



REF- AIESL /DEL/PPMM/NR/2025-26/107

SCOPE OF WORK

Supply, Installation, Testing & Commissioning (SITC) of 33kV Vacuum Circuit Breaker (VCB) Panel with Copper Busbars and Adopter Panel

VCB Make: Schneider/Siemens/ABB/L&T/Kirloskar/CG or equivalent OEM standards, only if they meet MII standards.

SCHEDULE OF WORK:

1. Removal & Dismantling Work Existing 33kV MOCB

- a) Safe removal and dismantling of existing 33kV MOCB and adopter panel.
- b) Disconnection of associated HT/LT cables, auxiliary wiring, and control circuits, strictly adhering to site safety protocols.
- c) Shifting of dismantled materials to the designated scrap area.
- d) Buy Back of old VCB and Panels etc.

2. Dismantling of Existing 33kV Cable

Removal of the existing 33kV cable from trenches, trays, or conduits and shifting of the retrieved material to the designated scrap yard. Safe handling and tagging during removal.

3. Supply, Installation, Testing & Commissioning (SITC)

3.1 Supply of New 33kV VCB Panel

- a) 33kV HT Panel, 1600A, 26.4kA for 3 sec, **VCB type with copper busbars.**
- b) CTs, PTs, and all standard accessories.
- c) **Panel should be OEM manufactured ONLY** Schneider/Siemens/ABB/L&T/Kirloskar/CG or equivalent OEM standards, only if they meet MII standards. It should be same make of VCB.
- d) Installation, testing, and commissioning shall be carried out in compliance with relevant IS/IEC standards.

3.2 Supply of Adopter Panel: One adopter panel to match existing site layout.

3.3 Civil Work / Fabrication of Base Frame

- a) Positioning, alignment, anchoring of the new 33 kV VCB panel.
- b) Integration with existing control and protection scheme.

4. Supply of 33kV Cable Work

4.1 Supply of 33kV XLPE Cable: 3C x 500 sq.mm XLPE Aluminum Cable (approx. 35m). The vendor shall perform load calculations and design the appropriate cable sizing accordingly.

4.2 Laying of 33kV Cable Between Transformer and 33kV Panel

Laying of the supplied 33kV cable between the transformer and the new VCB panel, including routing, dressing, clamping, trenching (if applicable), and preparation for termination.

4.3 Supply of 33kV Termination Kits

Supply of suitable indoor/outdoor type 33kV termination kits of approved make, as per site requirements.

4.4 Installation of 33kV Termination Kits

Complete installation of termination kits at both ends, including cable preparation, crimping, heat-shrink/plug-in termination, testing, and proper Sealing.

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5. CEA Approval

Coordination, documentation, submission, and obtaining of all necessary statutory approvals from the Central Electricity Authority (CEA). (If required)

6. Designing of Protection System

Design and finalization of a complete protection scheme suitable for the new 33kV VCB panel, ensuring relay coordination and compliance with applicable IS/IEC standards.

7. Testing & Commissioning

- a) **Transformer Stability Test:** Conducting transformer stability tests to verify performance under fault and load conditions, ensuring proper relay coordination and compliance with protection requirements.
- b) IR testing, primary/secondary injection tests.
- c) Breaker timing test, relay configuration.
- d) **Scheme Checks with Existing System:** Verification of compatibility and proper scheme integration with the existing system to ensure seamless operation after commissioning.

8. Site Survey

A mandatory site survey shall be conducted to assess the availability of space and verify site readiness for installation.

9. Material Handling Equipment

Crane/Hydra services required for unloading, shifting, and positioning of materials shall be in the vendor's scope.

10. Safety and Site Requirements

All necessary safety measures, PPE, barricading, and site safety protocols shall be ensured by the vendor during execution.

11. Technical Requirement – OEM Credentials

The bidder must be an OEM or an authorised partner of the OEM.

12. Thermal Monitoring

The panel must be equipped with thermal sensors with local temperature monitoring provisions on the panel.

13. Type Test Compliance

Offered design must be type-tested as per CEA guidelines.

14. Uniformity of Make

The Panel, Relay, Vacuum Bottle, and Circuit Breaker must all be of the same OEM make to ensure compatibility and reliability.

Terms and Conditions: -

1. The bidder must be an OEM (Schneider/Siemens/ABB/L&T/Kirloskar/CG or equivalent OEM standards, only if they meet MII standards) or an authorised partner of the OEM. Duly attested copy of OEM authorization letter, in original, must be submitted **(Must)**.
2. The bidder must visit the worksite and acquaint fully with the nature and quantum of job to be carried out, before offering price quotes. **(Must)**.
3. The party must strictly adhere to AIESL working hours i.e., from 0815 hrs to 1615 hrs.
4. The work shall be carried out under the supervision of duly authorized person / class 1 license holder from the Chief Electrical Inspectorate / by HT wireman's license holder.
5. The party has to provide its personnel PPE's (Safety shoes, safety goggles, electrical hand gloves etc.)

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for execution of work at the location.

6. All tools, test equipment, required to accomplish the task shall be in the scope of bidder.
7. Electric supply and pneumatic supply, as required to accomplish the work, shall be provided by AIESL.
8. The site should be handed over to AIESL in a neat and clean condition. The work shall be carried out in such a manner so as to cause minimum disturbance to AIESL working.
9. The party must submit the time schedule for completion of job and must complete the work within 30 days from the date of purchase order.

10. Guarantee / Warranty Clause

The bidder shall provide a guarantee/warranty for the equipment supplied and the work executed for a **minimum period of 12 (twelve) months from the date of commissioning** of the complete system.

However, if the **Original Equipment Manufacturer (OEM) of the Vacuum Circuit Breaker (VCB)** provides a warranty for a **longer period for the complete VCB setup**, the same shall be passed on to the buyer, and the **longer warranty period shall be applicable**. During the guarantee/warranty period, the bidder shall be responsible for **rectification, replacement, or repair of any defects arising out of faulty design, materials, workmanship, or installation, at no additional cost to the buyer**.

All defects noticed during the guarantee/warranty period shall be attended to and rectified by the bidder within a reasonable time.

11. AIESL shall not be responsible for any injury sustained to the contractor's personnel during the work at site. All risks of loss or of damage to property and of personal injury and death, which arise during and in consequence of the performance of the contract, are the responsibility of the contractor.
12. **Safety Requirements:** As a part of the Contract the Safety requirements must be satisfied & it must be ensured at all times that these are followed without deviation. The contractor will take necessary precautions to avoid any threat to human life or damage to the equipment. If any damage occurs contractor at his own cost shall make the same good.
13. The bidder must have working office in Municipal limits of Delhi NCR, in his name, as on date of the submission of the tender OR give undertaking to ensure that all local arrangements at work site i.e manpower, spare/supplies, tools etc. shall be arranged by the bidder (after award of contract) themselves without delaying the installation/ commissioning work. Self-attested copy of Lease Agreement/Electricity Bill/ Tax receipt/ telephone bill bearing company's address in support of documentary proof of bearing working office in Municipal limits of Delhi NCR must be enclosed, if they have working office in Delhi NCR.

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