submission of bids is extended, an amendment to the Bidding Documents shall be issued in accordance with ITB Para 2.10, in which case all rights and obligations of the Procuring Entity and Bidders previously subject to the deadline shall thereafter be subject to the deadline extended.

2.21.4 If the due date for submission of bids is not a working day, the bids shall be opened at the same time and hour on the next working day.

2.21.5 Bidder can withdraw or resubmit an online bid any time prior to the due date and time for submission of Bid (except details of online submission of Bid Security & Processing fee). In case of online resubmission of the bid, the latest submitted bid shall be available for evaluation.

### *2.22 Opening of Bids*

2.22.1 Technical Bids submitted by the Bidders through the e-Procurement portal shall be opened online on the due date for opening of the bid.

## EVALUATION AND COMPARISON OF BIDS

### *2.23 Confidentiality*

2.23.1 Information relating to the list of technically qualified bidders, L1 bidder, Award of Contract shall be available on the E-Tender Portal.

2.23.2 Any effort by a Bidder to influence the officials of the Procuring Entity (APGCL) or its committee in the evaluation or contract award decisions may result in the rejection of its Bid.

**2.23.3** Notwithstanding ITB Para 2.23.2, from the time of bid opening to the time of Contract Award, if any Bidder wishes to contact the officials of the Procuring Entity (APGCL) on any matter related to the bidding process, **it should do so in writing to Tender Inviting Authority (The Chief General Manager, Gen, APGCL).**

### *2.24 Preliminary Examination of Bids*

2.24.1 The Bid Evaluation Committee duly constituted by the Procuring Entity (APGCL) shall conduct a preliminary scrutiny of the bids at the beginning to assess the prima-facie responsiveness and record its findings thereof particularly in respect of the following:

i) That the bid is prepared in the prescribed manner and contains the documents and information as required.
ii) the bid is valid for the period, specified in the Bidding Documents.
iii) that the bid is accompanied by due Bid Security and Processing Fee.
iv) That the bid is unconditional, and that the bidder has agreed to give the required performance security; and
v) whether any other conditions specified in the Bidding Documents are fulfilled.

### *2.25 Clarification of Bids*

2.25.1 To assist in the examination, evaluation, comparison and qualification of the bids, the Bid Evaluation Committee may, at its discretion, ask any bidder in writing for clarification by a specific date regarding its bid specifically therein that if the bidder does not comply or respond by that date his bid shall be liable to be rejected. The request of the Committee for clarification and the response of the bidder thereto shall be in writing. Depending on the outcome, such bids shall be ignored or considered further.

2.25.2 Any clarification submitted by a bidder about his bid that is not in response to a request by the Committee specifically shall not be considered.

2.25.3 No substantive change to qualification information or to a submission, including changes aimed at making an unqualified bidder qualified or an unresponsive submission, responsive shall be sought, offered, or permitted under any circumstances.

2.25.4 All communication generated as above shall be included in the record of the procurement proceedings.

### *2.26 Immaterial Non-conformities in Bids*

2.26.1 The Bid Evaluation Committee may waive non-conformities in the bid that do not constitute a material deviation, reservation or omission and deem the bid to be responsive.

2.26.2 The Bid Evaluation Committee may request the bidder to submit necessary information or documents which are historical in nature like audited statements of accounts, tax clearance certificate, PAN, etc. within a reasonable period. Failure of the bidder to comply with the request within the given time shall result in the rejection of its bid.

2.26.3 The Bid Evaluation Committee may rectify immaterial non-conformities or omissions based on the information or documentation received from the bidder under ITB Para 2.26.2.

### *2.27 Determination of Responsiveness*

2.27.1 The Bid Evaluation Committee constituted by the Procuring Entity shall determine the responsiveness of a bid to the Bidding Documents based on the contents of the bid submitted by the Bidder;

2.27.2 A bid shall be deemed to be substantially responsive if it meets the requirements of the Bidding Documents without any material deviation, reservation, or omission where:

(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 Documents; and

(c) "omission" is the failure to submit part or all of the information or documentation required in the bidding documents.

2.27.3 A "material deviation, reservation, or omission" is one that,

(a) If accepted, shall: -

i) effect in any substantial way the scope, quality, or performance of the subject matter of procurement specified in the Bidding Documents; or

ii) limit in any substantial way, inconsistent with the Bidding Documents, the rights of the Procuring Entity or the obligation of the Bidder under the proposed contract; or

(b) if rectified shall unfairly affect the competitive position of other Bidders presenting responsive bids.

2.27.4 The Bid Evaluation Committee shall examine the technical aspects of the bid to confirm that all requirements of Bidding Documents have been met without any material deviation, reservation or omission.

2.27.5 The Bid Evaluation Committee shall regard a bid as responsive if it conforms to all requirements set out in the Bidding Documents, or contains minor deviations that do not materially alter or depart from the characteristics, terms, conditions and other requirements set out in the Bidding Documents, that is, there is no material deviation, or if it contains errors or oversights that can be corrected without any change in the substance of the bid;

2.27.6 Bids that are not responsive or contain any material deviation shall be rejected. Bids declared as non-responsive shall be excluded from any further evaluation.

### *2.28 Non-conformities, Errors, and Omissions.*

2.28.1 Provided that a Bid is substantially responsive, the Bid Evaluation Committee may waive any non-conformities in the Bid.

2.28.2 Provided that a bid is substantially responsive, the Bid Evaluation Committee may request that the Bidder submit the necessary information or documentation, within a reasonable period, to rectify nonmaterial, non-conformities or omissions in the bid related to documentation requirements. Such omission shall not be related to any aspect of the price of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.

### *2.29 Evaluation and Comparison of Bids.*

2.29.1 The Evaluation Committee of the Procuring Entity (APGCL) for Evaluation of this Bid shall use the criteria and methodologies listed in this Clause/document.

2.29.2 The Price Bid of only those bidders who are technically responsive/ qualified shall be opened online for comparative evaluation.

2.29.3 Unless otherwise specified in "Section III: Evaluation and Qualification Criteria", the evaluation shall be done on the total offered price which shall be inclusive of Total Basic Price, Freight, Insurance, Packing and Forwarding, GST etc. The responsive bidder offering lowest total price in BoQ1 (i.e., Price Bid) (inclusive of Total Basic Price, Freight, Insurance, Packing and Forwarding, GST etc.) shall be declared L1 (lowest) bidder. In case of tie, the bidder having highest average annual turnover in last three years shall be declared as the most preferred bidder.

2.29.4 The list of responsive and non-responsive bidder shall be published at the e-Procurement portal i.e., https://assamtenders.gov.in along with the reason for non-responsiveness.

### *2.30 Right to Accept or Reject any or all Bids*

2.30.1 The Procuring Entity (APGCL) reserves the right to accept or reject any bid, and to cancel / annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to the Bidders for which the management of the Procuring Entity shall keep record of clear and logical reasons properly for any such action/recall of bidding process. In case of cancellation / annulment, all bids submitted and specifically, bid securities, shall be promptly returned to the Bidders.

## AWARD OF CONTRACT

### *2.31 Award of Contract*

2.31.1 Subject to ITB 2.30.1, the contract shall be awarded to the lowest responsive bidder for the tendered item(s) as determined in the manner specified in ITB 2.29.

2.31.2 Procuring Entity (APGCL) shall award the tendered work to L1 bidder.

2.31.3 In case of a tie between two or more bidders in the price bid, then the bidder having highest average annual turnover during last three FY 2022-23, 2023-24, 2024-25 amongst them (all L1 bidders) shall be declared as most preferred bidder.

### *2.32 Notification of Award*

2.32.1 Prior to the expiration of the period of bid validity, the Procuring Entity (APGCL) shall notify the successful Bidder, in writing, that its Bid has been accepted. The notification letter (called the "Letter of Acceptance") shall specify the price of the

goods/works/service that the Procuring Entity (APGCL) will pay the Supplier/Contractor in consideration of timely completion of contracted work (called "the Contract Price"). In addition, the contracted rate quantity to be supplied and scope of work to be carried out by the contracted party shall also be specified. (called "the Contract Qty/Works"). APGCL may also issue a Work Order/Purchase Order containing details of the Scope of Supply & Work, Price, Terms & Conditions etc.

2.32.2 Until a formal Contract is prepared and executed, the Letter of Acceptance/Work Order/Purchase Order shall constitute a binding Contract. In case where a Contract is not executed, the Work Order/Purchase Order shall constitute the final binding of the contract for Contractor to execute and complete.

2.32.3 Procurement Entity (APGCL) shall promptly respond in writing to any unsuccessful Bidder who, after notification of award in accordance with ITB Para 2.32.1, requests in writing the grounds on which its bid was not selected.

### *2.33 Performance Security*

2.33.1 Within twenty-eight (28) days of the receipt of Letter of Acceptance/Work Order/Purchase Order from the Procuring Entity (APGCL) or before signing of the Contract, whichever is earlier, the successful Bidder, shall furnish the Performance Security in accordance with the General Terms & Condition (GTC).

2.33.2 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 Procuring Entity (APGCL) may award the Contract to the next lowest evaluated Bidder, whose bid is substantially responsive, provided it agrees to lowest evaluated bid price i.e., L1 price.

2.33.3 The validity of the performance security shall be for a period of 45 (Forty Five) days beyond the date of completion of all contractual obligations including warranty and maintenance obligations, if any. All claims under the warranty etc. shall be preferred to the executants bank up to 6 (six) months from the above 45 (forty-five) days period.

2.33.4 Performance Security Deposit can also be submitted by the Contractor in the form of Fixed Deposit/Demand Draft.

### *2.34 Signing of Contract*

2.34.1 Promptly after notification of Award/issue of Letter of Acceptance/issue of Work Order, the Procuring Entity may send the successful Bidder the draft Contract Agreement.

2.34.2 The successful Bidder shall sign, date, and return the contract to the Procuring Entity (APGCL) within twenty-eight (28) days of receipt of the Letter of Acceptance/Work Order along with required performance security.

# SECTION-III

## *3. Evaluation and Qualification Criteria*

### *3.1 Evaluation Criteria & Methodologies*

#### 3.1.1 Evaluation Criteria

(i) The Procuring Entity shall use the criteria and methodologies listed in this Section/in this Document to evaluate Bids. By applying the criteria and methodologies the TEC (Tender Evaluation Committee) shall determine the Most Advantageous Bid for Item/ Schedule/Work. That is the Bid that meets the Qualification Criteria and has been determined to be:

a) substantially responsive to the bidding document, and
b) the lowest evaluated cost for the item(s) or the Schedule, Works, as the case may be, as per ITB 2.29.

(ii) The determination of bidder quoting lowest cost shall be based on the comparison of evaluated total bid price carried out on "Delivery Duty Paid (DDP) consignee site basis", quoted by substantially responsive bidders and shall be inclusive of all P&F, Freight, Insurance, loading/unloading charges, travelling charges, boarding, lodging, fooding charges, GST, any other tax/duties, etc. That is, L1 bidder shall be the one who quoted the lowest total price inclusive of all cost components including GST in the BoQ (Price Bid).

### *3.2 Qualification Criteria*

#### 3.2.1 Eligibility Criteria (Manufacturer/Authorized Vendor)

(i) The bidder must be the Manufacturer of the offered 145 kV Isolator or an Authorized Dealer/Distributors of the Manufacturer of the offered 145 kV isolator.
(ii) In case the bidder is an authorized Dealer or Distributors, they must furnish a valid authorization letter/certificate from the Isolator Manufacturer specifically for this tender, "**in the prescribed format provided in the bidding documents under Form B3**".
(iii) **Manufacturer Statutory & Manufacturing Proof**: The manufacturer of the offered isolator must submit statutory and manufacturing documents (such as valid Factory License, SSI/MSME/Udyam Registration, Industrial License, or ISO 9001/relevant quality management certification) to establish conclusively that they are the manufacturer of the offered 145 kV isolators.
(iv) **Manufacturer Contact Details & Verification Rights**: The official contact details of the Manufacturer (including official email ID, official phone number, and physical factory address) must be provided in the bid. **APGCL reserves the absolute right to independently verify the authenticity of the manufacturer authorization, undertakings, and submitted documents** directly from the manufacturer or through appropriate channels. Any falsification or failure to verify shall result in the immediate disqualification of the bid.
(v) Documents regarding the bidder being the Manufacturer or an Authorized Vendor of the Manufacturer of the offered isolator (along with Form B3 and Manufacturer statutory documents, where applicable) shall be submitted in the technical bid. Failure to submit the required authorizations or manufacturing proofs shall render the bid liable for rejection.
(vi) In case of Authorized bidder of manufacturer, the Authorized bidder shall submit all the above-mentioned documents related to the Manufacturer of Isolator.

3.2.2 **Required Minimum Experience**

(i) The bidder shall have successfully executed at least **01 (one) work order** involving the **supply of not less than 05 (five) complete sets of 3- Phase, 145 kV or above voltage-grade isolators and including the associated insulators, under a single work order during last 07 (seven) years**.

[**Note:** For the purpose of this clause, a "complete isolator set" shall mean a complete 3- Phase, 145 kV or above voltage-grade isolator assembly, including all associated insulators required as part of the isolator sets, as specified in the relevant work order.]

**Calculation Period:** The 7-year period shall be calculated from the date of successful completion of the work (as stated in the Completion Certificate) up to the state date of online bid submission for this tender.

**Documentary Evidence**
The bidder shall submit documentary evidence in support of the experience claimed under this clause along with the technical bid. The documentary evidence shall include:

- Copy of the relevant **Work Order/Purchase Order**, clearly indicating the supply of **at least 05 (five) complete sets of 3-Phase, 145 kV or above voltage-grade isolators, including the associated insulators, under a single work order**; and
- Corresponding **Work Completion Certificate/Completion Report** issued by the respective client, confirming successful completion of the claimed supply.
  **Note: Experience from multiple work orders shall not be clubbed or aggregated** for meeting the minimum quantity requirement specified under this clause.
  The submitted documents shall clearly establish the **scope of supply, voltage grade, number of complete isolator sets supplied, inclusion of associated insulators, and successful completion** of the claimed work.

**Performance Record**

i. Any adverse performance report from any client of the bidder regarding the quality of materials supplied, quality of work executed, or failure to meet the work schedule may be considered grounds for disqualification.
ii. If a bidder provides Type Test certificates that are found to be expired, technically mismatched with the offered product, or issued by a non-accredited lab, the bid shall be deemed technically non-responsive.

3.2.3 **Quality, Reliability & Type Testing Criteria**

(i) **Type Test Certification**: The offered 145 kV Isolator must have successfully passed all type tests as per the latest version of IEC / IS standards conducted within the last 10 years from the date of bid opening. Such type test reports must be issued by an NABL-accredited or internationally recognized independent laboratory (such as CPRI, ERDA, or equivalent) and shall be submitted with the technical bid.

(ii) **Proven Track Record & Utility Performance**: To ensure reliability, the offered design/make of the 145 kV Isolator must have been in satisfactory commercial operation for at least 03 (three) years in power transmission utilities, state electricity boards, or large industrial installations, Power Generating Plants. **Proof of performance/trouble-free operation certificates, minimum 01 (one) number from such utilities/organization must be furnished** along with the technical bid.

(iii) **Quality Assurance**: The Manufacturer of the Isolator must possess a valid Quality Management System certification (such as ISO 9001)
(iv) Failure to meet the above requirements shall result in the rejection of the bidder's bid.

3.2.4 **Financial Standing**

(i) The Bidder must have an average annual Turnover of at least **Rs. 89.00 Lakh (Rupees Eighty-Nine Lakh only)** during the 03 (three) Financial Year, FY 2022-23, 2023-24 & 2024-25.
(ii) In this regard, a certified copy from the Chartered Accountant in form B5 for FY 2022-23, 2023-24 & 2024-25 should be submitted by the bidder along with his technical bid.
(iii) This must be accompanied by relevant CA certified/audited financial documents viz. –Balance Sheet, Profit & Loss Statement, **ITR**, etc. of the 03 (three) financial year, FY 2022-23, 2023-24 & 2024-25.

# SECTION-IV

## *4. Schedule of Requirements*

### 4.1 Details of Requirement

**Scope of Work for "Supply of 145 kV Isolators at 132 kV Switchyard of Lakwa Thermal Power Station, APGCL".**

**SCOPE OF SUPPLY**:

| Sl. No. | Description | Quantity | Unit |
|---|---|---|---|
| 1 | Supply of 145 kV, 1600 A, 31.5 kA, 3-Phase DBCR Motor Operated Isolator with single earth switches (manual operated) with Solid Core Post Insulator as per Specification along with all accessories. | 06 | Set |
| 2 | Supply of 145 kV, 1600 A, 31.5 kA, 3-Phase DBCR Motor Operated Isolator with two earth switches (manual operated) with Solid Core Post Insulator as per Specification along with all accessories. | 05 | Set |
| 3 | Supply of Terminal Connectors along with all accessories as per Specification **suitable for Moose Conductor**. | 66 | Nos. |

**The scope of work shall further include, but not be limited to, the following activities:**

- **Packing and Loading**: Proper packing and loading of all ordered materials by the bidder.
- **Safe Transportation**: Secure transportation of the materials to the LTPS site.
- **Unloading at Site**: Unloading materials at the LTPS site in a safe and organized manner.
- **Insurance Coverage**: Procurement of insurance to indemnify against any loss or damage of materials during transit up to the LTPS site and thereafter until the items are officially handed over to APGCL.

### 4.2 Consignee Address Details

The General Manager,
Lakwa Thermal Power Station (LTPS), APGCL.
District: Charaideo
State: Assam
PO: Suffry
PIN: 785689
Contact No.: 9435529107 (M).
Email Id: Janardan.das@apgcl.org

## 4.3 TECHNICAL SPECIFICATION FOR 145 KV ISOLATOR

### 4.3.1 SCOPE

The scope covers design, manufacture, testing, supply of Horizontal Centre rotating Double Break (HCDB), 3 pole gang, and motor operated isolator of rated current capacity as per technical specification enumerated herein.

### 4.3.2 STANDARD:

Disconnecting switches (isolators) covered by this specification shall conform to latest edition of IS:9921 (Part I to Part V) & IEC-129. Porcelain post insulators for the isolators shall conform to IS-2544 and/or IEC:168 as amended up to date except to the extent explicitly modified in this specification. Porcelain post insulators of isolator shall be guided by relevant technical specification of post insulator.

### 4.3.3 GENERAL INFORMATION:

The disconnecting switches (isolators) shall be installed as a replacement for existing isolators on the existing isolator structures in the 132 kV LTPS Sub-station.
Isolators shall be outdoor and off-load type. Earth switch shall be provided on isolator whenever called for.

### 4.3.4 DESIGN CRITERIA:

The 145 KV Horizontal Centre rotating Double Break type isolator shall be gang operated through motor from local as well as from remote control panel. There should be provision for mechanical operation by hand of isolators locally. Earth Switch shall be provided on both sides of the isolator and shall be gang operated mechanically by hand.
Earth switch wherever provided shall be constructional interlocked as well as electrically interlocked so that earth switch can be operated only when the main isolator is open and vice versa.

### 4.3.5 DUTY REQUIREMENT:

Isolator and earth switches shall be capable of withstanding the dynamic and thermal effect of maximum short circuit current of the system in their closed position. They shall be constructed such that they do not open under influence of short circuit current.
Earth switch can be capable of discharging trapped charges of the respective lines.
Isolator shall be capable of making/breaking normal current with no significant change in voltage occurs across the terminal of each pole of isolator on account of make / break operation.
The isolators shall be capable of making/breaking magnetising current of 0.7A at 0.15 power factor and capacitive current of 0.7A at 0.15 power factor at rated voltage.
The earth switch wherever provided shall be constructionally inter-locked so that earth switch can be operated only when the isolator is in open condition or vice versa. The constructional interlock shall be built in construction of isolator and shall be in addition to the electrical and mechanical interlocks provided in operating mechanism.

4.3.6 **MAIN CONTACTS (MALE AND FEMALE):**

The isolators with or without earthing switches shall have heavy duty self-aligning and self–cleaning type high pressure contacts. The contacts shall be made of hard drawn electrolytic copper. The high-pressure type contacts shall wipe the contact surface during opening and closing without causing any scouring or abrasion on the contact surface.
The contacts and other current carrying parts shall be so designed that their temperature rise under different operating conditions shall not exceed the value specified in IS:9921. Temporary rise of temperature due to passage of specified rated short circuit current shall not cause any annealing or welding of contact surfaces.
All current carrying parts including Earth Switch should be of Electrolytic Copper of current density 1.75 Ampere per sq. mm (Max.). For all aluminium parts, current density should be 0.75 ampere per sq. mm (Max.).
The female contacts of the horizontal type isolators shall consist of properly tempered loops of copper strip suitable for rated and short time current rating. The hard drawn electrolytic copper strips shall be silver plated of minimum 20 micron thickness and shall be fixed with powerful phosphor bronze or stainless-steel spring of required number.

4.3.7 **INSULATORS:**

The insulators to be used shall conform to IS:2544 and/or IEC-168 and shall be solid core type and shall be homogeneous; free from cavities, tough and impervious to moisture.
Glazing of porcelain shall be uniform brown colour free from blister, burns and other defects which may affect the mechanical and dielectric quality of the insulators.
All iron parts shall be hot dip galvanised. The joints shall be so designed that any thermal expansion of the metal and the porcelain parts shall not be loosened during the whole range of operation.
Puncture voltage of Insulator shall be greater than dry flashover voltage of respective Isolators.
The design of the isolator shall be such that pressure due to the contact shall not be transferred to the Insulators after the main blades are fully closed.
The cantilever strength (min) of solid core support insulator shall be as specified under 'specific technical particulars'.

4.3.8 **BASE OF THE ISOLATOR:**

Each isolator shall be provided with a complete galvanised steel base with holes and designed to mount on a supporting structure, which shall be rigid, and self-supporting.

4.3.9 **TERMINAL CONNECTORS:**

Terminal connectors shall be suitable for carrying rated current continuously and also the rated short time current without exceeding temperature specified for the main blades. One end rigid and other end flexible type connectors shall be used.
The terminals of disconnecting switches (isolators) shall be provided with bimetallic terminal connectors suitable for connection to ACSR Moose.

4.3.10 **AUXILIARY SWITCHES**:

All isolator and earthing switches shall be provided with auxiliary switches suitable for 220±10% V DC and continuous current carrying capacity of 10 Amps.

The contacts of the auxiliary switches shall be used for remote indication of open or close position in the control panel as well as for electrical interlock with other equipment. These contacts shall be housed in a suitable weatherproof cabinet for outdoor use to make it free from dust and prevent ingress of moisture during rain. Degree of protection of the cabinet IP-55 as per IS- 13947.
The number of auxiliary switches shall be determined as per requirement. An indicative number has been specified under specific technical parameters.

4.3.11 **EARTH SWITCH:**

The Earthing switch shall include the complete operating mechanism and auxiliary contacts.
The earth switch of the isolator shall be manually operated by hand. The operating handle shall be such that it can easily be operated from standing height from ground. There shall be interlock between contacts of main blades and earth switches so that at one time either main blade or earth switch can be made ON. The earth switches shall be able to carry the same fault current as the main blades of the isolators and shall withstand dynamic stresses.
The earthing terminal of earth switch shall be able to carry the rated short time current rating for three seconds.
Earth switch shall be provided with flexible copper braids for connection to earth terminal. These braids shall have the same short time current capacity as the earth blade.
The frame of each isolator and earthing switch shall be provided with two reliable earth terminals for connection to the earth mat.
Isolator design shall be such that earthing switch position can be interchange to either side of the structure as per requirement at site.
The plane of movement and final position of the earth blades shall be such that adequate electrical clearance are obtained from adjacent live parts in the course of its movement between ON and OFF position.

4.3.12 **OPERATING MECHANISM:**

The operating mechanism shall be motor operated as well as manually operated and shall ensure quick and effective operation. The operating mechanism shall be housed in a weatherproof outdoor mechanism box near the base of the isolator.
Each isolator and earth switch shall be provided with a manual operating handle at a height of 1000 mm. (approx.) from the base of isolator support structure so that one man can open or close the isolator with ease in one movement while standing at ground level.
All operating linkages carrying mechanical loads shall be designed for negligible deflection. The isolator and earth switches shall be provided with 'Over Center' device in the operating mechanism to prevent accidental opening due to wind, vibration, short circuit forces or movement of the support structures.
All rotating parts shall be provided with grease packed roller or ball bearings in sealed housing designed to prevent ingress of moisture, dirt or other foreign material. Bearing pressure shall be kept low to ensure long life and ease of operation. Locking pins whenever used shall be rustproof.
Signaling of closed position shall not take place unless it is certain that the movable contacts have reached a position in which rated normal current, peak withstand current and short time withstand current can be carried safely. Signaling of open position shall not take place unless movable contacts have reached a position such that clearance between contacts is at least 80% of the isolating distance.
The position of movable main blade of each isolators and earthing switching shall be indicated by a mechanical indicator at the lower end of the vertical rod shaft

for the isolator and earthing switch. The indicator shall be of metal and visible from operating level.
The isolator blades/earth switches shall be in continuous control throughout the entire cycle of operation. The operating rods and pipe shall be rigid enough to maintain control under adverse conditions to withstand all torsional and bending stresses arising from operation. All hinges / movable joints in current carrying parts shall be shunted with flexible copper conductors having adequate length and size to prevent breaking due to repeated operation. Operating rod of main and earth switch shall be pad lockable.

(i) The mechanism box shall have neoprene gasket hinged door at front with locking facility. All accessories inside the housing shall be easily accessible.
(ii) The box shall be suitable for mounting on structure as well as on plinth of adequate height.
(iii) The Control Cabinet/Operating mechanism box shall be made of 3 mm (min.) thick Aluminium sheet such that it provides adequate rigidity and shall be provided with removable gland plates at the bottom of the box for connection of cables. Space heater with thermostat and switch as well as one 230 Volt combined 5A/15A AC plug with socket and switch shall be provided. Mechanism Box shall have Degree of Protection not less than IP-55 as per IS:13947
(iv) Cubicle illumination lamp with door switch shall be provided.
(v) Suitable reduction gear shall be provided between motor and the drive shaft of the isolator. The mechanism shall stop immediately when motor supply is switched off.
(vi) Manual operation facility (with handle) should be provided with necessary interlock to disconnect motor.
(vii) Gear should be forged material and suitably chosen (rust free) to avoid bending/jamming on operation after a prolonged non-operation. Proper arrangement shall be provided for smooth transfer of rotary motion from motor shaft to the insulator along with stoppers to prevent over travel.

4.3.13 **EARTHING:**

Flexible conductor of adequate section shall be provided at the lower end of the vertical operating shaft for connection to station earthing system. It is for earth switch only. The frame of each Isolator and earthing switches shall be provided with two reliable earth terminals for Connecting G.S. Flat of 50×10mm.

4.3.14 **SUPPORTING STRUCTURE:**

The isolator shall be placed on rigid, self-supporting galvanized supporting structure. The base of the isolator shall be connected to the supporting structure through bolts of proper size as per requirement.

4.3.15 **COMPLETENESS OF SUPPLY**:

Any fittings, accessories or apparatus which may not have been mentioned in this specification, but which are necessary for efficient operation / performance shall deem to be included in the contract.

4.3.16 **GALVANISING**:

All ferrous parts including nuts, bolts, washers and other ferrous parts shall be hot dip galvanised as per relevant IS to withstand at least six dips each of one minute duration in copper sulphate solution of requisite strength except threaded portion which should withstand four dips each of one minute duration.

4.3.17 **TEST AT FACTORY AND TEST CERTIFICATES**:

Following routine tests at manufacturer's works shall be carried out. The contractor shall give at least 15 (fifteen) days advance notice to the Chief General Manager (Generation), APGCL intimating the actual date of inspection and details of all tests that are to be carried out:

(i) Power frequency dry test of the main circuit. (May be omitted as per IEC 60694 cl.7.1 subject to dimensional checking as per dimensions shown in type test report).
(ii) Voltage test on control and auxiliary circuits.
(iii) Measurement of resistance of the main circuit
(iv) Mechanical operation tests.
(v) Routine test report for all Isolators is to be submitted along with inspection offer.

All Acceptance tests at manufacturer's works shall be carried out in presence of representative of APGCL as per relevant IS & IEC. on every lot offered for inspection. In addition to above, all routine tests are also to be carried out on each Isolator as per relevant IS & IEC. Selection of samples for acceptance test as well as rejection and retesting shall be guided by relevant IS & IEC. The entire cost of acceptance and routine tests that are to be carried out as per relevant IS shall be treated as included in quoted price of Isolator.

4.3.18 **TEST REPORTS AND TYPE TESTS**:

Only type tested Isolator as per relevant IS and IEC shall be offered. Isolator offered should be of similar type & similar design with ones on which type testing has been carried out as per relevant IS and IEC.
Copies of type test reports carried out in Govt. recognized Test House or Laboratory /NABL accredited laboratory shall have to be submitted by successful bidder positively along with submission of drawings during detailed Engineering.

The submitted type test report shall proof that the type test have been carried out within five years from the start date of submission of bid. For type test reports conducted before more than five years and if type test facilities are not available in INDIA, the purchaser shall have the discretion to accept previous reports. Successful bidder may require to produce original copies of type test reports at the time of detail Engineering if asked by APGCL.

Each type test report shall comply the following information with test result

(i) Compete identification, date and serial no.
(ii) Relevant drawings as documented with test report.
(iii) Method of application, where applied, duration and interpretation of each test.

4.3.19 **SPECIFIC TECHNICAL PARTICULARS**

| Sl no. | Description | Parameters |
|---|---|---|
| 1 | Nominal System Voltage (kV) | 132 |
| 2 | Rated Voltage (kV) | 145 |
| 3 | Frequency (Hz) | 50 |
| 4 | No. of Phases | 3-Phase |
| 5 | System Neutral Earthing | Effectively Earthed |
| 6 | No of poles | 3 |
| 7 | Location | Outdoor |

| | | |
|---|---|---|
| 8 | Rated Insulation Level | |
| | 1.2/50 micro-sec. lightning Impulse Withstand Voltage (KVp)<br>i) Between line terminals and ground.<br>ii) Between line terminals with isolator open. | <br><br>±650<br>±750 |
| | One minute PF withstand voltage (KVrms)<br>i) Between line terminals and ground.<br>ii) Between terminals when isolator is open. | <br>275<br>315 |
| 9 | Rated Normal Current (Amps) | 1600 |
| 10 | Rated Short Time withstand current of Main Contacts and Earth Switch (KA) and duration (for 3 sec) and dynamic current (KAP) of isolator and Earth Switch. | i) 31.5 for 3 sec.<br>ii) 78.5 KAP |
| 11 | Mounting Condition | On Structure |
| 12 | Method of operation Main / Earthing Switch | Motor / Manual |
| 13 | Number of auxiliary switches for main isolator | 10NO+ 10NC(min.) |
| 14 | Number of auxiliary Switches in Earth Switch | 4 NO+ 4NC |
| 15 | Rated auxiliary AC Supply (Volt) | 400/230 V ±10% |
| 16 | Rated auxiliary DC Supply (Volt). | 220 V ±10% |
| 17 | Minimum creepage distance of support insulators (mm) | 3625 |
| 18 | Phase to phase spacing (mm) | 2700 |
| 19 | Operating Time of isolator | Less than 12 seconds |
| 20 | Mechanical terminal load for horizontal centre break Isolator<br>i) Straight Load (N)<br>ii) Cross Load (N) | <br><br>500<br>170 |
| 21 | Rated magnetising / capacitive current make and break | 0.7 Amps at 0.15 PF |
| 22 | All Contacts | Silver –plated , minimum 20 micron |
| 23 | Temperature rise above ambient temperature of 50 deg C corresponding to maximum continuous current (ºC) | Within limit as per table IV of IS : 9921(Pt. II) - 1982 |
| 24 | Cantilever strength of support insulator (Kgf) | 400 |
| 25 | Current Density of Copper (Max.) (A/Sq. mm.) | 1.75 |

4.3.20 **GUARANTEED TECHNICAL PARTICULARS FOR ISOLATORS**

(To be completed and signed by the Isolator Manufacturer and mandatorily submitted by the bidder along with the technical bid.)

| | | |
|---|---|---|
| 1 | ISOLATOR | |
| a | Name of Manufacturer | |
| b | Type & Model of the Manufacturer | |
| c | Date of Last Type Test | |
| d | Type from Operation | |
| e | Conforming Standard | |
| f | Total Height of the Isolator | |
| g | Total weight of the Isolator | |
| h | Material of the Main Blades | |
| i | Material of the Main Contacts | |
| j | Rated Voltage (KV) | |
| k | Maximum Voltage (KV) | |
| l | Rated Frequency (Hz) | |

| | | |
|---|---|---|
| m | Insulation Level : | |
| i. | 1.2/50 micro-sec. L.I. withstand voltage | |
| ii. | Between line terminals and ground parts (KVp) | |
| iii. | Between Isolating Arms (KVp) | |
| iv. | One minute Power frequency withstand Voltage (KVrms) | |
| v. | Between line terminals and ground parts (KVp) | |
| vi. | Between Isolating Arms (KVp) | |
| 2 | ISOLATOR CURRENT | |
| a | Rated normal current Amps (rms) | |
| b | Short time current rating (KA) for 3 Sec. | |
| c | Temperature rise above ambient of 50oC at rated current (oC) | |
| 3 | ISOLATOR CLEARANCE | |
| a | Clearance between : Phase to Phase (mm) | |
| b | Clearance between : Phase to Earth (mm) | |
| c | Clearance between Two arms in Open condition (mm) | |
| d | Height of the Rotating Insulator (mm) | |
| 4 | ISOLATOR DRIVES | |
| a | Type of Drive Motor (Like AC Squirel Cage, DC Motor) | |
| b | Volatge of Motor Drives | |
| c | Provision of Manual Operation (Yes / No) | |
| d | Rated auxiliary supply voltage to coil for close & Open Operation | |
| e | Number and type of auxiliary contacts for | |
| f | main blade | |
| g | earth switch | |
| h | Operating time for closing (secs.) | |
| i | Operating time for opening (secs.) | |

# SECTION-V

### *5. Bidding Forms*

Bidders shall fill-up and sign-seal and submit the below given relevant Forms – B1 to B7 and B9, B10, B11 in technical bid.

### *5.1 Letter of Bid*

**FORM-B1**

Letter of Bid (the bidder must prepare the Letter of Bid on its letterhead clearly showing the Bidder's complete name and address.)

Date: [insert date (as DD, MM, YYYY) of Bid Submission]
Tender Ref. No.: _____

To:
The Chief General Manager (Gen), APGCL
3rd Floor Bijulee Bhawan
Paltanbazar, Guwahati-781001

a) We have examined and have no reservations to the Bidding Documents, including Addenda issued to Bidders;
b) We meet the eligibility and qualification criteria as set out in this Bidding Document;
c) We have submitted the required bid security (EMD) and tender processing fee as stated in the bid document.
d) We offer to supply following tendered item(s) in conformity with all terms and conditions as specified in the Bidding Documents including the quantity, quality standard and delivery conditions, etc., as specified in the bid document under scope of work:

| Sl. No | Name of the Item(s) | Description | Remarks |
|---|---|---|---|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |

e) We have submitted both technical and price bid for above mentioned items and our bid shall be valid for a period of 180 (one hundred eighty) days counting from the final deadline specified for the submission of bid and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
f) If our bid is accepted, we commit to obtain a performance security in accordance with the Performance Security Deposit Clause of the Bidding Document.
g) We are not participating, as a Bidder, in more than one bid in this bidding process.
h) We, along with any of our, suppliers, OEM are not debarred by any procuring entity under the State Government, the Central Government or any State Government or any Public Undertaking, Autonomous Body, Authority by whatever name called under them;

i) We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in any activities which is in contravention of the Code of Integrity proscribed in the Bidding Documents;
j) We hereby certify that we are neither associated nor has been associated directly or indirectly with any personnel/official or any other entity that has prepared the specifications and other documents for the subject matter of procurement;
k) We hereby certify that we have fulfilled our obligations to pay all such taxes as payable to the Central Government or the State Government or any local authority;
l) We hereby certify that we are not insolvent, in receivership, bankrupt or being wound up, not have its affairs administered by a court or a judicial officer, not have its business activities suspended and must not be the subject of legal proceedings for any of the foregoing reasons;
m) We hereby certify that our directors and officers have not been convicted of any criminal offence related to their professional conduct or the making of false statements or misrepresentations as to their qualifications to enter into a procurement contract within a period of three years preceding the commencement of the procurement process, or not have been otherwise disqualified pursuant to debarment proceedings;
n) We understand that this bid shall constitute a binding contract between us, until a formal contract is prepared and executed; and
o) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.

Name of the Bidder _____

Name of the person duly authorized to sign the Bid on behalf of the Bidder _____

Title of the person signing the Bid _____

Signature of the person named above _____

***5.2 Bidder Information Form***

**FORM-B2**

**Bidder Information**

*[The Bidder shall fill in this Form in accordance with the instructions indicated below. No alterations to its format shall be permitted and no substitutions shall be accepted.]*

Date: *[insert date (as DD, MM, YYYY) of Bid Submission*]

Tender Ref. No.: _____

| |
|---|
| 1. Bidder's Name *[insert Bidder's legal name]* |
| 2. Bidder's year of registration/incorporation: *[insert Bidder's year of registration/incorporation]* |
| 3. Bidder's Address: *[insert Bidder's legal address]* |
| 4. Activities Undertaken by the Bidder: |
| 5. Bidder's Authorized Representative Information<br>*a)* Name: *[insert Authorized Representative's name]*<br>*b)* Address: *[insert Authorized Representative's Address]*<br>*c)* Telephone/Fax numbers: *[insert telephone/fax numbers]*<br>d) Email Address: *[insert Authorized Representative's email address]* |

**6. Details of the Manufacturer and the Production/Processing facility from where the offered goods/item(s) have been produced and processed.**

| Sl. No. | Name of the Goods/Item(s) offered | Name of the Manufacturer | Details of the Production Facility | Details of the Manufacturing License |
|---|---|---|---|---|
| 1 | | | | |
| 2 | | | | |

| | | | | |
|---|---|---|---|---|
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |

7. Years of experience in similar line of activity:

8. List of clients in Govt/Public Sector to whom supply has been done in last three years:

9. Details of the Bank Account:

   (i) Name of the Bank:

   (ii) Type of Account:

   (iii) Account Number:

   (iv) IFSC:

**Signature of the Bidder/ Authorized Signatory**

**(Name, Address & Designation)**

5.3 ***Manufacturer's Letter of Authorization***

**FORM-B3**

**Manufacturer's Authorisation Letter**

Date: *[insert date (as DD, MM, YYYY) of Bid Submission]*
Tender Ref. No.: _____

To: *[insert complete name of Bid Inviting Entity]*

WHEREAS

We *[insert complete name & address],* who are manufacturer of *following items*, do hereby authorize *[insert complete name of Bidder]* to submit a bid, the purpose of which is to provide the following item(s), produced/manufactured by us, and to subsequently negotiate and sign the Contract.

| S. No | Name of the Item(s) | Quality Certifications | Details of the Mfg. License | Details of Production Facility |
|---|---|---|---|---|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |

We have been manufacturing product(s) of similar in nature as stated above since last three financial years ended on 31st March 2026.

We shall stand guarantor with respect to the quality and genuineness for the goods manufactured or produced by us and supplied by <*insert the name of the bidder*> to <insert name of the procuring entity>, on the award of the contract.

We also stand guaranteed to fulfil the warranty and maintenance obligations with respect to the goods manufactured by us as per the bid terms and conditions either directly or through our authorized representatives.

Signed: *[insert signature(s) of authorized representative(s) of the Producer/Manufacturer]*

Name: *[insert complete name(s) of authorized representative(s) of the Producer/Manufacturer]*

Designation: *[Designation]*

Dated on_____day of_____, *[insert date of signing]*

**Note**: The Bidder (if not the manufacturer of the goods offered) shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer of the Goods offer and should be signed by a person with the proper authority to sign documents that are binding on the Manufacturer. The Bidder shall include it in its bid]

***5.4 Details of Work Orders***

**FORM- B4**

Name of the Bidder: _____

Tender Reference No._____

| **Name of the Client** | **Order No. and Date** | **Description of the Goods Supplied & Work Executed** | **Value of Order** | **Quantity** | **Reason for delay in completion, if any.** |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| | | | | | |

**Signature**

**(Bidder/ Authorised Representatives)**

**The Bidder shall also furnish the following documents in connection with their past performance:**

i) **Copy of Orders.**

ii) **Documentary evidence (Client's certificate) in support of satisfactory completion of contract: Work Completion Report.**

***5.5 Financial Strength of the Bidder***

**FORM-B5**

**Certificate on Financial Strength**
*(On the letterhead of Chartered Accountant/Statutory Auditor)*

We/I have verified the Audited Financial Statement of Accounts and other documents of…….. having registered office at ……. pertaining to the financial year 2022-23, 2023-24 and 2024-25. Based on our verification of the aforesaid statements and records, we certify that the following details are true to the best of our information and according to the explanation given to us.

**(*Amount in INR Lakhs*)**

| **Financial Information** | **Financial Year** | | | **Average** |
|---|---|---|---|---|
| | 2022-23 | 2023-24 | 2024-25 | |
| | Audited | Audited | Audited | |
| **Total Turnover** | | | | |
| **Net worth** | | | | |

Date:
Signature and seal of the CA firm
Place:

**UDIN :……**

Note:

*a) The bidder must furnish CA Certified/Audited financial statements for the above-mentioned financial years.*

***5.6 Power of Attorney for Signing of Bid***

**FORM-B6**

**Format for Power of Attorney for Signing of Application**
***(On a Stamp Paper of Rs 100/-)***

We, ……. [*name and address of the registered office*] do hereby constitute, appoint and authorize Mr. / Ms. ……(*name and residential address*) who is presently employed with us and holding the position of …….as our attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to our response to the Tender for [insert Name of Work] including signing and submission of all documents and providing information to the Client (i.e. [*insert name of the Bid Inviting Entity*]) and its officials or representatives, representing us in all matters before Client, and generally dealing with Client in all matters in connection with our bid response.

We hereby agree to ratify all acts, deeds and things lawfully done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us. Dated this the _____ day of _____2026

For _____
(Signature)
(Name, Designation and Address)

Accepted
_____(Signature)
(Name, Title and Address of the Attorney)

Date: _____

*Note:*

i. *The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, as laid down by the applicable law and the charter documents of the executants(s) and when it is so required the same should be under common seal affixed in accordance with the required procedure*.
ii. *In case an authorized Director or key officials of the Applicant signs the Application, a certified copy of the appropriate resolution/ document conveying such authority may be enclosed in lieu of the Power of Attorney.*
iii. *In case the Application is executed outside India, the Applicant must get necessary authorization from the Consulate of India. The Applicant shall be required to pay the necessary registration fees at the office of Inspector General of Stamps.*

***5.7 Undertaking by the Bidder***

**FORM-B7**

**Affidavit**

(***To be submitted on non-judicial stamp paper of minimum Rs 50/- duly certified by Notary***)

We, M/s. …… (the Bidder), (the names and addresses of the registered office) hereby certify and confirm that:

(i) We or any of our promoter(s) / director(s) / partner(s) are not blacklisted or otherwise disqualified pursuant to any debarment proceedings by any Central or State Government, Local Government or Public Sector Undertaking in India from participating in any bidding process, either individually or as member of a consortium as on the_____ (Date of Signing of Bidder).

(ii) We are not insolvent, in receivership, bankrupt, being wound up, having our affairs administered by a court or a judicial officer, having our business activities suspended or subject of legal proceedings for any of the foregoing reason;

(iii) We or any of our promoter(s), director(s), partner(s) and officers are not convicted of any criminal offence related to their professional conduct or the making of false statements or misrepresentations as to their qualifications to enter into a procurement contract within a period of *three years* preceding the commencement of the procurement process.

(iv) There is no conflict of interest in submitting this Bid.

(v) We shall abide by the clauses/ conditions of Bidding Documents issued by the Procuring Entity and any amendment made thereafter.

We further confirm that, we are aware of the fact that, our Bid submitted in response of the Tender Ref. No. [*insert tender number &date*] for [*insert the name of the Goods/subject matter of the Tender*], would be liable for rejection in case any material misrepresentation is made or discovered at any stage of Bid evaluation or thereafter during the agreement period.

Signature of the Bidder/Authorized Representatives

Name of the Bidder/Authorized Representatives

***5.8 Bank Guarantee Format for Bid Security***

**FORMAT-B8**

**Format of BG for Bid Security (EMD)**

(**IN STAMP PAPER of Minimum Rs 100/-**)

**Bank Guarantee No: _____, Date: _____**

**Bank Details:**

**Guarantor:**

**Tender No:**

**Name of Work:**

**Name of Bidder/Applicant:**

**Beneficiary:** Chief General Manager (Gen),

Assam Power Generation Corporation Ltd. (APGCL)

3rd Floor, Bijulee Bhawan, Paltanbazar, Guwahati – 781001, Assam.

Whereas ……..*(Name and address of the bidder)* is willing to submit their bid against the above mentioned tender no: ……. for ……*(Name of Work)* invited by the beneficiary on behalf of Assam Power Generation Corporation Ltd. and as per tender/bid conditions, the applicant is required to submit a Bank Guarantee as Earnest Money Deposit.

At the request of the applicant, we as Guarantor, hereby irrevocably undertake to pay the beneficiary any sum or sums not exceeding in total an amount of Rs……..*(in numeric) (Rupees …….only- In words)* if:

1) The bidder withdraws or amends, impairs or derogates from the bid in any respect within the period of validity of the bid.
2) The bidder fails to furnish the Performance Security for the due performance of the contract/Work Order against this tender.
3) The bidder fails or refuses to execute the contract.

We undertake to pay the beneficiary up to the above amount upon receipt of its first written demand, without the beneficiary having to substantiate its demand, provided that in its demand the beneficiary will note that the amount claimed by it due to it owing to the occurrence of one or more of the conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to…….(date) i.e. for 01 (one) Year from the start date of online submission of bid up to amount Rs……. *(in numeric) (Rupees …….only- In*

*words)* and any demand in respect thereof should reach the bank not later than the above date.

Notwithstanding anything contrary contained in any law for the time being in force or banking practice, this guarantee shall not be assignable or transferable by the beneficiary, notice or invocation by any person such as assignee, transferee or agent of beneficiary shall not be entertained by the bank. Any invocation of guarantee can be made only by the beneficiary directly.

Notwithstanding anything to the contrary contained herein:

1. Our liability under this bank Guarantee shall not exceed Rs*…….(in numeric) (Rupees …….only- In words)*.

2. This Bank Guarantee shall be valid up to ……(date) 01 (one) Year from the start date of online submission of bid.

3. The beneficiary's right as well as the Bank's liability under this guarantee shall stand extinguished unless a written claim or demand is made under this guarantee up to……(date) i.e. up to a period of 01 (one) Year from the start date of online submission of bid.

4.

Dated at_____this ___ day of _____,2026

(Signature on behalf of the Nationalized/Scheduled Bank)

(Seal of the Nationalized/Scheduled Bank)

Address of the main Branch of the Bank……

Address of the BG issuing Bank……

***5.9 Statutory Tax Compliance***

**FORM-B9**

**Statutory Tax Compliance**

## Self–Undertaking for Payment of Statutory Taxes

**To,**
The Procuring Entity,
[Name of Department/Organization]
[Address]

**Subject:** Self–Undertaking regarding payment of statutory taxes before applying for tender Tender/Bid Reference No & Date: _____.

a) I/We have duly paid and cleared all statutory taxes, cess, dues, and levies payable to Local Authorities, Panchayats, Municipalities, State Government, and the Central Government up to the date of this tender submission and undertake to promptly discharge any such dues that may arise during the tenure of the contract.
b) I/We shall be solely responsible for payment of all applicable taxes, including GST, duties, license fees, cess, and any other statutory liabilities arising in connection with the performance of the contract.
c) I/We undertake to immediately inform the Procuring Entity of any statutory revision, demand, or default and shall bear complete responsibility for settlement of such dues, keeping the Procuring Entity fully indemnified against any liability in this regard.
d) I/We hereby confirm that all notices, demands, or proceedings issued by any Tax Authority up to the date of this submission have been duly complied with and settled. Any outstanding demand has been disclosed to the Procuring Entity, and I/We undertake to settle the same before award of contract, keeping the Procuring Entity indemnified against any liability.
e) In case of any reduction in the rate or amount of GST, taxes, duties, or levies after the Notification of Award, the corresponding benefit shall be duly passed on to the Procuring Entity without delay.
f) This undertaking shall remain valid and binding for the entire duration of the tender evaluation and, if awarded, for the full tenure of the contract including any extensions, until its closure.
g) I/We understand that at any stage if it is found that any statement or document submitted is false/forged/invalid, the Procuring Entity has discretion to terminate the contract and proceed with alternate arrangements as per the tender's risk purchase clause if any.

I/We declare that the above statements are true to the best of my/our knowledge and belief.
**Authorized Signatory**

Name: _____
Designation: _____
Firm/Company Name: _____
Date: _____
Place: _____

**Company Seal:**

### *5.10 GST Rules, Act etc. Compliance Undertaking*

**FORM B10**

(To be submitted in bidders' pad along with technical bid)

Certified that in discharging the outward tax liability by ITCs all the provisions of GST Acts, Rules and notifications made therein are complied with including the following provisions:

- Goods and services relating to ITCs have actually been received.
- ITCs has been availed strictly in compliance with provisions under Section 16(2) (aa).
- Tax relating to ITCs has actually been paid to the government.
- No ITCs, though reflected in GSTR2B, availed if it is restricted by Section 38(2)(b).
- No ITCs, though reflected in GSTR2B, availed if it is blocked by Section 17(5).
- No ITCs in excess of input goods and services utilized actually in the PLANTs/ works, are utilized to discharge the liabilities.
- In no case, utilization of ITCs in discharging liabilities exceeds the upper limit as prescribed by contractee department.
- The above facts are true to the best of my knowledge.

Signature & seal of contractor/bidder
Name of Bidder:
Designation:

### *5.11 Checklist of Documents Submitted along with Technical*

**FORM-B11**

**CHECKLIST**

| Sl. No. | Description of the Document | Page | | Remarks |
|---|---|---|---|---|
| | | From | To | |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
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| 9 | | | | |
| 10 | | | | |
| 11 | | | | |

# SECTION-VI

## 6. General Terms and Conditions

The bidder must adhere to the clauses of this tender document and also, the tender must be submitted as per instructions given in this document, in the absence of which the submitted tender of the bidder may not be considered for evaluation at this end. However, in case of deviation from any of APGCL's tender document clause by the bidder, the same must be stated clearly as per the format given below:

EXCEPTION AND DEVIATION PROFORMA

| Sl.No. | Ref of Bid Document | | Subject | Deviation Details |
|---|---|---|---|---|
| | ***Page No.*** | ***Clause No.*** | | |
| | | | | |

In case the bidder doesn't to state the deviation(s) clearly, it will be presumed that the bidder has accepted all terms and conditions of this tender document. Also, acceptance/rejection of bidder's deviation(s) shall be at sole discretion of APGCL.

### 6.1 Firm Price:

The basic price(s) quoted by the bidder shall be firm without any variation in any way till completion of the work in full.
The price offered in the Price Bid for the item(s) shall be based on FOR consignee location/DDP (Place of destination) price. (Charges against Freight, Transit Insurance, Packing and Forwarding etc. shall be inclusive). The basic prices shall also be inclusive of charges against loading/unloading, travelling expenses of Contractor's Personnel, boarding & lodging of Contractor's Personnel at site, etc.

### 6.2 Performance Security Deposit:

On receipt of the Letter of Acceptance/Work Order/Purchase order, the successful bidder shall have to deposit a Bank Guarantee from a Nationalized or Scheduled Bank of RBI for an amount equivalent to 10% (ten percent) of the total value of Order (including GST, etc.) as performance security, within 28 (twenty eight) days from the date of receipt of the LOA/Order or before signing of contract, whichever is earlier, duly pledged in favor of the Chief General Manager (Gen), APGCL and such security deposit shall be valid up to 45 (forty-five) days beyond the date of completion of all contractual obligations including warranty and maintenance obligations, if any. All claims under the warranty, etc. shall be preferred to the executants bank up to 6 (six) months from the above mentioned 45 (forty-five) days period.
If the Contractor fails or neglects to perform any of his obligations under the contract/as per work order/tender, then APGCL shall have the right to forfeit either in full or in part at its absolute discretion, the security deposit furnished by the Contractor. No interest shall be payable on such deposits.

**Note:** The successful bidder is requested to advice the Bank Guarantee issuing bank to comply with the following and ensure to submit, the receipt of the copy of SFMS message as sent by the issuing bank branch, along with the original bank Guarantee in APGCL's tender issuing office:

The Bank Guarantee issued by the Bank must be routed through SFMS platform as per following details:

i. MT/IFN760/MT/IFN760 COV for issuing of Bank Guarantee.
ii. MT/IFFN 760/MT/IFN 767 COV for amendment of Bank Guarantee.

The above message/intimation shall be sent through SFMS by the BG issuing bank branch to Axis Bank, Paltan Bazar Branch, A/C no. 375010200007573, IFS code- UTIB0000375, Branch Address- AXIS Bank Ltd, Commercial Building, A.T. Road, Guwahati-781001, India.

**Apart from Bank Guarantee, Performance Security Deposit can also be submitted through Fixed Deposit (FD) and Demand Draft (DD), pledged/drawn in favor of The Chief General Manager (Gen), APGCL, Bijulee Bhawan, Paltan Bazar, Guwahati-1. All other Terms & Conditions regarding the Performance Security Deposit shall remain the same as mentioned in the above paragraphs.**

**Note**: The Bid Security (EMD) deposited by a Bidder may be forfeited in case the bidder does not deposit the required performance security and/or sign the contract within the specified time period.

### *6.3 Packing:*

The Bidder shall provide packing of the Goods as is required to prevent their damage or deterioration during transit to their destination. During transit, the packing shall be sufficient to withstand, without limitation, rough handling and exposure to extreme temperatures, salt and precipitation, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the goods' final destination and the absence of heavy handling facilities at all points in transit.

### *6.4 Insurance:*

a. The Contractor shall, unless otherwise specified by the Purchaser, insure the materials through their underwriter at their cost and shall keep it insured against any loss/damage/pilferage in transit, destruction or damage by fire/flood, 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 (APGCL) destination store and till commissioning/handover to APGCL.
b. The Contractor shall be responsible for safe arrival of the goods at destination (APGCL Store), their unloading and their receipt by the consignee. The Assam Power Generation Corporation Limited will discharge consignee's responsibilities only and shall not be responsible for any damage/ loss/ pilferage/ non-delivery by the carriers.
c. In case of any loss/damage/pilferage/non-delivery/short delivery by carriers etc. the supplier (Contractor) shall replace free of cost the missing/damaged/lost materials within 30 (thirty) days from the receipt of report thereof from the consignee without waiting for settlement of their claims with their carriers/ under-writers. Normally such reports from the consignee to the supplier (Contractor) shall be initiated within a period of 30 (thirty) days from the date of receipt of each consignment by him.
d. If it is considered necessary that the damaged equipment either in part or in full be sent back to the manufacturer's works for repair, the manufacturers/ suppliers (Contractor) 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 Contractor.
e. 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 (APGCL) reserves the right to forfeit the security deposit and/or adjust any outstanding payment to the Contractor with APGCL or take any other appropriate action.
f. All materials will be dispatched against clear door delivery basis unless otherwise agreed by the Purchaser (APGCL).

Also, insurance of all work personnel of the Contactor engaged during the work execution at work site is mandatory on behalf of the Contactor and necessary documents in this regard are required to be submitted by the Contactor to APGCL Official at work site before commencement of work. Without proper Insurance of all site personnel of the Contractor engaged for the work at work site, the Contractor shall not be allowed to execute the work at site and any delay in work completion for this shall be at Contractor's sole responsibility. Cost of Insurance of Contractor's Site Personnel working at work site shall be at Contractor's scope.

### 6.5 *Clarification and Additional Information:*

During the submitted bid's evaluation, APGCL may request the bidder for any clarification on the submitted bid and/or documents related to the tender. The bidder shall submit the sought clarifications and/or document(s) within stipulated time as determined by the undersigned. However, seeking clarification and document(s) during bid evaluation shall be on sole discretion of APGCL.

### 6.6 *Precautions to be Taken During Execution of Work:*

The Contractor shall take reasonable and statutory precaution during execution of the work at work site so as to avoid accident and damage to equipment and injury to workman and to prevent theft, pilferage etc.

### 6.7 *Liability for Accident and Damage:*

The Contractor shall not claim for compensation arising out of any accident(s) or damages done during the course of work execution at work site & the Contractor will be responsible for paying compensation to the worker as per Workmen Compensation Act, 1923 and subsequent amendments thereof. It is further clarified that in case any payment is to be made by the Contractor under the said Workmen Compensation Act, the same shall be paid forthwith and in case of failure in making such payments APGCL shall make payment and the amount so paid shall be deducted from the bills of the Contractor.

The Contractor shall adequately insure against liability to third party, in the joint names of the Employer, the Contractor and the sub-contractor for any loss, damage, death or bodily injury which may occur to any physical property owned by others, the goods/materials of the contract or to any person which may arise out of the performance of the contract.

### 6.8 *Acceptance of the Order/Contract:*

Acceptance of the Order/LOA in writing shall be conveyed by the supplier/Contractor to the Purchaser/Employer (APGCL) within 07 (seven) days from the date of issue of the such Order/LOA failing which, it will be presumed that all the Contactor has accepted the same in full.

### 6.9 *Force Majeure:*

Normally, force majeure shall cover only Act of God, fire, war, riots, epidemics and act of Government, etc. Any constraints other than those specified above, will not constitute a force majeure condition. In view of other constraints beyond the control of the Contractor, primarily due to statutory compulsion, extension of delivery time may also be considered on merit of individual case.

In case of a force majeure condition, the Contractor shall notify APGCL in writing such condition within 10 (ten) days from the beginning of such delay for consideration and acceptance. Unless otherwise directed by the Purchaser (APGCL) in writing, the Supplier (Contractor) shall continue to perform its obligations under the Contract as far as is reasonably practical and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

## 6.10 *Settlement of Disputes:*

**a. Amicable Settlement:**

If any dispute or difference (s) of any kind whatsoever arise between the parties in connection with or arising out of the work/contract, including without prejudice to the generality of the foregoing, any question regarding its existence, validity or termination, or the execution of the Contract whether during the progress of the Contract or after its completion and whether before or after the termination, abandonment or breach of the Contract, the parties shall seek to resolve any such disputes or differences by mutual consultation between the authorized representatives of both the parties for amicable settlement of the dispute within a period of ninety (90) days after receipt by one party of the other party's request for such amicable settlement.

**b. Arbitration:**

Any dispute, controversy or claim arising out of or relating to this work/contract or the breach, termination or invalidity thereof, that cannot be settled amicably between both the parties shall be settled by Arbitration.

In any arbitration proceeding hereunder-

a) Arbitration shall be in accordance with the Arbitration & Conciliation Act, 1996 or any statutory amendment thereof.
b) Arbitration shall be by a sole arbitrator, if agreed upon by the Parties. Failing agreement on the identity of such sole arbitrator, each Party shall appoint one arbitrator, and these two appointed arbitrators shall jointly appoint a third arbitrator, who shall chair the arbitration panel and act as the Presiding Arbitrator.
c) In an arbitration proceeding consisting of three arbitrators, if a party fails to appoint an arbitrator within 30 days from the receipt of a request to do so from the other party; or the two appointed arbitrators fail to agree on the third arbitrator within thirty days from the date of their appointment, the appointment shall be made upon request of a party by the High Court or by the President, Institution of Engineers (India), Assam State Centre.
d) In an arbitration with sole arbitrator, if the parties fail to agree on the arbitrator within 30 days from receipt of a request by one party from the other party to so agree, the appointment shall be made, upon request of a party, by the High Court or by the President, Institution of Engineers (India), Assam State Centre.
e) Proceedings shall, unless otherwise agreed by the Parties, be held in Guwahati.
f) English language shall be the official language for all purposes.
g) Decision of the sole arbitrator or of a majority of the arbitrators (or of the third arbitrator if there is no such majority) and the Arbitral Award shall be final and binding on the parties and the persons claiming under them respectively and shall be enforceable in any court of competent jurisdiction, and the Parties hereby waive any objections to or claims of immunity in respect of such enforcement.
h) The arbitrators and the parties to the arbitration shall maintain confidentiality of all arbitral proceedings except award where its disclosure is necessary for the purpose of implementation, enforcement and setting aside of the award.
i) The cost of arbitration shall be equally shared among both the parties.

## 6.11 *Legal Jurisdiction:*

Any disputes or differences arising under, out of, or in connection with this work/contract, shall be subject to the exclusive jurisdiction of courts at Guwahati only.

## 6.12 *Mistakes/Errors in submitted Bid:*

The Contractor shall be responsible and liable for any change in the work due to any discrepancies, errors, or omissions in the submitted bid which have arisen due to

inaccurate information or particulars furnished by the Contractor, even though approved by APGCL.

### 6.13 *Indemnification:*

The Contractor shall indemnify APGCL 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 for the use of any equipment supplied by the Contractor but such indemnity shall not cause any use of the equipment other than for the purposes indicated by or reasonably to be inferred from the specification.

### 6.14 *Subletting Contract:*

The Contractor shall not, without the consent in writing of APGCL assign or sublet his contract, or any substantial part thereof, or interest therein of benefit or advantage whatsoever, other than for raw materials or for minor details or for any part of the work of which the Sub-contractors are named in the tender provided any such consent shall not relieve the Contractor from any obligation, duty or responsibility under the contract.

### 6.15 *Variation of Quantity:*

APGCL might increase or decrease the quantity of materials by 20% if so required and the bidder shall agree to the same and shall supply the materials at the same quoted rates/prices in BOQ and terms and conditions stipulated in the tender except in regard to delivery schedule/work completion period, which shall be mutually agreed upon in case of increase in the ordered quantity from that in the tender.

### 6.16 *Co-Operation with Other Contractors:*

The Contractor shall agree to co-operate with the APGCL's other contractors for associated supplies and freely exchange with them such technical information as is necessary to obtain the most efficient and economical design and to avoid unnecessary duplication. No remuneration shall come from APGCL for such technical co-operation.

### 6.17 *Contractual Failure:*

In the event of contractual failure of any respect on the part of the Contractor, APGCL shall be entitled to **forfeit** the performance security deposit or any deposit or any payment due to the Contractor from this or his other contracts towards the recovery of APGCL's claim for damages arising out of the failure. In addition, APGCL may black-list or ban the Contractor or pending enquiry, suspend him or take any other steps considered suitable.

### 6.18 *Rejection:*

In the event, any of the materials supplied by the Contractor or work executed is found defective or otherwise not in conformity with the requirements of the contract/tender specifications, APGCL shall either reject the material/work or request the Contractor in writing to rectify the same. The Contractor, on receipt of such notification shall rectify or replace the defective material/rectify the defective work free of cost to APGCL. If the Contractor fails to do so, APGCL may at its option: -

(a) Replace or rectify such defective/non-conforming material/correct the defective work and recover the extra cost so involved plus 15% as overhead charge from the Contractor, or
(b) Terminate the contract for default, or
(c) Acquire the defective material at a reduced price as considered equitable under the circumstances.

### 6.19 *Deduction from Contract Price:*

All cost, damages or expenses which APGCL may have made for which, under the contract, the Contractor is liable, may be deducted by APGCL from any money due or becoming due by APGCL to the Contractor or may be recovered by action at law or otherwise from the Contractor.

In the event of recovery to the necessary extent becoming impossible owing to insufficiency of the earnest money/security deposit and withheld amounts, the balance due to APGCL may at the option of APGCL be recovered from any money due to the Contractor from APGCL under other contracts with the Contractor.

### 6.20 *Death, Bankruptcy etc.:*

If the Contractor becomes bankrupt or being a corporation is in the process of winding up, amalgamation or reorganization, then APGCL shall be at liberty to: -

(a) Terminate the contract forthwith by notice in writing to the Contractor or to the liquidator or receiver or to any person in whom the contract may become vested.
(b) Give such liquidator, receiver or other person the option of carrying out the contract subject to his providing a guarantee for the due and faithful performance of the contract up to an amount to be determined by APGCL.

In case of death of the Contractor before completion of the work, then APGCL shall be at liberty to:

(a) Close up the contract and take over the completed portion of work/supply done and made as per specification and make final payment to the legal heir of the Contractor on receipt of claim from such legal heir.
(b) Give the contract to the legal heir of the Contractor subject to his depositing a performance security for the due and faithful performance of the contract. The performance security amount shall be determined by APGCL commensurate with the incomplete portion of the work/supply. APGCL will enter into a fresh contract with the legal heir of the Contractor on the same terms and conditions of the earlier contract.

### 6.21 *Regulation of Local Authorities:*

The Contractor shall abide by the regulation of local Authorities unless such regulation is repugnant to any terms of the contract agreed upon.
The Contractor is required to fulfill all criteria related to Labour Laws.
The Contractor will also comply with all regulations/directives of both State & Central Government Pollution Boards.

### 6.22 *Suspension Of Business Dealings with Firms/Contractors:*

APGCL may suspend business dealings with a Firm/Contractor, if:

(a) The Central Bureau of Investigation or any other investing agency recommends such a course in respect of a case under investigation; and if a prima facie case is made out that the firm is guilty of an offence involving unethical, unlawful, fraudulent means in relation to business dealings, which, if established, would result in business dealings with it being banned.
(b) APGCL has past record of non-performance of the Firm in it's previously awarded contracts.
(c) APGCL has record of ban against the Firm by other Government / Public sector utility.
(d) However, APGCL shall give the Firm/Contractor a fair chance to explain the circumstances of such previous suspensions.

### 6.23 *Banning Of Business Dealings with Firms/ Contractors:*

APGCL may ban business dealings with a Firm/Contractor, if:

(a) The owner (s) of the Firm/Contractor is convicted by a court of law following prosecution for offences involving unethical, unlawful, fraudulent means in relation to business dealings.

(b) There is strong justification that the Firm has been guilty of malpractices, such as, bribery, corruption, fraud, substitution of tenders, misrepresentation, evasion or habitual default in payment of any Government tax, etc.
(c) The Firm continuously refuses to return government dues without showing adequate cause and Government are reasonably satisfied that this is not due to reasonable dispute which would attract proceeding in arbitration or court of law.
(d) The Firm is found guilty of being involving in unethical practices, such as:

1. "Corrupt practice" involving offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence the action of any such official procurement process or in contract execution.
2. "Fraudulent practice" involving misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract to the detriment of the Employer.
3. "Collusive practice" involving a scheme among bidders (prior to or after submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Employer of the benefits of free and open competition.
4. "Coercive practice" involving harming or threatening to harm directly or indirectly, persons or their property to influence procurement process or the execution of a contract.

APGCL may sanction a Firm/ Contractor or its successor, including declaring ineligible, indefinitely or for a period of not less than 3 (three) years.

**6.24 Language:**

Contract as well as all correspondence and documents relating to the Contract exchanged by the Contractor and the Purchaser (APGCL), shall be written in English language. Supporting documents and printed literature that are part of the Contract may be in another language provided they are accompanied by a self-certified accurate translation of the relevant passages in English language**,** in which case, for purposes of interpretation of the Contract, this translation shall govern.

The Contractor shall bear all costs of translation to the governing language and all risks of the accuracy of such translation, for documents provided by the Supplier.

***6.25* Joint Venture:**

In the case of a Joint Venture: -

(a) no partner of the Joint Venture shall submit an independent bid for the same package for which the Joint Venture submits a bid as this shall constitute conflict of interest;

(b) all partners of the Joint Venture shall be jointly and severally liable for the bid and for the execution of the Contract in accordance with the terms of the contract and a relevant statement to this effect shall be submitted by them in evidence thereof;

(c) in the event of the bid of Joint Venture being accepted, they shall either form a registered Joint Venture Company or a Limited Liability Partnership, or a Partnership Firm or else the contract documents and the Joint Venture Agreement, etc. shall be duly signed and executed in such a manner as may be required for making it legally binding on all partners and clearly indicating, amongst other things, the proposed distribution of responsibilities, both financial as well as technical, for execution of the work amongst them; and

(d) the Joint Venture shall nominate a Lead Partner who shall have the authority to conduct all business for and on behalf of any or all the parties of the Joint Venture during the bidding process and during execution of the contract. This

authorization shall be evidenced by submitting a power of attorney signed by the legally authorized signatories of all the partners or, otherwise, all the parties in Joint Venture shall sign the Agreement.

### *6.26 Nationality and Country of Origin Requirements:*

The Contractor and its Subcontractors shall comply with all applicable eligibility requirements under Assam Public Procurement Act, 2017 and Assam Public Procurement Rule, 2020 and as amended from time-to-time.

All Goods to be supplied under the contract shall have their origin in India or any other country with which India has not banned trade relations. The term "origin" used in this clause means the place where the goods are mined, grown, produced, or manufactured or from where the related services are arranged and supplied.

### *6.27 Tax and Duty Responsibility.:*

The Contractor shall be responsible for all taxes, duties, license fees, etc. incurred until completion of contracted work of the purchaser (APGCL). The participating bidder shall submit a self-undertaking on Statutory Tax Compliance as per Form B-9.

### *6.28* Inspection & Testing:

6.28.1 The Contractor shall at its own expense and at no cost to the Purchaser (APGCL) carry out all such tests and/or inspections of the Offered Goods as specified in this document or as per any Standard Practice/Requirement.

6.28.2 The inspections and tests may be conducted on the premises of the Supplier (Contractor) or its Subcontractor, at point of delivery, and/or at the Goods' final destination, or in another place in India as specified. If conducted on the premises of the Supplier or its Subcontractor, all reasonable facilities and assistance including access to drawings and production data, shall be furnished to the inspectors at no charge to the Purchaser (APGCL).

6.28.3 The Purchaser (APGCL) or its designated representative shall be entitled to attend the tests and/or inspections, and the Purchaser (APGCL) will bear its own costs and expenses incurred owing to traveling and board and lodging expenses only.

6.28.4 Whenever the Supplier (Contractor) is ready to carry out any such test and inspection, it shall give a reasonable advance notice, including the place and time, to the Purchaser (APGCL). The Supplier shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Purchaser (APGCL) or its designated representative to attend the test and/or inspection.

6.28.5 The Supplier (Contractor) shall provide the Purchaser (APGCL) with a report of the results of any such test and/or inspection.

6.28.6 The Purchaser (APGCL) 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 (Contractor) 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 (APGCL), and shall repeat the test and/or inspection, at no cost to the Purchaser (APGCL), upon giving a notice.

6.28.7 The Supplier (Contractor) 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, shall release the Supplier (Contractor) from any warranties or other obligations under the Contract.

**6.29 Confidential Information:**

a. Any information derived or otherwise communicated by the Purchaser (APGCL) to the Supplier (Contractor) in connection with the contract shall be kept / treated as secret and shall not without written consent of the Purchaser (APGCL) be published or disclosed to any third party or made use of by the Supplier except for the purpose of execution of the contract.

b. The Purchaser (APGCL) and the Supplier (Contractor) shall keep confidential and shall not, without the written consent of the other party hereto, divulge to any third party any documents, data, or other information furnished directly or indirectly by the other party hereto in connection with the Contract, whether such information has been furnished prior to, during or following completion or termination of the Contract. Notwithstanding the above, the Supplier may furnish to its Subcontractor such documents, data, and other information it receives from the Purchaser to the extent required for the Subcontractor to perform its work under the Contract, in which event the Supplier shall obtain from such Subcontractor an undertaking of confidentiality like that imposed on the Supplier under GTC Clause Copyright.

c. The Purchaser (APGCL) shall not use such documents, data, and other information received from the Supplier (Contractor) for any purposes unrelated to the contract. Similarly, the Supplier shall not use such documents, data, and other information received from the Purchaser for any purpose other than the performance of the Contract.

d. The obligation of a party under GTC Sub-Clauses 6.29 (a, b, c) above, however, shall not apply to information that:

   i. the Purchaser or Supplier need to share with the such institution(s) participating in the financing of the Contract;
   ii. now or hereafter enters the public domain through no fault of that party;
   iii. can be proven to have been possessed by that party at the time of disclosure and which was not previously obtained, directly or indirectly, from the other party; or
   iv. otherwise lawfully becomes available to that party from a third party that has no obligation of confidentiality.

e. The above provisions of GTC Clause 6.29 shall not in any way modify any undertaking of confidentiality given by either of the parties hereto prior to the date of the Contract in respect of the Supply/Work or any part thereof.

f. The provisions of GTC Clause 6.29 shall survive completion or termination for whatever reason, of the Contract.

**6.30 Limitation of Liability:**

Except in cases of criminal negligence or willful misconduct, the aggregate liability of the Supplier (Contractor) to the Purchaser (APGCL), whether under the Contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to the cost of replacing the substandard Goods supplied/ substandard work executed, or to any obligation of the supplier to indemnify the purchaser (APGCL) with respect to patent infringement.

**6.31 Copyright:**

The copyright in all drawings, documents, and other materials containing data and information furnished to the Purchaser (APGCL) by the Supplier (Contractor) herein shall remain vested in the Supplier, or, if they are furnished to the Purchaser/Authority directly or through the Supplier by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party.

# SECTION VII

## *7. Special Terms and Conditions*

### *7.1* **Terms of Payment***:*

Payment for the supply of 145 kV Isolators at the Lakwa Thermal Power Station (APGCL) shall be subject to compliance with the Performance Security Deposit clause of this tender and governed by the following conditions:

**(A) Advance Payment**

- An advance payment equivalent to **10% of the Purchase Order Value, excluding GST**, shall be released to the Contractor against submission and acceptance of an **Advance Bank Guarantee (ABG)** for an amount equivalent to the advance payment.
- The ABG shall remain valid and enforceable until the entire advance amount has been fully recovered by APGCL, or for such further period as may be required under the Work Order.

**(B) Supply Payment**

- Upon successful completion of the supply, delivery, inspection, and acceptance of the **entire Supply Part** at the LTPS site in accordance with the Purchase Order, the Contractor shall submit **Supply Invoice** for payment.
- Release of payment against the Supply Invoice shall be subject to submission of a valid tax invoice together with the following mandatory documents:
  - Delivery Challan / Lorry Receipt;
  - Manufacturer's Test Certificate;
  - Warranty Certificate; and
  - Consignee Receipt-cum-Acceptance Certificate.
- Payment against the Supply Invoice shall be released **after full recovery/adjustment of the advance payment equivalent to 10% of the purchase order Value, excluding GST**.
- **100% of the applicable GST** on the admissible Supply Invoice value shall be paid along with the corresponding supply payment, subject to applicable statutory deductions, compliance requirements, and the provisions of the Order.

**(C) Transit Damage, Shortage, Defect, and Non-Conformity**

- **Withholding of Payment:** In the event that any transit damage, shortage, defect, or other non-conformity is identified during inspection at the site in respect of any item(s) forming part of the Supply Part, **the entire amount payable against the Supply Invoice, including the applicable GST component, shall be withheld** until all such affected item(s) have been completely replaced, repaired, rectified, or otherwise brought into full conformity with the requirements of the Purchase Order.
- All replacement, repair, rectification, or other corrective action shall be carried out by the Contractor **at its sole cost and risk**, including all associated costs of transportation, insurance, handling, unloading, reloading, testing, and any other incidental expenses, as applicable.

- **No Partial Release:** No partial, proportionate, or milestone payment shall be processed against the Supply Invoice while any transit damage, shortage, defect, or non-conformity remains unresolved and the affected item(s) have not been duly re-inspected and accepted by APGCL.

**Paying Authority:**
The Chief General Manager (F&A), APGCL,
3rd Floor, Bijulee Bhawan, Paltan Bazar,
Guwahati-781001.

**Note:**
- All bills are to be processed through The General Manager (LTPS), APGCL.
- Performance Bank Guarantee shall be submitted by the successful bidder within 28 (twenty-eight) days after receipt of the Work Order/Purchase Order from the Procuring Entity (APGCL) or before signing of the Contract, whichever is earlier.

### *7.2 Warranty Clause:*

i. The materials supplied as well as workmanship shall carry a warranty covering a minimum period for rectification/free replacement thereof. The Contractor 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 Tender document of APGCL. The Contractor further warrants that the Goods shall be free from defects arising from any act or omission of the Contractor or arising from design, materials, and workmanship, under normal use in the conditions prevailing in the state. **The term "period of warranty" shall mean the period of 18 (eighteen) months from the date the materials are received in APGCL's Store in good and acceptable conditions.** During the period of warranty, the Contractor shall rectify all defects in design, materials and workmanship that may develop under normal use of the equipment upon written notice from the APGCL Engineer who shall indicate in what respects the equipment is faulty. This rectification/free replacement must be carried out within a reasonable period as determined and directed by the APGCL. The cost of rectification/free replacement will be to the Contractor's account.

ii. If the Contractor fails to rectify the defects within a reasonable time, APGCL may fix a date by which the Contractor would rectify the defects, failing which the APGCL may:
   (a) Carry out remedial work himself or through others, in a reasonable manner and at the contractor's risk and cost. The cost incurred by APGCL in remedying the defects shall be recovered from the Contractor by APGCL.
   (b) Determine and certify a reasonable reduction in the contract price or
   (c) May terminate the contract in respect of such parts of the work and APGCL shall be entitled to recover all sums paid for such parts of the work.
   (d) May forfeit either in part or in full, Performance Security Deposit.

### *7.3 Work Completion Period:*

The Work Completion Period for the supply of all materials ordered, as per the Order, shall be **Two Hundred Twenty-Five (225) days** from the date of issue of the Purchase Order.

This includes **forty-five (45) days** for the submission and approval of drawings and **one hundred eighty (180) days** for the completion of the supply of all materials ordered to LTPS Store.

**Submission and Approval of Drawings and Documents**
The successful bidder shall submit all required drawings and documents for approval to APGCL within twenty-one (21) days from the date of issue of the Purchase Order.

The time taken by APGCL in reviewing and approving the drawings/documents shall not be counted against the bidder's account. **However, any delay on the part of the bidder in initial submission or in resubmitting revised drawings to address APGCL's comments shall be solely attributable to the bidder**.

Any delay in the submission of drawings or the supply of materials attributable to the bidder shall attract Liquidated Damages (LD) as stipulated under the Liquidated Damage Clause (Clause No. 7.4) of this tender.

### *7.4 Liquidated Damage (LD):*

The date of delivery/ completion of work shall be deemed to be the essence of the contract and shall be completed not later than the date specified in the order/ contract. In case of failure to deliver the material / equipment in full or to complete the work in full or same within the stipulated delivery period or delay in the erection work beyond completion schedule, the Purchaser/Employer shall be entitled to: -

7.4.1 Recover an amount at the rate of 1 % (one percent) of the Contract Price/purchase order value per week or part thereof of delay, subjected to maximum of 10 % (ten percent) of the Contract Price/Purchase Order value of Material/Work delayed as Liquidated Damage. However, the payment of liquidated damage shall not in any way relieve the Contractor from any of its obligations to complete the work or from any other obligation and liabilities of the Contractor under the Contract/as per order.

7.4.2 Purchase the undelivered material/equipment from elsewhere or to complete the balance work, giving notice to the Contractor and to recover any extra expenditure incurred thereby for having to purchase these materials or complete the work at a higher price, at risk and responsibility of the Contractor.

7.4.3 Cancel the Contract/Purchase Order wholly or in part and to purchase materials/equipment and execute the work at the full risk and cost of the Contractor and forfeit the security deposit.

### *7.5 Technical Specifications, Drawings, Test Reports etc.:*

The following shall be provided by the bidder in their technical bid.

(a) Technical Data Sheet/Specification of the offered Isolators in the format provided in Section IV: Schedule of requirements.
(b) GA drawing of the offered Isolators.
(c) GA drawings of the offered terminal connectors.
(d) Type Test Report as mentioned under clause 3.2.3
(e) Any other relevant information related to the work.

### *7.6 Inspection, Testing, and Dispatch Clearance*

(Shall be read in conjunction with Clause No. 6.28 of this E-Tender.)

7.6.1 **Right of Inspection**:
APGCL reserves the right to carry out inspection and/or witness acceptance and routine tests of the manufactured equipment/goods either during the fabrication process or after the completion of manufacturing.

7.6.2 **Intimation for Inspection**:
The Contractor shall inform the Chief General Manager (Gen.), APGCL at least 15 (fifteen) days in advance regarding the period when the materials will be ready for inspection and testing at the manufacturer’s works. APGCL shall depute its engineers to witness the inspection and testing activities.

**7.6.3 Factory Acceptance Tests (FAT):**

The bidder shall arrange for the conduct of all Factory Acceptance Tests in accordance with relevant IS/IEC standards and as specified in Section IV: Schedule of Requirement, free of charge to APGCL.

7.6.4 **Dispatch Clearance**:

Materials shall be dispatched to the site only after receiving dispatch clearance from the Chief General Manager (Gen.), APGCL, subsequent to satisfactory testing and inspection.

***7.7 Maximum Input Tax Credit (ITC) Utilization***

The maximum Input Tax Credit (ITC) utilization ratio by Contractors will be 75% (seventy percent) under this tender/contract.

The bidder shall have to submit in technical bid a Signed and Sealed certificate confirming compliance with the applicable provisions of the GST Acts, Rules and other relevant statutory requirements in discharging the outward tax liability by ITC. A standard format for the same is provided under Bidding Forms, Form B-10 under SECTION-V of this document and bidder shall sign-seal and submit the same in technical bid.

**Note**: For the above details regarding ITC, bidders are requested to go through the notification No. eCF No. 803347/20, dated 11/07/2026 issued by the Finance (Taxation) Dept. Govt. of Assam is attached herewith as Annexure - A.

***7.8 Cyber Security Clause:***

**In case applicable for the Offered Products/Tendered Products, bidders shall note and adhere to the following requirements as given below under Cyber Security: -**

All bidders shall adhere to the Order of Ministry of Power, Govt. of India, No. 12/34/2020 – T&R, dated 24/12/2021 and No. 25-10/72/2024-PG, dated 06/08/2025 regarding Testing of power system equipment for use in the Supply System and Network in the Country for Cyber Security and shall also follow the Guidelines of CEA for Cyber Security in Power Sector, 2021. The products offered and thereafter supplied by bidder shall adhere to the above Order and Guidelines or any amendments issued/recent Guidelines. Bidder shall submit all the requisite documents in this regard including Test Certificates, etc. from Designated Laboratories of their offered/supplied products and shall fulfil all the mandatory requirements in this regard.

Bidder shall submit his signed & sealed confirmation regarding adherence to the above requirements along with all mandatory documents, test reports from Designated Laboratories, etc. in technical bid.

**Note**: Order of Ministry of Power, Govt. of India, No. 12/34/2020 – T&R, dated 24/12/2021 and No. 25-10/72/2024-PG, dated 06/08/2025 and Guidelines of CEA for Cyber Security in Power Sector, 2021 are attached herewith for reference of bidders.

***7.9 Mandatory documents:***

The bidder must upload the scanned copies of the following mentioned documents along with the technical bid on e-tender portal - assamtenders.gov.in, failing which the submitted bid of the bidder may be treated non-responsive.

(a) Copy of PAN Card and EPF Registration.
(b) Copy of GST Registration Certificate of the bidder's Firm.
(c) Documents related to bidder's eligibility and past experience.
(d) Documents related to bidder's Firm: Certificate of registration of the Firm (in case of Solo Proprietor)/Certificate of Incorporation (in case of Company), Joint

Venture Agreement, whichever is applicable. Note: In case of Joint Venture (JV), the bidder must be the Lead Partner in the JV.

(e) Documents related to the bidder's average annual turnover during 03 (three) Financial Year (FY 2022-23, 2023-24 & 2024-25) These documents must be certified by a Chartered Accountant.

**(f)** Signed & Sealed Confirmation from Bidder stating that they had quoted for all items (entire bidder's scope) required as per this Tender Clause Section-IV: Schedule of Requirements)/BoQ1. **No Part Offer is accepted.**

**(g)Technical documents of the product offered (as per Clause 7.5).**

(h) Payment proof of EMD.

(i) Authorization Letter in case the bidder is not the manufacturer. All documents related to the Manufacturer of the Isolator.

(j) Statutory document in regard to bidder being Manufacturer of the offered materials along with address details.

(k) All Bidding forms, duly filled up as per the instructions provided therein.

(l) All other documents as sought in this Tender.

(m) Any other document as deemed necessary as per this tender of APGCL.

**--Sd--**
**Chief General Manager (Gen),**
**APGCL, Guwahati-1**

Annexures:

1. Annexure-A: Notification No. eCF No. 803347/20, dated 11/07/2026 issued by the Finance (Taxation) Dept. Govt. of Assam.
2. Annexure-II: Order of Ministry of Power, Govt. of India, No. 12/34/2020 - T&R, dated 24/12/2021.
3. Annexure-III: Order of Ministry of Power, Govt. of India, No. 25-10/72/2024-PG, dated 06/08/2025
4. Annexure-IV: Guidelines of CEA for Cyber Security in Power Sector, 2021.

ANNEXURE-A

**GOVERNMENT OF ASSAM**
**FINANCE (TAXATION) DEPARTMENT**
**JANATA BHAWAN, DISPUR, GUWAHATI-6**
**Email - eoffice.fintax@assam.gov.in,/financetaxation@yahoo.in**

eCF No.803347/20 Dated Dispur 11-07-2026

From : Smti. Sanghamitra Bhagawati, ACS,
Deputy Secretary to the Govt. of Assam,
Finance (Taxation) Department

To : 1) The Senior Most Secretary, Public Works (Building & NH) / Public Works (Health & Education) / Public Works (Roads) / Irrigation / Water Resource / Public Health Engineering Department, Janata Bhawan, Dispur, Guwahati - 781006.

2) The Managing Director,
Assam Electricity Grid Corporation Limited (AEGCL) /
Assam Power Generation Corporation Limited (APGCL)/
Assam Power Distribution Company Limited (APDCL).

Subject : Guidelines regarding determination of maximum permissible Input Tax Credit (ITC) utilization ratios in respect of works contracts executed under Works Departments and Public Sector Undertakings of the Government of Assam.

Ref : Record of discussion of the meeting with various Works Department held on 25th June 2026 (Copy *enclosed*).

Sir,

With reference to the subject cited above, I am directed to state that with a view to ensuring uniformity, transparency and proper verification of Input Tax Credit (ITC) utilization by contractors executing Government works, the following instructions shall be complied with by all concerned Works Departments:

**1. Maximum acceptable ITC utilization ratios**

| # | Department | Type of work | Key inputs / | *Maximum* |
|---|---|---|---|---|

| | | | process involved | acceptable ITC utilisation ratio |
|---|---|---|---|---|
| i. | Public Works Department – Building, Health & Education | RCC Building | • Civil work (cement, brick, sand, Steel, Stone chips, Tiles, paint, etc.)<br>• Electrical work<br>• Plumbing<br>• Water supply<br>• Mechanical | 70% |
| | | Stadiums | • Civil work (cement, brick, sand, Steel, Stone chips, Tiles, paint, etc.)<br>• Electrical work<br>• Plumbing<br>• Water supply<br>• Site development | 55% |
| (ii) | Public Works Department – Roads | Bituminous roads or Paver blocks | • Road work (bitumen/ paver block, gravel, sand, etc.) | 30% (if contractor has own quarry)<br>40% (if contractor does not have own quarry) |
| | | | • ICBP Road work (ICBP, gravel, sand, Road Furnisher etc.) | 40% (if contractor has own quarry)<br>50% (if contractor does not have own |

| | | | | |
|---|---|---|---|---|
| | | | | quarry) |
| | | | • Drain work (cement, sand, chips, steel, etc.) | 60% |
| | | Build-up girder (BUG)/ Steel Bridge (primarily over water bodies) | • Steel<br>• Cement<br>• Chips<br>• Sand<br>• Gravel | 75% |
| | | Fly Overs / RCC Bridge | • Cement<br>• Steel<br>• Chips<br>• Sand<br>• Gravel<br>• Others | 70% |
| | | Mixed Contracts (Road and Bridge/Road and Drain etc) | As applicable | As per weightage of the component in the estimate |
| (iii) | Department of Irrigation | Flow Irrigation Scheme (FIS) | • Concrete work (cement, steel, sand)<br>• Earthwork<br>• Mechanical work (steel plates, channel)<br>• Solar/Electrical work | 60% |
| | | Lift Irrigation System (LIS) | • Concrete work<br>• Mechanical work<br>• Solar/Electrical work<br>• Distribution | 60% |

| | | | | |
|---|---|---|---|---|
| | | | System | |
| | | Tube Wells | • Concrete work<br>• Pipe network<br>• Pump (solar or electrical)<br>• Gravel | 45% |
| (iv) | Assam Electricity Grid Corporation Limited (AEGCL) | EHV Grid Su-Station | • Material supply<br>• Freight & Insurance<br>• Erection and civil works | 80% |
| | | EHV Transmission Lines | • Material supply<br>• Freight & Insurance<br>• Erection and civil works | 80% |
| (v) | Assam Power Generation Corporation Limited (APGCL) | Hydro Project | • Civil work<br>• Electro-Mechanical work<br>• Hydro-mechanical work<br>• Colony / Roads | 70% |
| | | Thermal Project | • Civil work<br>• Electro-mechanical | 75% |
| | | Solar Projects | • Panel Supply<br>• Civil work | 80% |
| (vi) | Assam Power Distribution Company Limited (APDCL) | Construction of 33kV Sub-Station/ DTR Substation | • Material Supply for Electrical/Civil Works<br>• Fright & Insurance | 80% |
| | | | • Poles (PSC/Steel | |

| | | | | |
|---|---|---|---|---|
| | | Power Distribution Network (LT/HT) | Tubuler Pole), GI Channel, GI Angle, LA, Hardware Fittings<br>• Conductor, AB Cable/ MVCC Covered Conductor | 80% |
| (vii) | Water Resources Department | Embankment | • Earthwork<br>• Geo-bags<br>• Tarping works | 30% |
| (viii) | Public Health Engineering Department | Water supply | • Civil work (steel, cement, pipes)<br>• Electrical work (transformer, cable work)<br>• Mechanical Work (tubewell, pumps) | 70% |

I. Contractors utilizing ITC beyond the prescribed benchmark shall be identified and verified by the Procuring entity for verification without fail.

II. Where ITC claims are found genuine after verification, no further action shall be taken; otherwise appropriate action shall be initiated under GST law contractual provisions and Assam Public Procurement Framework..

III. Where fake ITC/bogus billing is detected or payment of inputs in cash is found, the concerned Works Department shall take action including blacklisting/debarment as permissible. Suitable tender clauses shall be incorporated in current and future tenders by the Procuring Entity

IV. For bituminous works, procurement shall be made only from authorized empaneled vendors.

V. Applications of private bitumen vendors shall be vetted by PWD (Roads) after verification by GST department. PWD (Roads) shall ensure an adequate panel of authorized vendors and incorporate suitable tender provisions. Empanelment shall be cancelled if GST norms not followed by vendors.

**2. The above instructions shall be implemented by all concerned Departments/Organizations subject to the following conditions:**

I. A suitable provision may be incorporated to relax the prescribed maximum permissible ITC utilization ratio in exceptional cases where a genuine and justifiable requirement exists, particularly where the labour component of the work is substantially outsourced.

II. It shall be clearly stipulated that the prescribed maximum permissible ITC utilization ratio represents only the upper ceiling and shall not be construed as the standard or automatic entitlement. The concerned Procuring entity shall determine the admissible ITC utilization ratio on a case-to-case basis after due examination and shall ensure that the prescribed ceiling is not misused.

III. The concerned Procuring entity shall obtain a certificate from the contractor confirming compliance with the applicable provisions of the GST Acts, Rules and other relevant statutory requirements. To implement this, a standard format is also *enclosed* for ready reference.

IV. The prescribed maximum permissible ITC utilization ratios shall be incorporated in the bid documents and form part of

all future contracts. Existing contracts may also be suitably amended, wherever legally permissible. However, provision may be kept for relaxation in exceptional cases where genuine and justifiable reasons exist.

v. Tender/contract documents shall contain appropriate provisions for debarment or blacklisting of contractors, after following due process, where they are found to have availed fake ITC, indulged in bogus billing, payment of inputs in cash or committed any other serious violation of the Assam GST Framework or Procurement Framework.

This has the approval of the Competent Authority.

Yours faithfully,

Encl : As stated above

Digitally signed by
Sanghamitra Bhagawati
Date: 11-07-2026
14:22:11

Deputy Secretary to the Govt. of Assam,
Finance (Taxation) Department

Memo eCF No.803347/20-A Dated Dispur 11-07-2026

Copy for information and necessary action to:

1. The Commissioner of Taxes, Assam, Kar Bhawan, Dispur, Guwahati – 781006.

2. The Staff Officer to Chief Secretary, Assam, Lok Sewa Bhawan, Dispur, Guwahati – 781006.

3. OSD to the Hon'ble Finance Minister, Assam, Janata Bhawan, Dispur, Guwahati – 781006, for kind appraisal of Hon'ble Minister.

4. PS to the Additional Chief Secretary to Chief Minister, Assam, Lok Sewa Bhawan, Dispur, Guwahati – 781006, for kind appraisal of Additional Chief Secretary.

5. PS to the Sr Most Secretary to the Govt. of Assam, Finance

Department, Janata Bhawan, Dispur, Guwahati – 781006, for kind appraisal of Sr Most Secretary.

***e-signed***
Deputy Secretary to the Govt. of Assam,
Finance (Taxation) Department

**ANNEXURE-II**

No. 12/34/2020-T&R
Government of India / Bharat Sarkar
Ministry of Power / Vidyut Mantralaya
(T&R Division)

"F" Wing, 2nd Floor, Nirman Bhawan,
New Delhi, Dated the 24th December, 2021.

ORDER

Subject: Testing of power system equipment for use in the Supply System and Network in the country for Cyber Security – reg.

Reference is invited to this Ministry's Order No.12/34/2020-T&R dated 8th June, 2021on the above mentioned subject. The above Order stands revised to the extent attached in Annexure 1 to Annexure 4.

2. The above Order dated 8th June, 2021, shall be applicable for imported products as listed in Annexure-1 for orders placed on or after 8th June 2021.

3. The subject order will be reviewed and updated as needed and the same will be notified as and when any changes / updates are implemented.

4. This issues with the approval of the competent authority.

Encl: Annexure 1 to 4.

(Ujjwal Kumar Sinha)
Deputy Secretary to the Govt. of India
Tel: 23063497

To

1. All Ministries/Departments of Government of India (As per list)
2. Secretary (Coordination), Cabinet Secretariat
3. Vice Chairman, NITI Aayog
4. Comptroller and Auditor General of India
5. Chairperson, CEA
6. Secretary (Power/ Electricity), all State Governments & Union Territory Administration as per mailing list.
7. Chairman of all State Power Utilities as per mailing list.
8. CMDs of CPSEs/ Chairman. of DVC &BBMB/ MD, EESL/ DG, NPTI/ DG, CPRI/ DG, BEE
9. All ASs / JSs / EA, MoP

Copy to:

1. PS to Hon'ble PM, Prime Minister's Office
2. PS to Hon'ble MoP for Power and NRE
3. PS to Hon'ble MoS for Power and Heavy Industries
4. Sr. PPS to Secretary (Power)

**Annexure – 1**

**List of designated laboratories for cyber security conformance testing**

**Table -A. Field Equipment /Operational Technology (OT)**

| Sl. No. | Equipment | Communication Protocol Conformance Standards | Protocol Security Conformance Standards | Designated Laboratories |
|---|---|---|---|---|
| 1 | Remote Terminal Units (RTUs) / Feeder / Field RTUs (FRTUs)&PLCs with IEC communications protocols | IEC 60870-5 -101 / IEC 60870-5 -104 (Test Details-Annexure 2) | IEC 60870-5- 7 Security extension &IEC 62351 series (specifically IEC 62351-100 parts 1& 3) ( Test Details Annexure-2) | Central Power Research Institute (CPRI), Prof Sir C V Raman Road, Sadashiva Nagar PO, Bengaluru - 560080, Karnataka |
| 2 | Intelligent Electronic Device (IED) / Equipment / Numerical Protection Relays / Bay Control Units / Bay Protection Units, Gateways, Transformer Tap controller/ changer with IEC 61850 communication protocol | IEC 61850-5 to IEC 61850-10 ( Test Details-Annexure 2) | | CPRI |
| 3 | Smart meters with IEC 62056communication protocols | IS 15959 series and IS 16444 series ( Test details-Annexure 2) | IS 15959 series and IS 16444 series (Test Details Annexure 2) | 1. CPRI<br>2. Electrical Research and Development Association (ERDA), ERDA Road, GIDC, Makarpura, Vadodara - 390 010 Gujarat<br>3. Yadav Measurements Pvt. Ltd. (YMPL) 373-375, RIICO Bhamashah Industrial Area Kaladwas 313003 Udaipur – Rajasthan |

**Information Technology (IT) Equipment (Main / Backup / Disaster recovery (DR) Control Centre / Substation control centre IT equipment)**

All IT products procured /supplied shall have a valid Certificate of Common Criteria as per ISO/IEC 15408 issued by signatories of the Common Criteria Recognition Agreement (CCRA)

www.commoncriteriaportal.org

Import/procurement/supplied from vendors sourcing from prior reference countries, the Certificate for Common Criteria shall be from Government Laboratories in India according to the IC3S scheme operated by Ministry of Electronics and Information Technology, which is a signatory to CCRA.
https://www.commoncriteria-india.gov.in/

**Details of tests for various identified products**

**Remote Terminal Units (RTUs)/ Feeder / Field RTUs (FRTUs) & PLC's (Sl. No. 1 of Table - A of Annexure - 1)**

**Test protocol:**

Utilities / manufacturers will submit the sample along with all the required technical documentation for taking up testing to the designated laboratory.

**Reference standards**

1) IEC 60870-5-101 & IEC 60870-5-104 as applicable

2) IEC 60870-5-7 Telecontrol equipment and systems - Part 5-7: Transmission protocols - Security extensions to IEC 60870-5-101 and IEC 60870-5-104 protocols (applying IEC 62351)

3) IEC 62351-100-1 & IEC 62351-100-3 and other cross referenced standards

**Test cases**

**Extract from standard (IEC 62351-100-1)**

The conformance test cases are divided into four clauses:

- Clause 5: Verification of configuration parameters. This clause contains the configuration parameters affecting the message contents and/or the protocol behaviour.
- Clause 6: Verification of communication. The goal of this clause is to verify that Device Under Test (DUT) is able to implement the security extension messages as described in IEC TS 60870-5- 7.
- Clause 7: Verification of procedures. The goal of this clause is to verify that DUT is able to execute the security extension procedures as described in IEC TS 62351-5.
- Clause 8: Test result chart. This clause contains the results of the test cases listed in Clauses 6 and 7 for each supported value of the configuration parameters listed in Clause 5.

The test cases are organized in tables. They are numbered; their numbering syntax is: Sub clause number (where the Table is located) + test case number.

In the column 'reference' each test case has a direct reference to IEC TS 62351-5 or IEC TS 60870-5-7 where the clause under test is defined.

Test cases are mandatory depending on the description in the column 'Required'. The following situations are possible:

M= Mandatory test case. The test is referencing a clause that is mandatory in IEC TS 62351-5 or IEC TS 60870-5-7.

Protocol Information Conformance Statement (PICS) x, x = Mandatory test case if the functionality is enabled in the PICS (by marking the applicable check box), with a reference to the section number of the PICS (x.x).

**Conformance testing of security extension procedures**

The security extension procedures can be summarized as follows:

- User management
- Update key maintenance
- Session key maintenance
- Challenge/Reply authentication
- Aggressive Mode authentication

**Extract from standard (IEC 62351-100-3)**

IEC 62351-3 defines the requirements related to the authentication/encryption protocol, procedures and methods to be implemented at TCP/IP (transport) level.

The conformance test cases are divided into three clauses:

- Clause 5: Verification of configuration parameters. This clause contains the parameters specified by the standards referencing IEC 62351-3 (see IEC 62351-3:2014/AMD1:2018, Clause 7) and affecting the protocol behaviour.
- Clause 6: Verification of IEC 62351-3 requirements. The goal of this clause is to verify that DUT is conformant to the requirements of the IEC 62351-3.
- Clause 7: Test result chart. This clause contains the results of the test cases listed in Clause 6 for each supported value of the configuration parameters listed in Clause 5.

The test cases are organized in tables. They are numbered, their numbering syntax is: Sub clause number (where the table is located) + test case number.

In the column 'Reference' each test case has a direct reference to IEC 62351-3 where the clause under test is defined. PICS or Protocol Implementation eXtra Information for Testing (PIXIT) could be found in the "Reference" column for some test cases whenever the execution of the test case shall take into account specific parameter values declared in the PICS or PIXIT of the DUT.

Test cases are mandatory depending on the description in the column 'Required'. The following situations are possible:

M = Mandatory test case. The test is referencing to a clause that is mandatory in IEC 62351-3.

PICS

or

PIXIT = Mandatory test case if the functionality is enabled in the PICS or PIXIT by marking the applicable check box or declaring the applicable value.

**Annexure – 3**

**Testing Criteria**

**1) Supply from Trusted Sources**

The sample size shall be as specified by CEA as per the approved criteria for Trusted Vendors

**2) Supply from other than trusted vendors**

For RTUs /FRTUs and IEDs, the sample size for testing shall be minimum one number from each make and having same firmware version for the supply lot size of 200 numbers or less. For every additional supply lot of upto 200 numbers, one sample having the same firmware version as that of the first lot shall be tested for randomly selected test cases. For smart meters, the sample size for testing shall be minimum one number from each make and having same firmware version for the supply lot size of 5000 numbers or less. For every additional supply lot of upto 5000 numbers, one sample having the same firmware version as that of the first lot shall be tested for randomly selected test cases. The manufacturer shall submit request to the Nodal agency along with vendor's / manufacturer's certifications for supply chain management system practices and secure product development process implementations based on any one or more of standards ISO / IEC 27036, ISO / IEC 20243, IEC 62443 for verification.

After scrutiny of vendor's / manufacturer's proof and certifications the supplier / utilities shall be asked to submit product to the designated laboratory for communication and cyber security conformance testing. All certifications shall be valid as on the date of submission of samples for testing and product certifications / type test reports shall not be older than 5 years.

The entire supply lot shall stand rejected on failure of any sample drawn from the lot to comply with the test requirements.

**3) Supply from prior reference countries**

The utility shall obtain prior permission from the Government of India for importing the product / system from prior reference countries.

The sample size shall be 5% of the supply lot / ordered quantity (minimum one) from each make and having same firmware version for each supply lot shall be tested. The manufacturer shall submit request to the Nodal agency along with vendor's / manufacturer's certifications for supply chain management system practices and secure product development process implementations based on any one or more of standards ISO / IEC 27036,ISO / IEC 20243, IEC 62443 for verification. All certifications shall be valid as on the date of submission of samples for testing and product certifications / type test reports shall not be older than 5 years.

After scrutiny of vendor's / manufacturer's proof and certifications the supplier / utilities shall be asked to submit product to the designated Government / Government controlled Autonomous laboratory for type tests (Annexure - 4) and for communication & cyber security conformance testing (Annexure 1 and Annexure 2).

The entire supply lot shall stand rejected on failure of any sample drawn from the lot to comply with the test requirements.

**Annexure – 4**

## Type Tests

Products imported from prior reference countries shall also undergo type testing (one sample)as per following standards in addition to communication protocol and security conformance testing at the designated Government / Government controlled Autonomous laboratory:

### Type test standards for RTUs/ FRTUs

1. IEC 60870-l-2 1989 Telecontrol equipment and systems. Part l: General considerations. Section Two: Guide for specifications.

2. IEC 60870-2-l:1995Telecontrol equipment and systems - Part 2; Operating conditions - Section l: Power supply and electromagnetic compatibility.

3. IEC 60870-2-21996 Telecontrol equipment and systems - Part 2: Operating conditions - Section 2: Environmental conditions (climatic, mechanical and other non-electrical influences).

4. IEC 60870-3: 1989 Telecontrol equipment and systems. Part 3: Interfaces (electrical characteristics)

### Type test standard for IEDs / Numerical Protection Relays / Bay controls units

1. The applicable testing standards for Protection Relays, Sensors, Tap Changer Control, Bay Protection Units, Measurement Equipment is IEC60255-1 (Common Requirements), -21 (Vibration, Shock & Bump), -26 (Electromagnetic Compatibility) and – 27 (Safety) for Measurement Relays and Protection Equipment.

2. IEC 61850-3: 2013, Ed. 2 Communication networks and systems for power utility automation - Part 3: General requirements.

### Type test standards for Smart meters

1. IS 16444: 2015 AC static direct connected watthour smart meter class 1 and 2 - Specification.

2. IS 16444 Part 2: 2017 AC static transformer operated watthour and var - Hour smart meters, class 0.2 S, 0.5 S and 1.0 S: Part 2 specification transformer operated smart meters.

**Note:**

1. All above referred standards shall be latest with amendments if any at the time of submission of sample(s) for testing.

2. Type tests generally covers functionality, environmental, mechanical, EMI/ EMC and electrical safety related tests.

3. All certifications shall be valid as on the date of submission of samples for testingand product certifications/type test reports shall not be older than 5 years.

**ANNEXURE-III**

No. 25-10/72/2024-PG
Government of India
Ministry of Power
(PG Desk)
****

Shram Shakti Bhawan, Rafi Marg,
New Delhi, dated the 06th August, 2025

**ORDER**

**Subject: Testing of power system equipment for use in the Supply System and Network in the country for Cyber Security - reg.**

Reference is invited to this Ministry's Order No.12/34/2020-T&R dated 24th December 2021 (copy enclosed) on the above-mentioned subject. The above Order stands amended to include products, whose smart and programmable components are imported and assembled in India, for use in the power System and Network.

2. The Order dated 06th August, 2025, shall be applicable for all products as listed in Annexure-1 for orders placed on or after 06th August, 2025

3. The subject order will be reviewed and updated as needed.

4. This issues with the approval of Competent Authority.

Encl: As above

(Deepak Rao)
Director
Tele No. 23354399

i. All Ministries/Departments of Government of India (As per list)
ii. Secretary (Coordination), Cabinet Secretariat, New Delhi
iii. Vice Chairman, NITI Aayog , New Delhi.
iv. Comptroller and Auditor General of India, New Delhi.
v. Chairperson, CEA , New Delhi
vi. Secretary (Power/ Electricity), all State Governments & Union Territory Administration as per mailing list.
vii. Chairman of all State Power Utilities as per mailing list.
viii. CMDs of CPSEs/ Chairman of DVC & BBMB/ MD, EESL/ DG, NPTI/ DG, CPRI/ DG, BEE.
ix. All ASs / JSs /CE, Ministry of Power, New Delhi

Copy to:

i. PS to Hon'ble PM, Prime Minister's Office
ii. PS to Hon'ble Minister of Power and Ministry of Housing and Urban Affairs.
iii. PS to Hon'ble Minister of State for Power.
iv. PPS to Secretary (Power).

**Annexure-IV**

File No.CEA-CH-13-12/4/2021-IT Division

भारत सरकार
**Government of India**
विद्युत मंत्रालय
**Ministry of Power**
केन्द्रीय विद्युत प्राधिकरण
**Central Electricity Authority**
सूचना प्रौद्योगिकी एवं साइबर सुरक्षा प्रभाग
**Information Technology & Cyber Security Division**
************

**विषय : CEA (Cyber Security in Power Sector) Guidelines, 2021.**

CEA is mandated to prepare 'Guidelines on Cyber Security' in Power Sector under the provision of regulation (10) of the Central Electricity Authority (Technical Standards for Connectivity to the Grid) (Amendment) Regulations, 2019. Guidelines on Cyber Security in Power Sector incorporating the cardinal principles has been prepared by CEA. In compliance to the provision of the above regulation, **CEA (Cyber Security in Power Sector) Guidelines, 2021** are issued for compliance by all entities listed in the clause 2.3 (Applicability of the Guidelines) of the guidelines.

**Encl:** Guidelines on Cyber Security

07/10/21
**(V.K Mishra)**
**Secretary CEA**

# CEA (Cyber Security in Power Sector) Guidelines, 2021

## 1.0 Background

1.1 Cyber intrusion attempts and Cyber-attacks in any critical sector are carried out with a malicious intent. In Power Sector it's either to compromise the Power Supply System or to render the grid operation in-secure. Any such compromise, may result in mal-operations of equipments, equipment damages or even in a cascading grid brownout/blackout. The much hyped air gap myth between IT and OT Systems now stands shattered. The artificial air gap created by deploying firewalls between any IT and OT System can be jumped by any insider or an outsider through social engineering. Cyber-attacks are staged through tactics & techniques of Initial Access, Execution, Persistence, Privilege Escalation, Defence Evasion, Command and Control, Exfiltration. After gaining the entry inside the system through privilege escalation, the control of IT network and operations of OT systems can be taken over even remotely by any cyber adversary. The gain of sensitive operational data through such intrusions may help the Nation/State sponsored or non-sponsored adversaries and cyber attackers to design more sinister and advanced cyber-attacks.

1.2 Government of India has set up the Indian Computer Emergency Response Team (CERT-In) for Early Warning and Response to cyber security incidents and to have collaboration at National and International level for information sharing on mitigation of cyber threats. CERT-In regularly issues advisories on safeguarding computer systems and publishes Security Guidelines which are widely circulated for compliances. All Central Government Ministries/ Departments and State/Union Territory Governments have been advised to conduct cyber security audit of their entire Cyber Infrastructure including websites at regular interval through CERT-In empanelled Auditors so as to identify gaps and appropriate corrective actions to be taken in cyber security practices. CERT-In extends supports to enable Responsible Entity in conducting cyber security mock drills and in assessment of their preparation to withstand cyber-attacks. The Responsible Entity must submit Reports of Cyber Audit of cyber security controls, architecture, vulnerability management, network security and periodic cyber security drills to sectoral CERT as well as CERT-In. Team of experts shall review these reports and shortcomings if any in the compliances shall be flagged by them. CERT-In on regular basis also conducts workshops and training programs to enhance Cyber awareness of all Stakeholders.

1.3 Ministry of Power has created 6(six) sectoral CERTs namely Thermal, Hydro, Transmission, Grid Operation, RE and Distribution for ensuring cyber security in Indian Power Sector. Each Sectoral CERT has prepared their sub-sector specific model Cyber Crisis Management Plan(C-CMP) for countering cyber-attacks and cyber terrorism. Each Sectoral CERT has circulated their model C-CMPs for preparation and implementation of organization specific C-CMP by each of their Constituent Utility.

1.4 All Responsible Entities, Service Providers, Equipment Suppliers/Vendors and Consultants engaged in Power Sector are equally responsible for ensuring cyber security of the Indian Power Supply System. They are to act timely upon each threat intelligence,

advisories and other inputs received from authenticated sources, for continuous improvement in their cyber security posture.

1.5 In the current Indian scenario though many cyber security directives and guidelines exists, but none of them are power sector specific. Ministry of Power has directed CEA to prepare Regulation on Cyber Security in Power Sector. And as an interim measures CEA has been directed to issue Guideline on Cyber Security in Power Sector, under the provision of Regulation 10 on Cyber Security in the "Central Electricity Authority (Technical Standards for Connectivity to the Grid) (Amendment) Regulations, 2019".

1.6 The Guidelines on Cyber Security, in the form of Articles written below, requires mandatory Compliance by all Responsible Entities. The Guidelines shall come into effect from the date of issue by Central Electricity Authority, New Delhi.

2.0 Hereby the Guidelines on Cyber Security are drawn in the form of Articles for compliance by the Requester as well as User under the following provision of Regulation 10 on Cyber Security, in the "Central Electricity Authority (Technical Standards for Connectivity to the Grid) (Amendment) Regulations, 2019".

***"The requester and the user shall comply with cyber security guidelines issued by the Central Government, from time to time, and the technical standards for communication system in Power Sector laid down by the Authority."***

2.1 **Objective of issuing Guideline**:

a) Creating cyber security awareness
b) Creating a secure cyber ecosystem,
c) Creating a cyber-assurance framework,
d) Strengthening the regulatory framework,
e) Creating mechanisms for security threat early warning, vulnerability management and response to security threats,
f) Securing remote operations and services,
g) Protection and resilience of critical information infrastructure,
h) Reducing cyber supply chain risks,
i) Encouraging use of open standards,
j) Promotion of research and development in cyber security,
k) Human resource development in the domain of Cyber Security,
l) Developing effective public private partnerships,
m) Information sharing and cooperation
n) Operationalization of the National Cyber Security Policy

2.2 Within the text of these Articles, '**Responsible Entity'** shall mean all:

a) Transmission Utilities as well as Transmission Licensees,
b) Load despatch centres (State, Regional and National),
c) Generation utilities (Hydro, Thermal, Nuclear, RE),
d) Distribution Utilities
e) Generation Aggregators,
f) Trading Exchanges,
g) Regional Power Committees, and
h) Regulatory Commissions.

2.3 **Applicability:**

All Responsible Entities as well as System Integrators, Equipment Manufacturers, Suppliers/Vendors, Service Providers, IT Hardware and Software OEMs engaged in the Indian Power Supply System.

2.4 **Scope:**

2.4.1 **Control Systems for System Operation and Operation Management.**

a) Grid Control and Management Systems,
b) Power Plant Control Systems,
c) Central Systems used to monitor and control of distributed generation and loads e.g. virtual power plants, storage management, central control rooms for hydroelectric plants, photovoltaic/wind power installations,
d) Systems for fault management and work force management,
e) Metering and measurement management systems,
f) Data archiving systems,
g) Parameterisation, configuration and programming systems,
h) Supporting systems required for operation of the above mentioned systems,

2.4.2 **Communication System.**

a) Routers switches and firewalls,
b) Communication technology-related network components,
c) Wireless digital systems.
d) Control Centre to Control Centre Communications for data exchange on ICCP. **(IEC 61850/60850-5/TASE.2/)**

2.4.3 **Secondary, Automation and Tele control technologies**

a) Control and Automation components,
b) Control and field devices,
c) Tele control devices,
d) Programmable logic controllers / Remote Terminal Units, including digital sensor and actuators elements,
e) Protection devices,
f) Safety components,
g) Digital measurement and metering installations,
h) Synchronisation devices,
i) Excitation Systems,

**3.0 Definition of Terms:**

1. **Access Management**: shall mean set of policies and procedures of the Responsible Entity for allowing Personnel, devices and IoT to securely perform a broad range of operational, maintenance, and asset management tasks either on site or remotely as laid down in Clause 5.2.5 of IS 16335**.**
2. **Accreditation:** shall mean the process of verifying that an organisation is capable of conducting the tests and assessments against a product/process that are required to be certified.

3. **Accreditation Body:** shall mean an organisation that has been accredited to verify the credentials and capabilities of the organisations that wish to become a certification body.
4. **Act:** shall mean the Information Technology Act, 2000 (21 of 2000)
5. **Asset**: shall mean anything that has value to the organization.
6. **Certification:** shall mean the process of verifying that a product has been manufactured in conformance with a set of predefined standards and/or regulations by an organisation, that is accredited to conduct the certification process
7. **Certification Body:** shall mean an organisation that has been accredited by an accreditation body to certify products / process against a certification scheme.
8. **Certification Scheme:** shall mean the processes, paperwork, tools, and documentation that define how a product or manufacturer is certified
9. **Chief Information Security Officer:** shall means the designated employee of Senior management level directly reporting to Managing Director/Chief Executive Officer/Secretary of the Responsible Entity, having knowledge of Information Security and related issues, responsible for cyber security efforts and initiatives including planning, developing, maintaining, reviewing and implementation of Information Security Policies
10. **Critical Assets:** shall mean the facilities, systems and equipment which, if destroyed, degraded or otherwise declared unavailable, would affect the reliability or operability of the Power Supply System.
11. **Critical System:** shall mean cyber assets essential to the reliable operation of critical asset. Critical System consists of those cyber assets that have at least one of the following characteristics:
    a) The cyber asset uses a routable protocol to communicate outside the electronic security perimeter.
    b) The cyber asset uses a routable protocol within a control centre.
    c) The cyber asset is dial-up accessible.
12. **Critical Information Infrastructure*:*** shall mean Critical Information Infrastructure as defined in explanation of sub-section (1) of Section 70 of the Act.
13. **Cyber Assets**: shall mean the programmable electronic devices, including the hardware, software and data in those devices that are connected over a network, such as LAN, WAN and HAN.
14. **Cyber Crisis Management Plan:** shall mean a framework for dealing with cyber related incidents for a coordinated, multi-disciplinary and broad-based approach for rapid identification, information exchange, swift response and remedial actions to mitigate and recover from malicious cyber related incidents impacting critical processes.
15. **Cyber Security Breach**: shall mean any cyber incident or cyber security violation that results in unauthorized or illegitimate access or use by a person as well as an entity, of data, applications, services, networks and/or devices through bypass of the underlying cyber security protocols, policies and mechanisms resulting in the compromise of the confidentiality, integrity or availability of data/information maintained in a computer resource or cyber asset.
16. **Cyber Security Incident:** shall mean any real or suspected adverse cyber security event that violates, explicitly or implicitly, cyber security policy of Responsible Entity resulting in unauthorized access, denial of service or disruption, unauthorized use of computer resource for processing or storage of information or changes to data or information

without authorization, leading to harm to the power grid or its critical sub-sectoral elements Generation, Transmission and Distribution.

17. **Cyber Security Policy:** shall mean documented set of business rules and processes for protecting information, computer resources, networks, devices, Industrial Control Systems and other OT resources.
18. **Electronic Security Perimeter:** shall mean the logical border surrounding a network to which the Cyber Systems of Power Supply System are connected using a routable protocol.
19. **Information Security Division:** shall mean a division accountable for cyber security and protection of the Critical System of the Responsible Entity.
20. **Protected System:** shall mean any computer, computer system or computer network of the Responsible Entity notified under section 70 of the Act, in the official gazette by appropriate Government.
21. **Security Architecture:** shall mean a framework and guidance to implement and operate a system using the appropriate security controls with the goal to maintain the system's quality attributes like confidentiality, integrity, availability, accountability and assurance.
22. **Vulnerability:** shall mean intrinsic properties of something resulting in susceptibility to a risk source that can lead to an event with a consequence
23. **Vulnerability Assessment:** shall mean a process of identifying and quantifying vulnerabilities

## 4.0 Standards

| Reference | Description |
|---|---|
| ISO/IEC 15408 | Common Criteria Certification Standard |
| ISO/IEC 17011 | General requirements for accreditation bodies accrediting conformity assessment bodies |
| ISO/IEC 17025 | General requirements for the competence of testing and calibration laboratories |
| ISO/IEC 21827 | Systems Security Engineering - Capability Maturity Model (SSE-CMM) |
| ISO/IEC 24748-1 | Systems and software engineering — Life cycle management — Part 1: Guidelines for life cycle management. |
| ISO 27001/2 | Information Security Management |
| ISO/ IEC 27019 | Information technology — Security techniques — Information Security controls for the energy utility industry |
| ISO/IEC 61508 | Functional Safety of Electrical / Electronic / Programmable Electronic Safety-related Systems |
| IEC 61850 | Communication networks and systems for power utility automation |
| IEC 62351 | Standards for Securing Power System Communications |
| IEC 62443 | Cyber Security for Industrial Control Systems |
| IS 16335 | Power Control Systems – Security Requirements. |

## 5.0 Abbreviations

| Abbreviations | | Description |
|---|---|---|
| a) | BES | Bulk Electric System |

| | | |
|---|---|---|
| b) | CDAC | Centre for Development of Advanced Computing |
| c) | CEA | Central Electricity Authority |
| d) | CERC | Central Electricity Regulatory Commission |
| e) | CERT | Computer Emergency Response Team |
| f) | CERT-In | Indian Computer Emergency Response Team |
| g) | CII | Critical Information Infrastructure |
| h) | CISO | Chief Information Security Officer |
| i) | CSK | Cyber Swachhta Kendra |
| j) | COTS | Commercial off-the Shelf |
| k) | ESP | Electronic Security perimeter |
| l) | ICS | Industrial Control Systems |
| m) | ICT | Information and Communications Technology |
| n) | IEC | International Electro Technical Commission |
| o) | ISAC | Information Sharing and Analysis Centre |
| p) | ISD | Information Security Division |
| q) | ISO | International Organization for Standardization |
| r) | ISMS | Information Security Management System |
| s) | IT | Information Technology |
| t) | FAT | Factory Acceptance Test |
| u) | NABL | National Accreditation Board for Testing and Calibration Laboratories |
| v) | NCIIPC | National Critical Information Infrastructure Protection Centre |
| w) | NLDC | National Load Dispatch Centre |
| x) | NPTI | National Power Training Institute |
| y) | NSCS | National Security Council Secretariat |
| z) | OEM | Original Equipment Manufacturer |
| aa) | OT | Operational Technology |
| bb) | RLDC | Regional Load Dispatch Centres |
| cc) | SAT | Site Acceptance Test |
| dd) | SERC | State Electricity Regulatory Commission |
| ee) | SCADA | Supervisory Control and Data Acquisition Systems |
| ff) | SIEM | Security Information and Event Management |
| gg) | SLA | Service Level Agreement |
| hh) | SLDC | State Load Dispatch Centre |
| ii) | QCI | Quality Council of India |

# CEA (Cyber Security in Power Sector) Guidelines, 2021

## Article 1. Cyber Security Policy.

a. **Cardinal Principles: The Responsible entity will strictly adhere to following cardinal principles while framing cyber security policy:**

   i. There is hard isolation of their OT Systems from any internet facing IT system.
   ii. May keep only one of their IT systems with internet facing at any of their site/location if required which is isolated from all OT zones and kept in a separate room under the security and control of CISO.
   iii. Downloading/Uploading of any data/information from their internet facing IT system is done only through an identifiable whitelisted device followed by scanning of both for any vulnerability/malware as per the SOP laid down and for all such activities digital logs are maintained and retained under the custody of CISO for at least 6 months. The log shall be readily to carry out the forensic analysis if asked by investigation agency.
   iv. List of whitelisted IP addresses for each firewall is maintained by CISO and each firewall is configured for allowing communication with the whitelisted IP addresses only.
   v. Communication between OT equipment/systems is done through the secure channel preferably of POWERTEL through the fibre optic cable. Security configuration of the communication channel is also to be ensured.
   vi. All ICT based equipment/system deployed in infrastructure/system mandatorily CII are sourced from the list of the "Trusted Sources" as and when drawn by MoP/CEA.

b. The Responsible Entity shall be ISO/IEC 27001 certified (including sector specific controls as per ISO/IEC 27019).
c. The Responsible Entity shall have a Cyber Security Policy drawn upon the guidelines issued by NCIIPC.
d. The Responsible Entity shall ensure annual review of their Cyber Security Policy by subject matter expert and changes shall be made therein only after obtaining the due approval from Board of Directors.
e. The process of Access Management for all Cyber Assets owned or under control of the Responsible Entity shall be detailed in the Cyber Security Policy.
f. The Cyber Security Policy shall leverage state-of-art cyber security technologies and relevant processes at multiple layers to mitigate the cyber security risks.
g. The Responsible Entity shall be solely responsible to get Cyber Security Policy implemented through its Information Security Division (ISD).
h. The CISO shall record the reason(s) for exemption required, if any, in case, unable to comply with any of the provision(s) of the Cyber Security Policy. Any exception shall be allowed only after an approval of provisions of compensatory control(s) to mitigate residual cyber security risks.

i. The CISO shall record the exemptions sought in statement of applicability controls, while getting the ISO 27001 certified. All exemptions and its justification need to be in conformance with Cyber Security Policy of the Responsible Entity.
j. The Responsible Entity shall allocate sufficient Annual budget for enhancing cyber security posture, enhanced year over year.
k. The Responsible Entity shall work in collaboration with other Industry Stakeholders as well as Academia to promote R&D activity in the domain of cyber security.
l. The Responsible Entity shall ensure that cyber security issues are taken up as agenda items in their Board meetings once in every three months.

**Article 2 Appointment of CISO.**

a) The Responsible Entity shall mandatorily appoint a CISO and shall confirm to qualification, if any, **laid** by Quality Council of India (QCI). In absence, the work of CISO shall be looked upon by Alternate CISO. In case qualification for appointment of Alternate CISO has been relaxed for reasons recorded thereof, Alternate CISO has to mandatorily acquire the minimum required cyber security skill sets within six months from the date of his appointment.
b) The Responsible Entity shall regularly update details of CISO and Alternate CISO, with the Sectoral CERT, as well as on ISAC-Power Portal.
c) Roles and Responsibility of CISOs shall be as laid by CERT-In and ring-fenced to ensure cyber security of the Cyber Assets of the Responsible Entity.

**Article 3: Identification of Critical Information Infrastructure (CII).**

a) The Responsible Entity shall submit to NCIIPC through Sectoral CERT, details of Cyber Assets which uses a routable protocol to communicate outside the Electronic Security Perimeter drawn by the Responsible Entity or a routable protocol within a control centre and dial-up accessible Cyber Assets, within 30 days from the date of their commissioning in the System.
b) The Responsible Entity shall submit details of Critical Business Processes and underlying information infrastructure along with mapped impact and Risk Profile to NCIIPC and shall get their CIIs identified in consultation with NCIIPC. The process of the notification/declaration by Appropriate Government shall follow thereafter.
c) The Responsible Entity shall review their declared/notified CIIs at least once a year to examine changes if any in the functional dependencies, protocols and technologies or upon any change in security architecture. The Responsible Entity shall review their declared/notified CIIs once in every 6 months, in case if NCIIPC has directed them to constitute an Information Security Steering Committee.
d) The Responsible Entity shall ensure that all cyber assets of their identified/notified CIIs are recorded in the asset register and considered for risk assessment as well as for finalization of controls in statement of applicability.

**Article 4. Electronic Security Perimeter**

a) The Responsible Entity shall identify and document the Electronic Security Perimeter(s) and all Access Points to the perimeter(s).

b) The Responsible Entity shall follow procedure of identifying "Electronic Security Perimeter" in case of distributed and/or hybrid information infrastructure, as per IEC 62443 / IS16335 (as amended from time to time).
c) The Responsible Entity shall ensure that every Critical System resides within an Electronic Security Perimeter.
d) The Responsible Entity shall perform a cyber-Vulnerability Assessment of each electronic Access Points to the Electronic Security Perimeter(s) at least once in every 6 (six) months and/or after any change in Security Architecture.
e) The Responsible Entity shall ensure that all critical, high and medium vulnerabilities identified as a result of cyber Vulnerability Assessment shall be closed and verified for the effective closure.

**Article 5. Cyber Security Requirements**

a) The Responsible Entity shall have an Information Security Division (ISD), headed by CISO.
b) The Responsible Entity shall ensure that the ISD must be functional on 24x7x365 basis and is manned by sufficient numbers of Engineers having valid certificate of successful completion of course on cyber security of Power Sector from the Training Institutes designated by CEA.
c) The Responsible Entity shall ensure that ISD
   1) has on-boarded Cyber Swachhta Kendra(CSK) of CERT-In, if they have public IPs.
   2) has timely acted upon the advisories, guidelines and directive of NCIIPC, CSK, CERT-In and Sectoral CERTs,
   3) has deployed an Intrusion Detection System and Intrusion Prevention System capable of identifying behavioural anomaly in both IT as well as OT Systems.
   4) shares reports on incident response and targeted malware samples with CERT-In,
   5) updates the firmware/software with the digitally signed OEM validated patches only.
   6) enables only those ports and services that are required for normal operations. In case of any emergency the procedure as laid in Access management be followed.
   7) maintains firewall logs for the last 6 months duration. Firewall logs shall be analysed and all critical and high severity comments shall be addressed for effective closure.
   8) retains document of FAT, SAT test results and report/ certificate of cyber tests carried out for compliance of Government Orders and Cyber Security Audit.*
   9) maintains all cyber logs and cyber forensic records of any incident for at least** 90 days.

   * FAT, SAT must include comprehensive cyber security tests of the component/equipment/system to be delivered/delivered at site.
   ** 90 days from date of the commissioning of the system/recovery from any incident, whichever is later.

d) The Responsible Entity shall routinely audit and test security properties of the Critical System and must act upon, in case if any new vulnerabilities is identified through testing or by the equipment manufacturer.

e) The Responsible Entity shall design a secure architecture for control system appropriate for their process control environment*.
f) All State Load Dispatch Centres(SLDCs) shall comply with the directions issued by the National Load Dispatch Centre(NLDC) as well as Regional Load Dispatch Centres(RLDCs) U/s 29 (1) of the Electricity Act, 2003 to ensure stability and cyber security of grid operation and achieve efficiency in the grid operation. In case of any non-compliance, the Head of SLDC shall be responsible and shall be liable for Penalty as per the provision of CERC/SERC.

*There are so many different types of systems in existence and so many possible solutions, it is important that the selection process ensures that the level of protection is commensurate with the business risk and the Responsible Entity shall not rely on one single security measure for its defence. *(Reference IEC/TR62351-10* Edition1.0 2012-10 *Power systems management and associated information exchange –Data and communications security – Part 10: Security architecture guidelines).*

**Article 6 Cyber Risk Assessment and Mitigation Plan**

a) The Responsible Entity shall document in their Cyber Security Policy a Cyber Risk Assessment and Mitigation Plans drawn upon the best practises being followed in the Power Sector, and the same shall be approved by Board of Directors.
b) The Cyber Risk Assessment and Mitigation Plans shall clearly define the matrix for assessing the cyber risk of both IT and OT environment and risk acceptance criteria.
c) The Cyber Risk Assessment Plan shall be capable to demonstrate that repeated cyber security risk assessment delivers consistent, valid and comparable results.
d) The review of cyber risk assessment shall be carried out at least once in a Quarter. The actionable of risk treatment and mitigation shall be tracked in this review for their effectiveness.
e) The CISO shall be responsible for implementation and regular review, on the basis of internal and external feedbacks, of the Cyber Risk Assessment and Mitigation Plans.

**Article 7 Phasing out of Legacy System**

a) As the life cycle of the Power System Equipment/System is longer than that of IT Systems deployed therein, the Responsible Entity shall ensure that all IT technologies in the Power System Equipment/System should have the ability to be upgraded.
b) The Responsible Entity shall ensure that the Information Security Division shall draw the list of all communicable equipments/systems nearing end life or are left without support from OEM. Thereafter CISO shall identify equipment/systems to be phased out from the list drawn, firm up their replacement plan and put up the replacement plan for approval before the Board of Directors.
c) The CISO shall ensure that till equipments/systems nearing end life or left without support from OEM are not replaced, their cyber security is hardened and ensured through additional controls provisioned in consultation with the OEM or alternate Supplier(s)*.
*e.g. Use of CDAC developed AppSamvid and whitelisting of applications installed may be explored across all legacy systems.
d) The Responsible Entity shall document in their Cyber Security Policy a Standard Operating Procedure for safe and secure disposal of outlived or legacy devices.

**Article 8. Cyber Security Training**.

a) The Responsible Entity shall establish, document, implement, and maintain an annual cyber security training program for personnel having authorized cyber or authorized physical access (unescorted or escorted) to their Critical Systems.
b) The Responsible Entity shall review annually their cyber security training program and shall update it whenever necessary. Annual Review shall record evaluation of the effectiveness of the trainings held.
c) The Responsible Entity shall ensure that Cyber Security training program designed for their IT as well as OT O&M Personnel must include following topics and as per their functional requirements and security concerns additional topics shall be added:
   1) User authentication and authorization.
   2) Cyber Security and Protection mechanisms of IT/OT/ICS Systems.
   3) Introduction to various standards i.e. ISO/IEC:15408, ISO/IEC:24748-1, ISO: 27001, ISO: 27002, ISO 27019, IS 16335, IEC/ISO:62443.
   4) Training on implementation of ISO/IEC 27001 and awareness on IEC 62443.
   5) Vulnerability Assessment in the Critical System.
   6) Monitoring and preserving of electronic logs of access of Critical Assets.
   7) Detecting cyber-attacks on SCADA and ICS systems
   8) The handling of Critical System during cyber crisis.
   9) Action plans and procedures to recover or re-establish normal functioning of Critical Assets and access thereto following a Cyber Security Incident.
   10) Hands on SCADA operation at any of the Regional Load Dispatch Centre.
   11) Handling of risks involved in the procurement of COTS Products.

d) All Personnel engaged in O&M of IT & OT Systems shall mandatorily undergo courses on cyber security of Power Sector from any of the training institute designated by CEA, immediately within 90 days from the notification of CEA Guidelines on Cyber Security in Power Sector.
e) The Responsible Entity shall ensure that none of their newly hired or the current Personnel have access to the Critical System, prior to the satisfactory completion of cyber security training programme from the Training Institutes designated in India, except in specified circumstances such as cyber crisis or an emergency.
f) NPTI in consultation with CEA shall identify and design domain specific courses on Cyber Security for different target groups. The "Governing Board for PSO Training and Certification" shall approve the content, duration etc of these courses and shall review it Annually. NPTI shall conduct these courses at all of their branches on regular basis and shall maintain the list of the Participants successfully completing the course.

**Article 9 Cyber Supply Chain Risk Management**

a) The Responsible Entity shall ensure that, as and when Ministry of Power, Government of India notifies the Model Contractual Clauses on cyber security, these clauses are included in their every Bid invited for procurement of any ICT based components/equipments/System to be used for Power System.
b) The Responsible Entity shall ensure that all the Communicable Intelligent Equipments and the Service Level Agreements (SLAs) for their Critical Systems shall be sourced from the list of the "Trusted Sources" as and when drawn by MoP/CEA.

c) The Responsible Entity shall ensure that, in case, for the any Communicable Intelligent Devices, if no Trusted Source has been identified, then the successful bidder in compliance with the provisions made in MoP order dated 2.7.2020 and any other relevant MoP order has got the product cyber tested for any kind of embedded malware/Trojan/cyber threat and for adherence to Indian Standards at the designated lab.

d) The Responsible Entity shall ensure that the essential cyber security tests are carried out successfully during FAT, SAT as detailed in **Annexure A.** The equipment/System besides for functionality shall also be tested in the factory for vulnerabilities, design flaws, parts being counterfeit or tainted, so as to minimize problems during on-site-testing and installation. Cyber Security Conformance Testing are to be carried out in the designated Lab as listed in **Annexure-I of MoP Order No. 12/13/2020-T&R dt. 8th June, 2021(Order at Annexure-B).**

e) The Responsible Entity shall ensure that the Equipment/System supplied by the successful bidder shall accompany with a certificate[$, #] obtained by OEM from a certification body accredited to assess devices and process for conformances to IEC 62443-4 standards during design and manufacture. The Responsible Entity shall accept the certificate submitted along with the supplied Equipment/System only if it's in line with the Testing Protocol as notified by Ministry of Power, Government of India, from time to time.

f) The Responsible Entity in compliance to the requirement of Article 9(e) shall also accept, till the setting up of an adequate certification facility in the India, a digitally signed self-declaration of conformance to the IEC 62443-4 standards during design and manufacture of the equipment/system, if submitted by the OEM.

g) The Responsible Entity shall dispose all unserviceable or obsolete Communicable Intelligent Devices as per the procedure laid in their Cyber Risk Assessment and Mitigation Plans which shall be in line with the prevailing best practices.

$ The National & International certification may be specified in the tender for critical systems/sub-systems being procured by the Responsible Entity.

# Certification Schemes:
**Embedded Device Security Assurance Certification** is for an individual product,
**System Security Assurance Certification** is for a set of products in a system (possibly from different vendors)
**Security Development Lifecycle Assurance Certification** is for the development processes that a manufacturer uses for developing products.

**Article 10 Cyber Security Incident Report and Response Plan**

a) The CISO of the Responsible Entity shall report in the formats prescribed by CERT-In, all Cyber Security Incidents, classified as reportable events.

b) Root cause analysis for all reportable events shall be carried out and corrective action taken, so as to ensure that any re-occurrence of such event can be managed with ease.

c) The Responsible Entity shall mandatorily define in their Cyber Security Policy, criteria(s) identified on the basis of impact analysis, for declaring the occurrence of

Cyber Security Incident(s) as a Cyber Crisis in the System owned or controlled by them.

d) The Responsible Entity shall mandatorily designate an Officer along with his/her standby by name and designation and empower them to declare an occurrence of the incident(s) as "Cyber Crisis". The contact details of these Officers shall be updated in the C-CMP within 15 days of changes if any due to transfer or superannuation etc.
e) The CISO shall ensure that during any Cyber Security Incident, ISD monitors and minutely records every details of cyber security events and incidents in both IT as well as the OT System owned or controlled by the Responsible Entity.
f) The CISO shall ensure that each cyber incident is handled strictly as per Cyber Security Incident Response Plan detailed in the latest C-CMP approved by the Board of Directors.
g) The Responsible Entity shall ensure that the efficacy of the Cyber Security Incident Response Plan is tested annually through mock drill(s) carried out, if feasible, as simulation exercise(s) or as table top exercise(s) with wider participation of their employees, in consultation with CERT-In and sectoral CERT. In case if any shortcoming is observed in the Cyber Security Incident Response Plan suitable changes shall be made in it.
h) The Responsible Entity shall ensure that the CISO compiles details of incident detection, incident handling, learnings from each incident and damage claims made if any and shall report to CERT-In as well as upload information on ISAC-Power Portal.

**Article 11 Cyber Crisis Management Plan(C-CMP)**

a) The Responsible Entity shall prepare a Cyber Crisis Management Plan and submit to their sectoral-CERT for review with intimation to Ministry of Power/CISO-MoP. Responsible Entity shall update their C-CMP on the basis of comments made by sectoral-CERT and then submit for vetting to CERT-In. The C-CMP shall be updated once again to include the observations made by CERT-In before seeking approval of Board of Directors for implementation of C-CMP.
b) The Responsible Entity shall ensure that the C-CMP is reviewed at least annually. The CISO shall ensure that all changes are made in C-CMP only with the due approval of Board of Directors and the changes made in C-CMP have been communicated through a verifiable means to all the concerned Personnel of the Responsible Entity.
c) The CISOs shall be the custodian of all the cyber security related documents including Cyber Crisis Management Plan, Risk Treatment Plan, Statement of Applicability of controls, and compliance to regulator's requirement.
d) The CISO shall be accountable for ensuring enforcement of C-CMP by Information Security Division of the Responsible Entity, during a cyber-crisis, as and when declared by the designated Officer. (refer Article 10(d))

**Article 12: Sabotage Reporting%**

a) The Responsible Entity shall incorporate procedure for identifying and reporting of sabotage in their Cyber Security Policy within 30 days from issue of the Guidelines, or grant of licence under the appropriate legal provisions to the Responsible Entity.
b) The CISO shall be held liable for non-reporting of identified sabotage(s) as per procedure laid for identifying and reporting of sabotage in the Cyber Security Policy of the Responsible Entity.

c) The CISO shall prepare a detailed report on disturbances or unusual occurrences, identified, suspected or determined to be caused by sabotage in the Critical System of the Responsible Entity, and shall submit the report to the Sectoral CERT as well as to CERT-In within 24 hours of its occurrence.
d) The CISO shall submit to NCIIPC within 24 hours of occurrence the report on every sabotage classified as cyber incidents(s) on "Protected System".
e) The CISO upon occurrence on every sabotage shall take custody of all log records as well as digital forensic records of affected Cyber Assets, Intrusion Detection System, Intrusion Protection System, SIEM and shall preserve them for at least 90 days and shall make them available as and when called upon for investigation by the concerned Agencies.

*%Disturbances or unusual occurrences, suspected or determined to be caused by sabotage.*
*Sabotage e.g. can be a forced intrusion in un-manned/manned facility and taking control of operation of Critical System through a communicating device.*

**Article 13 Security and Testing of Cyber Assets**

a) The Responsible Entity shall ensure security of all in-service phase as well as standby Cyber Assets through regular firmware/Software updates and patching, Vulnerability management, Penetration testing (of combined installations), securing configuration, supplementing security controls. CISO shall maintain details of update version of each firmware and software and their certification if received from OEMs.
b) The Responsible Entity shall carry out regularly Vulnerability Assessment of all Cyber Assets owned or under their control. If a Cyber Asset is found vulnerable to any exploits or upon any patch updates or major configuration changes, then further Penetration Testing may be carried out offline or in a suitably configured laboratory test-bed to determine other vulnerabilities that may have not been identified so far.
c) The Responsible Entity shall specify security requirement and evaluation criteria during each phase of their procurement Process.
d) The Responsible Entity shall ensure that all Cyber Assets being procured shall conform to the type tests as mentioned in the specification for type testing listed in the bid document. Type test reports of tests conducted in NABL accredited Labs or internationally accredited labs (with in last 5 years from the date of bid opening) shall be mandated to be submitted along with bid. In case, the submitted Type Test reports are not as per specification, the re-tests shall be conducted without any cost implication to the Responsible Entity.
e) The Responsible Entity shall ensure that all Communicable devices are tested for communication protocol as per the ISO/IEC/IS standards listed in **MoP Order No. 12/13/2020-T&R dated 8th June, 2021(Annexure-B).**
f) The Responsible Entity shall ensure that all Critical Systems designed with Open Source Software are adequately cyber secured.
g) The Responsible Entity as a best practise upon any incidence of Cyber Security Breach shall carry out cyber security tests at any lab designated for cyber testing by Ministry of Power. These tests shall be similar to Pre Commissioning Security Test and those essential for carrying out Post Incident Forensics Analysis.

**Article 14 Cyber Security Audit**

a) The Responsible Entity shall implement Information Security Management System (ISMS) covering all its Critical Systems.
b) The Responsible Entity shall through a CERT-In Empanelled Cyber Security OT Auditor shall get their IT as well as OT System audited at least once in every 6 (six) months and shall close all critical and high vulnerabilities within a period of one month and medium as well as low non-conformity before the next audit. Effective closure of all non-conformities shall be verified during the next audit.
c) The Cyber Security Audit shall be as per ISO/IEC 27001 along with sector specific standard ISO/IEC 27019, IS 16335 and other guidelines issued by appropriate Authority if any. These mentioned standards shall be current with all amendments if any and in case if any standard is superseded, the new standard shall be applicable. CISO shall ensure immediate closure of non-conformance, based on the criticality and by means all non-conformances are to be closed before the next audit.
d) The Responsible Entity shall ensure that CISO has all the required systems and documents in place, as mandated by NSCS for base line cyber security audit.

**FAT & SAT**

1. During FAT stage, the customer has to verify all types test reports / certificates including Communication protocol and security conformance tests of the devices offered for FAT.
2. FAT of SCADA involves testing as a whole system in the integrated scale down set up. For SCADA, Indian standard IS 15953: 2011 "SCADA System for Power System Applications" provides definition and guidelines for the specification, performance analysis and application of SCADA systems for use in electrical utilities (for transmission & Distribution) including guidance on Tests and inspections.
3. The SAT will be done at customer site as per the SAT document mutually agreed by buyer and supplier. For SAT also, guidance from IS 15953: 2011need to be applied.
4. IEC 61850-10-3 Communication Networks and Systems For Power Utility Automation-Functional testing of IEC 61850 systems (in draft stage - CDTR) covers testing of applications within substations covering

    a. A methodical approach to the verification and validation of a substation solution
    b. The use of IEC 61850 resources for testing in Edition 2.1
    c. Recommended testing practices for different use cases
    d. Definition of the process for testing of IEC 61850 based devices and systems using communications instead of hard wired system interfaces (ex. GOOSE and SV instead of hardwired interfaces)
    e. Use cases related to protection and control functions verification and testing.

    This standard may be used as a guidelines for FAT & SAT for Substation Automation System (SAS) based on IEC 61850.

**Annexure - B**

**Annexure – 1**

**List of designated laboratories for cyber security conformance testing**

**Table -A. Field Equipment /Operational Technology (OT)**

| Sl. No. | Equipment | Communication Protocol Conformance Standards | Protocol Security Conformance Standards | Designated Laboratories |
|---|---|---|---|---|
| 1 | Remote Terminal Units (RTUs) & PLCs with IEC communications protocols | IEC 60870-5 -101 / IEC 60870-5 -104 (Test Details Annexure 2) | IEC 60870-5- 7 Security extension & IEC 62351 series (specifically IEC 62351-100 parts 1 & 3) ( Test Details Annexure-2 | Central Power Research Institute (CPRI), Prof Sir C V Raman Road, Sadashivanagar P O, Bengaluru – 560080, Karnataka |
| 2 | Intelligent Electronic Equipment / Numerical Protection Relays / Bay Control Units / Bay Protection Units, Gateways, Transformer Tap controller/ changer, etc. with IEC 61850 communication protocol | IEC 61850 – 5 to IEC 61850 – 10 ( Test Details Annexure 2) | | CPRI |
| 3 | Smart meters with IEC 62056 communication protocols | IEC 62056 series / DLMS & IS 15959 series and IS 16444 series ( Test details Annexure 2) | IEC 62056 series / DLMS & IS 15959 series and IS 16444 series (Test Details Annexure 2) | 1. CPRI<br>2. Electrical Research and Development Association (ERDA), ERDA Road, GIDC, Makarpura, Vadodara - 390 010 Gujarat<br>3. Yadav Measurements Pvt. Ltd. (YMPL) 373-375, RIICO Bhamashah Industrial Area Kaladwas 313003 Udaipur – Rajasthan |

**Information Technology (IT) Equipment (Main / Backup / Disaster recovery (DR) Control Centre / Substation control centre IT equipment)**

All IT products procured /supplied shall have a valid Certificate of Common Criteria as per ISO/IEC 15408 issued by signatories of the Common Criteria Recognition Agreement (CCRA) ( www.commoncriteriaportal.org).

Import/procurement/supplied from vendors sourcing from prior reference countries, the Certificate for Common Criteria shall be from Government Laboratories in India according to the IC3S scheme operated by Ministry of Electronics and Information Technology, which is a signatory to CCRA.

https://www.commoncriteria-india.gov.in/

**Annexure - 2**

**Details of tests for various identified products**

**Remote Terminal Units (RTUs) (Sl. No. 1 of Table – A of Annexure – 1)**

**Test protocol:**

Utilities / manufacturers will submit the sample along with all the required technical documentation for taking up testing to the designated laboratory.

**Reference standards**

1) IEC 60870-5-101 & IEC 60870-5-104 as applicable

2) IEC 60870-5-7 Telecontrol equipment and systems - Part 5-7: Transmission protocols - Security extensions to IEC 60870-5-101 and IEC 60870-5-104 protocols (applying IEC 62351)

3) IEC 62351-100-1 & IEC 62351-100-3 and other cross referenced standards.

**Test cases**

**Extract from standard (IEC 62351-100-1)**

The conformance test cases are divided into four clauses:

- Clause 5: Verification of configuration parameters. This clause contains the configuration parameters affecting the message contents and/or the protocol behaviour.
- Clause 6: Verification of communication. The goal of this clause is to verify that Device Under Test (DUT) is able to implement the security extension messages as described in IEC TS 60870-5-7.
- Clause 7: Verification of procedures. The goal of this clause is to verify that DUT is able to execute the security extension procedures as described in IEC TS 62351-5.
- Clause 8: Test result chart. This clause contains the results of the test cases listed in Clauses 6 and 7 for each supported value of the configuration parameters listed in Clause 5.

The test cases are organized in tables. They are numbered; their numbering syntax is: Subclause number (where the Table is located) + test case number.

In the column 'reference' each test case has a direct reference to IEC TS 62351-5 or IEC TS 60870-5-7 where the clause under test is defined.

Test cases are mandatory depending on the description in the column 'Required'. The following situations are possible:

M= Mandatory test case. The test is referencing a clause that is mandatory in IEC TS 62351-5 or IEC TS 60870-5-7.

Protocol Information Conformance Statement (PICS) x, x = Mandatory test case if the functionality is enabled in the PICS (by marking the applicable check box), with a reference to the section number of the PICS (x.x).

**Conformance testing of security extension procedures**

The security extension procedures can be summarized as follows:

- User management
- Update key maintenance
- Session key maintenance
- Challenge/Reply authentication
- Aggressive Mode authentication

**Extract from standard (IEC 62351-100-3)**

IEC 62351-3 defines the requirements related to the authentication/encryption protocol, procedures and methods to be implemented at TCP/IP (transport) level.

The conformance test cases are divided into three clauses:

- Clause 5: Verification of configuration parameters. This clause contains the parameters specified by the standards referencing IEC 62351-3 (see IEC 62351-3:2014/AMD1:2018, Clause 7) and affecting the protocol behaviour.
- Clause 6: Verification of IEC 62351-3 requirements. The goal of this clause is to verify that DUT is conformant to the requirements of the IEC 62351-3.
- Clause 7: Test result chart. This clause contains the results of the test cases listed in Clause 6 for each supported value of the configuration parameters listed in Clause 5.

The test cases are organized in tables. They are numbered, their numbering syntax is: Subclause number (where the table is located) + test case number.

In the column 'Reference' each test case has a direct reference to IEC 62351-3 where the clause under test is defined. PICS or Protocol Implementation eXtra Information for Testing (PIXIT) could be found in the "Reference" column for some test cases whenever the execution of the test case shall take into account specific parameter values declared in the PICS or PIXIT of the DUT.

Test cases are mandatory depending on the description in the column 'Required'. The following situations are possible:

M = Mandatory test case. The test is referencing to a clause that is mandatory in IEC 62351-3.

PICS

or

PIXIT = Mandatory test case if the functionality is enabled in the PICS or PIXIT by marking the applicable check box or declaring the applicable value.

**Intelligent Electronic Devices (IEDs) (Sl. No. 2 of Table – A of Annexure – 1)**

Utilities / manufacturers will submit the sample along with all the required technical documentation for taking up testing to the designated laboratory.

**Reference standards**

IEC 61850 series

Specifically IEC 61850-5, IEC 61850-6, IEC 61850-7, IEC 61850-8, IEC 61850-9 and IEC 61850-10

**Test cases**

Communication protocol conformance as per IEC 61850 -10. This part of standard defines methods and abstract test cases for conformance testing of client, server and sampled values devices used in power utility automation systems, the methods and abstract test cases for conformance testing of engineering tools used in power utility automation systems, and the metrics to be measured within devices according to the requirements defined in IEC 61850-5. Further this part of standard specifies standard techniques for testing of conformance of client, server and sampled value devices and engineering tools, as well as specific measurement techniques to be applied when declaring performance parameters. The use of these techniques will enhance the ability of the system integrator to integrate IEDs easily, operate IEDs correctly, and support the applications as intended.

**Smart Meters (Sl. No. 3 of Table – A of Annexure – 1)**

Utilities / manufacturers will submit the sample along with all the required technical documentation for taking up testing to the designated laboratory.

IEC 62056 series of standards (Electricity metering data exchange – The DLMS/COSEM suite) specifies details of communication protocol requirements, conformance testing and security requirements. The Part 5-3 (DLMS/COSEM application layer) specifies the DLMS/COSEM application layer in terms of structure, services and protocols for DLMS/COSEM clients and servers, and defines rules to specify the DLMS/COSEM communication profiles. It defines services for establishing and releasing application associations, and data communication services for accessing the methods and attributes of COSEM interface objects, defined in IEC 62056-6-2 using either logical name (LN) or short name (SN) referencing.

Clause 5 and sub clauses specifies security requirements. It cover security concepts, Identification and authentication, Cryptographic algorithms, Cryptographic keys – overview, Key used with symmetric key algorithms, Keys used with public key algorithms and Applying cryptographic protection.

**Note:** All above referred standards shall be latest with amendments if any at the time of submission of sample(s) for testing.

**Annexure – 3**

**Testing Criteria**

**1) Supply from Trusted Sources**

The sample size shall be as specified by CEA as per the approved criteria for Trusted Vendors

**2) Supply from other than trusted vendors**

The sample size shall be shall be 5% of the supply lot / ordered quantity (minimum one). The manufacturer shall submit request to the Nodal agency along with vendor's / manufacturer's certifications for supply chain management system practices and secure product development process implementations based on any one or more of standards ISO / IEC 27036, ISO / IEC 20243, IEC 62443 for verification.

After scrutiny of vendor's / manufacturer's certifications the supplier / utilities shall be asked to submit product to the designated laboratory for communication and cyber security conformance testing.

The supply lot shall stand rejected on failure to comply with the test requirements.

**3) Supply from prior reference countries**

The utility shall obtain prior permission from the Government of India for importing the product / system from prior reference countries.

The sample size shall be shall be 10 % of the supply lot / ordered quantity (minimum one). The manufacturer shall submit request to the Nodal agency along with vendor's / manufacturer's certifications for supply chain management system practices and secure product development process implementations based on any one or more of standards ISO / IEC 27036, ISO / IEC 20243, IEC 62443 for verification.

After scrutiny of vendor's / manufacturer's certifications the supplier / utilities shall be asked to submit product to the designated Government / Government controlled Autonomous laboratory for type tests (Annexure – 4) and communication & cyber security conformance testing.

The supply lot shall stand rejected on failure to comply with the test requirements.

**Type Tests**

Products imported from prior reference countries shall also undergo type testing as per following standards in addition to communication protocol and security conformance testing at the designated Government / Government controlled Autonomous laboratory:

**Type test standards for RTUs**

1. IEC 60870-1-2:1989 Telecontrol equipment and systems. Part 1: General considerations. Section Two: Guide for specifications.
2. IEC 60870-2-1:1995 Telecontrol equipment and systems - Part 2: Operating conditions - Section 1: Power supply and electromagnetic compatibility.
3. EC 60870-2-2:1996 Telecontrol equipment and systems - Part 2: Operating conditions -Section 2: Environmental conditions (climatic, mechanical and other non-electrical influences).
4. IEC 60870-3:1989 Telecontrol equipment and systems. Part 3: Interfaces (electrical characteristics)

**Type test standard for IEDs / Numerical Protection Relays / Bay controls units**

1. IEC 61850-3: 2013, Ed. 2 Communication networks and systems for power utility automation – Part 3: General requirements.

**Type test standards for Smart meters**

1. IS 16444: 2015 AC static direct connected watthour smart meter class 1 and 2 – Specification.
2. IS 16444 Part 2: 2017 AC static transformer operated watthour and var - Hour smart meters, class 0.2 S, 0.5 S and 1.0 S: Part 2 specification transformer operated smart meters.

**Note:**

1. All above referred standards shall be latest with amendments if any at the time of submission of sample(s) for testing.
2. Type tests generally covers functionality, environmental, mechanical, EMI/ EMC and electrical safety related tests.