



Technical Bulletin

TB 0307 – Changes to Distribution Earth Testing Requirements

Purpose

This bulletin outlines the changes to routine earth testing maintenance intervals for distribution substations as specified in SMI101.

Background

All distribution substation earth grids (common or separate) are currently required to be tested every 10 years (6 years for SWER) as specified in SMI 101.

A Reliability Centred Maintenance (RCM) review of distribution earth grid maintenance has been undertaken by Substation Design. The analysis determined that the cost of routine earth grid testing for common earthed distribution substations was grossly disproportionate to the safety benefits gained.

Based on the RCM analysis, maintenance intervals for routine earth testing of common earthed distribution substations have been revised.

Required Standard Changes

SMI 101 standard charges are as follows:

Existing Maintenance Intervals:

Clauses	Asset type	Maint. Interval (years)
5.1, 6.1, 6.2, 7.1	Earth resistance test (common or separate)	10

Revised Maintenance Intervals:

Clauses	Asset type	Maint. Interval (years)
5.1, 6.1, 6.2, 7.1	Earth resistance test (common)	Not Required
	Earth resistance test (separate)	10

Note: Each distribution substation has an earthing configuration listed in the Asset Management Database (Ellipse) of “COM”, “SEP” or “UNK”. All distribution substation assets listed as “UNK” are required to undergo routine earth grid testing, as per a separately (SEP) earthed asset. The earthing configuration should be reviewed by field crews when conducting the test. The correct earthing configuration must be updated in the database to correct assets listed as “UNK”.

Implementation

These changes will be effective immediately.

Actions

Asset Planning & Performance

- Revise SMI 101 – Minimum requirements for maintenance of distribution equipment to reflect the changes approved in this technical bulletin.

Delivery Excellence

- Program maintenance activities in accordance with this technical bulletin.

Field Operations

- Coordinate and schedule maintenance activities in accordance with this technical bulletin.
- Update the Earthing Configuration in the Asset Management Database following tests on assets currently listed as “UNK”.