

Title: **TECHNICAL EVALUATION
STANDARD FOR SUBSTATION
INSULATION COVERS TO
PREVENT WILDLIFE CONTACT**

Unique Identifier: **240-132406362**

Alternative Reference Number: **n/a**

Area of Applicability: **Engineering**

Documentation Type: **Standard**

Revision: **2**

Total Pages: **15**

Next Review Date: **March 2027**

Disclosure Classification: **Controlled
Disclosure**

Compiled by

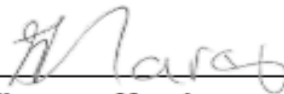
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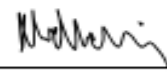
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1. Introduction

This document has been developed in accordance with Eskom Procurement and Supply Management Procedure 32-1034 and is used to define the standard technical evaluation criteria to be used when evaluating pre-qualification submissions.

The document defines various aspects required to perform the technical evaluation for substation insulation covers and contains the evaluation criteria used at paper evaluation and the associated sample/factory evaluation. Contractors/Consultants who are sourcing material for use on self-build infrastructure projects are encouraged to use this evaluation criteria, to ensure compliance of products to the applicable Eskom standard.

2. Supporting clauses

2.1 Scope

The scope of this document is to provide the framework wherein the substation insulation covers to prevent wildlife contact may be effectively evaluated against the applicable standard; 240-105644353, Specification for substation insulation covers to prevent wildlife contact.

This document does not specify the requirements of each item as the specific requirements for the items are contained within the Technical Schedules that are attached to the respective Commercial Enquiries. This document covers only the evaluation strategy and criteria for substation insulation covers used in substations within Eskom.

2.1.1 Purpose

The purpose of this document is to standardise the technical strategy and evaluation criteria for application during formal Commercial Enquiry processes for Eskom when procuring substation insulation covers in alignment with Eskom Holdings SOC (Ltd) policies.

2.1.2 Applicability

This document shall apply throughout Eskom Holdings Limited Distribution Division. It is also applicable for all external parties constructing substation infrastructure projects that will be handed over operationally to Eskom.

2.2 Normative/informative references

Parties using this document shall apply the most recent edition of the documents listed in the following paragraphs.

2.2.1 Normative

- [1] 32-1034, Eskom Procurement and Supply Management Procedure
- [2] 240-48929482, Tender Technical Evaluation Procedure
- [3] 240-105644353, Specification for Substation Insulation Covers to prevent Wildlife Contact.
- [4] ISO 9001, Quality Management Systems.

2.2.2 Informative

- [5] D-DT-6370 COVER: CLAMP
- [6] IEEE 1656:2010: IEEE Guide for Testing the Electrical, Mechanical, and Durability Performance of Wildlife Protective Devices on Overhead Power Distribution Systems Rated up to 38 kV

2.3 Definitions

2.3.1 General

| Definition | Description |
|--|---|
| Accredited testing laboratory/authority | A laboratory which is ISO/IEC 17025 accredited and/or that holds valid certification issued by ILAC (International Laboratory Accreditation Corporation) or one of its members. |
| Certified test report | A certificate of tests performed as specified within the specification, and carried out by an accredited authority or by the manufacturer and witnessed by an accredited authority that has been accredited in accordance with ISO/IEC 17011 and ISO/IEC 17025. |
| Eskom assessment / evaluation representative(s) | The person(s) appointed by Eskom to perform evaluation of tender submission (s) in line with Eskom requirements. |
| Routine test | Tests done to verify the quality and uniformity of the workmanship and materials used in the manufacture of the product. |
| Type test | Tests done on the completion of the development of a new design to establish representative performance data. They need to be repeated if the design is changed to modify its performance or there is a change in the manufacturing process. |

2.3.2 Disclosure classification

Controlled disclosure: controlled disclosure to external parties (either enforced by law, or discretionary).

2.4 Abbreviations

| Abbreviation | Description |
|--------------|--|
| COE | Centre of Excellence |
| DTI | Department of Trade and Industry |
| NEC | New Engineering Contract |
| OEM | Original Equipment Manufacturer |
| SAP | Systems Application Processes |
| TCIF | Technology Change Implementation Forum |
| TET | Technical Evaluation Team |

2.5 Roles and responsibilities

Suppliers are responsible for manufacturing, testing and supplying products in accordance with document [3]. Personnel involved with the design, procurement and construction of Eskom substations shall ensure compliance to these requirements and that substation insulation covers are evaluated in accordance with this document.

2.6 Process for monitoring

All substation insulation covers to be supplied to Eskom shall be in accordance with [3] and shall be evaluated against the criteria as stipulated in this document. It will be communicated via the TCIF structures to affected departments for noting and compliance. The Substations COE will ensure that it is updated should it be required with the support of the Substations Products Care Group.

2.7 Related/supporting documents

This document must be applied together with document 240-105644353: Substation Insulation Covers to prevent Wildlife Contact.

3. Requirements

3.1 General

The technical evaluation for the substation insulation covers to prevent wildlife contact shall be composed of two main parts namely documentation evaluation and a factory evaluation (if applicable/required). If the tender being evaluated is for a National Contract, then a factory evaluation would be deemed compulsory and is highly recommended for Provincial or Cluster Contracts. The criteria for the technical evaluation are based on the specified requirements in the Eskom Standard 240-105644353: Specification for Substation Insulation Covers to Prevent Wildlife Contact.

All documentation for this tender shall be in English.

For the supplier's submission to be compliant all tender technical returnables must be submitted as required and score at least 85% in the qualitative evaluation.

Suppliers who are tendering but are not the OEM of the product must source the required technical returnable from the OEM where relevant. Missing information will not be requested after the Enquiry closing date.

If any part or sub-component of the production process is outsourced, the Supplier shall retain full and complete accountability for the (entire) product.

Note 1: Eskom Distribution systems hardware items are allocated a specific designation by the Department of Trade and Industry (DTI) which is included in the Commercial section of the enquiry. The technical evaluation process shall only proceed when the DTI designation requirements are met.

Note 2: Where the Factory Assessment and Verification is a requirement it must be clearly stated as such in the Commercial Strategy documentation. However, the Technical Evaluation Team may, in consultation with Eskom SMEs, determine that no further assessment is needed. This will be determined after the qualitative assessments.

3.2 Desktop Evaluation

The desktop evaluation shall be conducted by the Eskom assessment representatives. This part of the evaluation will start when submissions are opened the first time. It begins with the confirmation that all tender technical returnables have been submitted. Total compliance with the stipulated criteria in Level 1, will result in the tender submission moving on to the qualitative criteria in Level 2. (Refer to Annex A). Tenderers that do not submit all the required tender technical returnables will be disqualified and will not proceed to the qualitative part of the assessment.

- Submissions meeting 100% of the Level 1 requirements will proceed to the next level of the technical evaluation.
- Submissions failing to meet 100% of the Level 1 requirements will be deemed non-responsive (non-compliant); the submission will be disqualified and not evaluated further.
- Where clarifications are required, the rules as per 32-1034 are to be applied and no tender is to be made responsive via the clarification process.

During the qualitative assessment, the Eskom evaluating representatives will go through the qualifying submissions in detail and score each item evaluated. Refer to Annex B. The tender submission must score a minimum of 85% in the qualitative evaluation to be considered as technically qualified. If required, these tenders will then move on to the next phase of the evaluation i.e., Factory Evaluation. The requirement for a factory evaluation will be made by the cross functional team at Tender Strategy Phase.

3.3 Sample Evaluation

As part of the qualitative tendering criteria suppliers are required to submit samples for evaluation. The samples should be the exact products that will be supplied if the supplier is awarded the tender.

The sample evaluation determines the compliance of the manufactured product to the manufacturing standards as stated in the Level 2 criteria. As an example, the product sample will be assessed for compliance to aspects such as dimensions, markings, accessories etc. These will be known and sourced from the measurable criteria stated in the Level 2 criteria.

A list of samples of substation insulation covers to be submitted during tendering shall be included in the tender enquiry documents.

NB: A factory evaluation will only be conducted if the supplier has met the requirements in Level 1 and 2.

3.4 Factory Evaluation

This assessment is performed on the basis of assessing the supplier's capability to enter into a contract with Eskom with respect to a specific product or service.

This report and any actions that are listed or recommended as a result of this assessment, is by no means a confirmation or guarantee that any contract will be entered into by Eskom and the supplier or that post contract performance has been achieved.

Any actions undertaken by the supplier as a consequence of this report is for the supplier's account. Any liability for the said actions undertaken by the supplier is not transferrable to Eskom in any way.

The assessment team has no authority or responsibility in the decision taken by Eskom with respect to contracting for a product or service.

Any statements, intentions and/or actions expressed by the assessment team during the assessment and post the assessment has no effect and does not constitute any liability to Eskom with regards to contract placement or post contract performance guarantees.

Eskom evaluating representatives will contact and arrange to visit the factory of the tenderers whose submissions have passed the desktop and sample evaluation.

At the factory of each supplier, the Eskom evaluating representatives will conduct the evaluation using the factory evaluation criteria in Annex C. The criteria for the factory evaluation are not point scored but are assessed on a Yes/No basis on whether they have been met satisfactorily. An assessment of 'No' against any criterion will eliminate the tenderer from further consideration, unless the tenderer agrees to resolve the issues identified, in a manner which is acceptable to the technical evaluation team.

At the end of this exercise, the Eskom evaluating representatives will list all the deviations, if any, on the factory evaluation document. The Eskom representatives will conduct a formal discussion with the tenderer on these deviations. Herein, the tenderer will be given an opportunity to express whether they agree or disagree with Eskom's findings and if they will meet Eskom requirements before/upon a contract being awarded. At the end, Eskom and the representatives of the tenderer will sign the factory evaluation document which will be used to conclude the technical evaluation report. Where the tenderer has agreed to meet Eskom requirements, all of these will form part of the contract and the verification that will be conducted afterwards.

4. Authorization

This document has been seen and accepted by:

| Name and surname | Designation |
|-------------------|--|
| Alex Ndlela | Senior Manager – Distribution Division, Engineering |
| Athelene Gouws | Senior Engineer – Distribution Division, Gauteng Cluster |
| Best Khoza | Engineer – Distribution Division, Cape Coastal Cluster |
| Dickey van Eeden | Senior Technician – Distribution Division, CentralEast Cluster |
| Jason Blaauw | Senior Engineer – Distribution Division, Cape Coastal Cluster |
| Stefan Terblanche | Senior Advisor – Distribution Division, Cape Coastal Cluster |

5. Revisions

| Date | Rev | Compiler | Remarks |
|------------|-----|----------|---|
| March 2022 | 2 | M Khan | Updated and revised to correspond with changes in the applicable standard 240-105644353. Removed scoring for. <ul style="list-style-type: none">History of SupplySample impression Included scoring for. <ul style="list-style-type: none">Type testsStorage and Installation manual |
| May 2018 | 1 | M Khan | First Issue |

6. Development team

The following people were involved in the development and revision of this document:

- Mohamed Khan, Senior Engineer
- Athelene Gouws, Senior Engineer
- Jason Blaauw, Senior Engineer
- Stefan Terblanche, Senior Advisor
- Theunus Marais, Chief Engineer

7. Acknowledgements

Not applicable.

Annex A – Desktop Documentation Evaluation: Tender Technical Returnables

Tender technical returnables are not point scored. These are assessed on a Yes/No basis as to whether all the required technical returnables have been submitted. All submissions must comply with [3], 240-105644353: Substation Insulation Covers to Prevent Wildlife Contact. The tender technical returnables are:

| LEVEL 1 CRITERIA | CLAUSE in [3] | YES | NO |
|--|---------------|-----|----|
| Is all information supplied in English? | 3.7 | | |
| Has completed technical schedule B been submitted? | Annexure A | | |
| Has a detailed set of drawings per insulation cover been submitted? | 3.7 | | |
| Has a list of all type test certificates and reports specified in the specification been submitted? | 3.5 | | |
| Has manual(s) for handling, storage, installation and inspections of the insulation covers been submitted? | 3.7 | | |

| QUALIFYING FOR FURTHER QUALITATIVE EVALUATION? | YES | NO |
|--|-----|----|
|--|-----|----|

Annex B – Desktop Documentation Evaluation: Qualitative Criteria

After it has been confirmed that all the tender technical returnables have been submitted and that critical requirements have been met, the submission will be assessed against the following criteria (shown below with their weightings).

| Criteria | Section | % weight | Weighted Score |
|--|---------|------------|----------------|
| Range of Products | B1 | 5 | |
| Technical Suitability | B2 | 70 | |
| Outline Drawings | B3 | 15 | |
| Storage, Maintenance and Installation Manual | B4 | 10 | |
| Total | | 100 | |

For each evaluation criteria, the extent to which submissions comply with the requirements shall be scored based on the following, with a maximum score of 100.

| | |
|---|---|
| 5 | COMPLIANT Meet technical requirement(s) AND No foreseen technical risk(s) in meeting technical requirements. |
| 4 | COMPLIANT WITH ASSOCIATED QUALIFICATIONS Meet technical requirement(s) with; Acceptable technical risk(s) AND/OR Acceptable exceptions AND/OR Acceptable conditions. |
| 2 | NON-COMPLIANT Does not meet technical requirement(s) AND/OR Unacceptable technical risk(s) AND/OR Unacceptable exceptions AND/OR; Unacceptable conditions. |
| 0 | TOTALLY DEFICIENT OR NON-RESPONSIVE |

Threshold: The score that each tenderer receives will provide a numeric basis for tender comparison. The minimum weighted average score required for a substation insulation cover to be considered 'technically acceptable' must be **85% or above**.

| B1 | | | | | RANGE OF PRODUCTS | | | | |
|---|--|-----------------------------|---|-------|-------------------|--|--|--|--|
| ITEM NO | DESCRIPTION | UNIT | CRITERIA | SCORE | | | | | |
| B1.1 | Does the supplier supply all the covers required as per this tender? | % of required covers listed | > 90 % | 5 | | | | | |
| | | | 80 – 90% | 4 | | | | | |
| | | | 60 – 80% | 2 | | | | | |
| | | | < 60% | 0 | | | | | |
| RANGE OF PRODUCTS (maximum points: 5) | | | Score | | | | | | |
| RANGE OF PRODUCTS (section weight: 5%) | | | Weighted Score = $(\text{Score}) * \left(\frac{5}{5}\right)$ | | | | | | |

| B2 | | | | | TECHNICAL SUITABILITY | | | | |
|---|---|--------------|--|---------|-----------------------|--|--|--|--|
| ITEM NO | DESCRIPTION | UNIT | CRITERIA | SCORE | | | | | |
| B2.1 Compliance with Technical Requirements (30%) | Does the supplier comply with the technical requirements as stipulated in the Technical Schedules? (Excluding Type Tests) | % compliance | > 90 % | 5 | | | | | |
| | | | 80 – 90% | 4 | | | | | |
| | | | 70 – 80% | 2 | | | | | |
| | | | < 70% | 0 | | | | | |
| | Tests (maximum points: 5) | | | Score 1 | | | | | |
| Tests (sub-section weight: 30%) | | | Weighted Score 1 $= (\text{Score 1}) * \left(\frac{30}{5}\right)$ | | | | | | |
| B2.2 Deviation schedule provided (5%) | Has a deviation schedule been completed and accepted for deviations from the standard? | % compliance | 100 % | 5 | | | | | |
| | | | 80-99% | 4 | | | | | |
| | | | 60 -79 % | 2 | | | | | |
| | | | < 60% | 0 | | | | | |
| | Deviation Schedule (maximum points: 5) | | | Score 2 | | | | | |
| Deviation Schedule (sub-section weight: 5%) | | | Weighted Score 2 = $(\text{Score 2}) * \left(\frac{5}{5}\right)$ | | | | | | |


| ITEM NO | DESCRIPTION | UNIT | CRITERIA | SCORE | |
|--|---|------|--|-------|--|
| B2.3 Type Tests Submission (35%) | Have the type tests as specified in the standard been passed as required? | | | | |
| | Volume resistivity test | | Yes | 5 | |
| | | | No | 0 | |
| | Wet withstand test | | Yes | 5 | |
| | | | No | 0 | |
| | Wet power frequency flashover test | | Yes | 5 | |
| | | | No | 0 | |
| | Lightning impulse withstand test | | Yes | 5 | |
| | | | No | 0 | |
| | Cold temperature test | | Yes | 5 | |
| | | | No | 0 | |
| | Ultraviolet aging | | Yes | 5 | |
| | | | No | 0 | |
| | Salt fog aging | | Yes | 5 | |
| | | | No | 0 | |
| | Retention testing | | Yes | 5 | |
| | | | No | 0 | |
| | Flammability testing | | Yes | 5 | |
| | | | No | 0 | |
| | Radio-influence voltage test | | Yes | 5 | |
| | | No | 0 | | |
| Type Tests (maximum points: 50) | | | Score 3 | | |
| Type Tests (sub-section weight: 35%) | | | Weighted Score 3 = $(\text{Score } 3) * \left(\frac{35}{50}\right)$ | | |
| TECHNICAL SUITABILITY (section weight: 70%) | | | Weighted Score 1 + Weighted Score 2 + Weighted Score 3 = | | |

| B3 OUTLINE DRAWINGS | | | | |
|---|-------------------------------------|--------------------|---|--------------|
| ITEM NO | DESCRIPTION | UNIT | CRITERIA | SCORE |
| B3.1 | Insulation Cover description | % drawings correct | > 90 % | 5 |
| | | | 80 – 90% | 4 |
| | | | 60 – 80% | 2 |
| | | | < 60% | 0 |
| B3.2 | Eskom code/ SAP Number | % drawings correct | > 90 % | 5 |
| | | | 80 – 90% | 4 |
| | | | 60 – 80% | 2 |
| | | | < 60% | 0 |
| B3.3 | Drawing number | % drawings correct | > 90 % | 5 |
| | | | 80 – 90% | 4 |
| | | | 60 – 80% | 2 |
| | | | < 60% | 0 |
| B3.4 | Dimensions including weight (in kg) | % drawings correct | > 90 % | 5 |
| | | | 80 – 90% | 4 |
| | | | 60 – 80% | 2 |
| | | | < 60% | 0 |
| Outline Drawings (maximum points: 20) | | | Score | |
| OUTLINE DRAWINGS (section weight: 15%) | | | Weighted Score = $(\text{Score}) * \left(\frac{15}{20}\right)$ | |

| B4 STORAGE, MAINTENANCE, AND INSTALLATION MANUAL | | | | |
|--|--|-------------|--|--------------|
| ITEM NO | DESCRIPTION | UNIT | CRITERIA | SCORE |
| B4.2 | Has the supplier provided a comprehensive storage, maintenance and installation manual (in English)? | Number | Comprehensive and Complete | 5 |
| | | | Minor Omissions | 4 |
| | | | Major Omissions | 2 |
| | | | Not Suitable/ Inaccurate | 0 |
| Storage, Maintenance and Installation Manual (maximum points: 5) | | | Score | |
| STORAGE, MAINTENANCE, AND INSTALLATION MANUAL (section weight: 10%) | | | Weighted Score = $(\text{Score}) * \left(\frac{10}{5}\right)$ | |

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Annex C – In-Factory Product Assessment

| | |
|---|---|
|  | <p>SUBSTATION INSULATION COVERS IN-FACTORY PRODUCT ASSESSMENT CHECK SHEET</p> |
|---|---|

TECHNICAL EVALUATION TEAM

| Name | Signature | Date |
|------|-----------|------|
| | | |
| | | |
| | | |
| | | |

DOCUMENT REQUIREMENTS

The following documents must be provided by the supplier at the factory before the start of the assessment:

- Routine tests records,
- Storage and handling procedures,
- Inspection manual/s.
- Installation manual/s

C1 SAMPLE AND ROUTINE TEST RECORDS

| ITEM | EVALUATION ASPECT | YES/NO |
|------|---|--------|
| C1.1 | Are there procedures available to conduct sample and routine tests? | |
| C1.2 | Are records of sample and routine tests available? | |
| C1.3 | Are sample and routine tests conducted regularly and as per the suppliers' procedure? | |

C2 PACKAGING

| ITEM | EVALUATION ASPECT | YES/NO |
|------|--|--------|
| C2.1 | Are the insulation covers marked with the following identification marks: Manufacturer's identification Product Code Batch identification | |
| C2.2 | Are individual covers packaged in sealed, heavy duty, UV stabilized bags? | |
| C2.3 | Are the sealed covers packaged for delivery in strong durable containers? | |


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| | | |
|------|--|--|
| C2.5 | On the package, is there a label with the following: Eskom's order number Eskom SAP number Manufacturer's name Content of crate/container (i.e. a parts list) Overall dimensions of crate/container Total mass of the crate/container Pictograms/symbols showing correct storage and stacking Instructions of the crates/containers Delivery address | |
|------|--|--|

C3 MANUALS

| ITEM | EVALUATION ASPECT | YES/NO |
|------|---|--------|
| C3.1 | Are the installation and inspection manuals available in English? | |
| C3.2 | Are the installation and inspection manuals comprehensive in its description of tasks to be undertaken? | |
| C3.3 | Are the installation and inspection manuals available in distributable electronic format? | |

Annex D – In Factory Product Assessment Evaluation Agreement

|  | | SUBSTATION INSULATION COVERS FACTORY PRODUCT and ASSESSMENT EVALUATION AGREEMENT | | | | | |
|---|----------|--|-----------------------|----------|----------|----------|-------|
| | | Item | Deviation Description | Response | Tenderer | | Eskom |
| Agree | Disagree | | | | Agree | Disagree | |
| | | | | | | | |
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MAIN REPRESENTATIVES

| Company | | | Enquiry # | |
|-----------------|-------------|--|-----------|--|
| Eskom | Name | | Signature | |
| | Designation | | Date | |
| Tenderer | Name | | Signature | |
| | Designation | | Date | |
| Factory | Name | | Signature | |
| | Designation | | Date | |

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