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Amendment No: 5

Substation Maintenance Instruction

Plugboard switchgear

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Substation Maintenance Instruction

PRIMARY SYSTEMS

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SMI 206 PLUGBOARD SWITCHGEAR

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1.0 PURPOSE

To set out in detail the maintenance requirements for plugboard switchgear installed in the company's network.

2.0 SCOPE

This instruction defines the maintenance requirements for plugboard switchgear, which includes the equipment support frame, bushings, cable clamps/connections and neon indicators.

All work is to be carried out in accordance with this instruction and the manufacturer's instructions.

Where conflicting information is found between these two instructions, information mentioned in this instruction supersedes the manufacturer's instruction.

This instruction must be read in conjunction with Substation Maintenance Instruction SMI 101 – Minimum requirements for maintenance of distribution equipment for distribution substations.

This switchgear is no longer approved for use in new installations on the company's network. This document is for existing switchgears only, which are installed in small population in the northern region of the company.

3.0 REFERENCES

Company Policy (Network) 9.9.1 – Network Asset Maintenance
Company Procedure (Network) GAM 0089 – Authorisations Governance and Management
Substation Design Instruction SDI 208 – Plugboard 12/24kV switchgear
Substation Maintenance Instruction SMI 101 – Minimum requirements for maintenance of distribution equipment
Endeavour Energy Electrical Safety Rules
Network Management Plan December 2013 Review
Electricity Supply Act 1995 (NSW)
Work Health and Safety Act 2011
Work Health and Safety Regulation 2011
ENA National Electricity Network Safety Code (Doc 01-2008)

4.0 DEFINITIONS AND ABBREVIATIONS

Ellipse

Endeavour Energy's asset database

SDI

Substation Design Instruction

SMI

Substation Maintenance Instruction

5.0 ACTIONS

5.1 General requirements

Any work on this switchgear, such as connections, disconnections or replacement of fuses and replacement of neon indicators is to be carried out only when this switchgear is **de-energised**.

All defects found during maintenance must be recorded in Ellipse.

5.2 Authorisations

These instructions must be carried out only by company employee or contractor who have been authorised in accordance with Company Procedure (Network) GAM 0089 – Authorisations Governance and Management.

Site frontages shall be of sufficient size to allow the ultimate intended capacity to be delivered.

5.3 Routine maintenance schedule

Routine maintenance
1.0 INSPECTION
General
Inspect the equipment and take photos of any defects
Inspect for evidence of moisture/condensation, excessive dirt or dust, burning odour, audible discharge or other defects
Bushings
Inspect for evidence of tracking, cracks, arcing or other defects
Perspex barrier
Inspect perspex barriers for overheating, tightness, cracks, deformities or other defects
Steelwork/hardware
Inspect for rust, corrosion or other defects
Cables/connections/clamps
Inspect cable support clamps for correctness
Inspect condition of cable and cable termination
Inspect earthing connections
Neon indicator panel
Check neons are “ON” in in-service condition. If neons are “OFF”, raise a defect for replacement.

6.0 AUTHORITIES AND RESPONSIBILITIES

Chief Engineer has the authority and responsibility for approving this instruction.

Manager Primary Systems has the authority and responsibility for approving this instruction.

Network Maintenance Manager has the responsibility to keep the content of this instruction up to date.

Regional distribution operation managers have the authority and responsibility for:

- overseeing that Endeavour Energy employees and/or contractors engaged to perform the work have appropriate qualifications;
- meeting the requirements of this instruction within their area of responsibility;

- confirming that work performed is carried out in accordance with local and statutory requirements;
- managing public safety so that it is not compromised; and
- overseeing that employees are conversant with, and work in accordance with, the Electrical Safety Rules.

Endeavour Energy employees and contractors have the authority and responsibility for:

- conducting themselves in a manner that meets the requirements of this instruction and Substation Maintenance Instruction SMI 101 – Minimum requirements for maintenance of distribution equipment;
- working in accordance with local and statutory requirements;
- performing work in a manner that does not compromise public safety;
- working in accordance with Endeavour Energy's Electrical Safety Rules; and
- recording maintenance and test data in Endeavour Energy's electronic databases.

7.0 DOCUMENT CONTROL

Documentation Content Coordinator : Network Maintenance Manager

Documentation Distribution Coordinator : Branch Process Coordinator