

INSTRUCTIONS FOR SAFE TO CLIMB TEST

This procedure outlines the requirements of Safe to Climb Tests used prior to the climbing of any pole or structure that has the potential to fail during climbing.

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1. OBJECTIVE

This document is designed to inform Evoenergy employees and accredited contractors of the required process for a “Safe to Climb” test prior to the climbing of any pole or structure that has the potential to fail during climbing.

2. SCOPE

The scope of this document is for all Evoenergy employees as well as any accredited contractors who undertake works on the Evoenergy distribution network.

3. PROCEDURE

In all cases, Evoenergy staff and accredited contractors are required to carry out a full “Safe to Climb” test prior to the ascending of any pole or structure. This test is required for identifying any risks or hazards associated with the pole or structure that may render it unsafe to climb. Any reference to poles in this procedure shall be read to include other structures wherever climbing is intended.

Evoenergy’s Safe to Climb Test procedure has been formulated to reduce the risk of pole failures for persons working aloft.

3.1 Actions and Responsibilities

Evoenergy Staff

Prior to the climbing of any pole it is mandatory for the climber to perform a “Safe to Climb” test. It is the climber/s responsibility to satisfy themselves that the pole is safe to climb.

If the person carrying out the test (or members of the work team) is not satisfied that the pole is safe to climb after carrying out the instructions contained within this procedure, the pole must not be climbed until further investigation is carried out or alternate methods are utilised. This may require a full test by a suitably trained Evoenergy Asset Inspector or work may be carried out via other means, e.g. Mobile Elevated Working Platform (MEWP).

If at any time pole head loading is to be significantly altered through re-tensioning, untying or straightening for example, the person carrying out the work must ensure that the pole is assessed. This assessment shall be based on the work to be performed and the pole loading changes that may occur.

In all instances, safe working practices shall be adopted so that the person (or members of the work team) is not placed in a potentially dangerous situation. The assessment shall include the status of adjacent poles if any loads may be transferred to them. Refer table 3.1 and 3.2. Where a MEWP can be used, then a MEWP SHALL be utilised for work that will require significant change in pole loading.

Notes: Staked, nailed or splinted poles are considered serviceable after inspection and it is acceptable to change the loading on such poles with an ‘in date’ inspection tag.

3.2 Identifying Where a Full Pole Inspection is Required

In order for employees to undertake the process in this document, it is required that there is understanding on where a full pole inspection is required.

Pole inspection cycles are 4 years for Bushfire Mitigation zones and 5 years in Urban areas. Refer to Table 1 below for further guidance on where a full pole inspection is required.

TABLE 1. WHERE A FULL POLE INSPECTION IS REQUIRED

POLE TYPE	IS FULL INSPECTION REQUIRED?
Natural Round	Only if Tag is out of cycle
Creosote	Only if Tag is out of cycle
Tanalith	Only if Tag is out of cycle
Concrete/Fibreglass	No
Steel	Only if Tag is out of date and pole is > 12 years old

3.3 Identifying Where a Pole has been Condemned

Condemned poles are easily identifiable through visual identifiers on the pole itself. Detailed analysis on why a pole has been condemned can be found using Evoenergy’s works management systems.

TABLE 2. IDENTIFICATION OF A PREVIOUSLY CONDEMNED POLE

CONDITION	IDENTIFICATION	LIMITATION
Pole Condemned	Painted red cross at tag height with tag nailed in centre of cross	Pole not to be climbed
Pole Nailed	The pole nail	Pole not to be climbed

4. SAFE TO CLIMB TEST

This section of the procedure provides detailed information on the mandatory and optional tests that make up a safe to climb test. A safe to climb test is viewed as the combination of all mandatory and optional tests undertaken on a site. In order for a safe to climb test to be completed all mandatory steps must have been completed.

If at any time during the assessment process defects are identified that compromise the integrity of the pole, the pole is **not** to be climbed and the pole condition shall be reported immediately.

4.1 Initial Visual Inspection (Mandatory)

All poles (including private poles) shall be visually inspected to ensure that they are safe to approach. Points to look for are as follows:

4.1.1 Conductors

- 📌 Low conductors
- 📌 Uneven sag or inappropriately designed attachments
- 📌 Lightning, burn or flash marks
- 📌 Integrity of insulators
- 📌 Visual signs of electrical leakage (e.g. broken insulators, conductor touching pole or crossarm, dead animals/birds on or near pole etc.)

4.1.2 Pole Structure Soundness

- 📌 Termites
- 📌 Condemned & reinstated poles
- 📌 Visual evidence of decay
- 📌 Differences in pole situation (e.g. leaning, bending, slack stays)
- 📌 Depth, age of pole and last test date
- 📌 Structural damage caused by motor vehicle
- 📌 Rusting, spalling, discolouration (concrete, steel and fibreglass)
- 📌 Visual signs of electrical leakage
- 📌 Missing or loose hardware (e.g. broken insulator, conductor touching pole or crossarm)
- 📌 Pole steps missing
- 📌 Pole foundation condition

4.1.3 Physical Terrain

- 📌 Existing traffic conditions
- 📌 Changes in traffic conditions
- 📌 Sloping or uneven ground
- 📌 Pedestrian & vehicular traffic
- 📌 Surrounding vegetation
- 📌 Obstructions (e.g. carports, garden sheds and fences)

4.2 Electrical Test (Mandatory)

Workers must not touch a pole or structure unless testing as per SM4613 Low Voltage Testing Manual has been performed.

4.3 Notation of Pre-Existing Condition of Pole (Mandatory)

Check for condition identification markers such as condemned markings, crosses, and inspection tags. Where identification markers are not visible or legible workers shall consult the works management system that shall have records of previous pole inspections.

4.3.1 Private poles

Private poles may or may not be marked and should be treated with extreme care, as they may not have been subjected to a regular maintenance and inspection regime. Where a private pole must be climbed in order to complete distribution tasks the workers may decide to have this pole inspected by a suitably trained Evoenergy Asset Inspector.

4.4 Above Ground Inspection (Mandatory)

4.4.1 Timber Pole

- 📌 Splits
- 📌 Knots & checks
- 📌 Evidence of termites/Bees
- 📌 Degradation
- 📌 Vehicle impacts
- 📌 Fire damage
- 📌 Leaning or bending
- 📌 Look for evidence of ground movement in the vicinity of the pole butt

4.4.2 Concrete & Steel poles

- 📌 Extent of any rusting
- 📌 Extent of spalling
- 📌 Unexpected discolouration
- 📌 Extent of any damage due to vehicle impacts
- 📌 Fire damage
- 📌 Presence of bees
- 📌 Look for evidence of ground movement in the vicinity of the pole butt

Note:

Where any of the defects referred to in the above dot points are present, the work team shall arrange for a suitably trained Evoenergy asset inspector to conduct a full pole inspection to determine the condition of the pole through an internal evaluation.

4.3 Sound Testing the Pole -Timber Only (Optional)

Sound testing is a recognised industry method to assist in the determination of the pole condition.

Sound testing is performed by:

- 🔊 Striking the pole from several directions with a dumpy hammer
- 🔊 Starting at the base of the pole, as close as possible to ground-line starting in the non-critical axis, sound around the circumference, at approximately 100mm intervals, then upwards around the circumference of the pole, as high as can be conveniently reached whilst listening for changes in the sound the hammer makes on contact with the pole
- 🔊 A sharp ringing sound indicates the pole is solid
- 🔊 A dull, soft or hollow sound indicates the presence of a pipe, internal decay or advanced termite attack

4.4 Ladder Bounce Test (Mandatory)

A ladder bounce test shall be performed by employees prior to climbing a pole.

A ladder bounce test is performed by:

- 🔊 Extending a ladder to as close as possible to 45 degrees up the pole to climbing height, preferably in the critical axis. Proceed to climb the ladder no higher than the third rung and bounce the ladder against the pole to create stress. Listen for timber creaking or other adverse noises or ground movement.

Note: Prior to performing a Ladder Bounce Test, assess whether adjacent spans, if very slack, will clash together during the test and if so, do not proceed with the test until steps are taken to rectify.

4.5 Rope Test (Optional)

Depending on the outcome of the Ladder Bounce & Sound Tests, a Rope Test may then be considered as a further check. Pressure is applied as close as possible to the head of the pole by the attachment of a rope, which has been hoisted by an approved operating stick or a ladder to the top of the pole if the Ladder Bounce Test was successful prior to this test occurring. Pulling is to be done by hand only and is to be in the same direction as the critical axis.

Note: Ensure the rope used is of a sufficient length that should the pole under test fail, it does not cause injury or damage

4.6 Checks Whilst Climbing the Pole (Mandatory)

After beginning to climb a distribution pole, the following further items will assist in determining if the pole is suspect after checks in previous sections have been completed. Work crews shall utilise non-climbing resources to assess these wherever required.

- 🔊 Noise
- 🔊 Detailed visual inspection, splits, knots, termite, degradation
- 🔊 Excessive bending of pole or ladder movement
- 🔊 Excessive vibration
- 🔊 Pole footing movement

4.7 Continual Monitoring of the Pole (Mandatory)

Workers working on the pole should be aware that the load conditions at the pole top are constantly changing due to a number of factors e.g. wind, movement of climbers, etc. Therefore, the following points should be monitored by workers both up the pole and on the ground.

- 📌 Noise
- 📌 Excessive movement of pole or ladder
- 📌 Excessive vibration
- 📌 Pole footing movement
- 📌 Weather changes
- 📌 Changed traffic conditions

5. TRAINING & COMPETENCY ASSESSMENT (MANDATORY)

5.1 Training

All staff required by the employer to climb poles shall be trained in the use of any procedures developed in accordance with this work instruction.

5.2 Annual Competency Assessment

Employers must ensure workers undergo assessment in appropriate aspects of pre-climbing at intervals not exceeding 12 months. Should workers not reach the competency standards required then employers must not permit the employee to ascend poles and retraining will be required.

The employer must keep suitable and accurate records that indicate workers have displayed competence in the appropriate procedures within the previous 12 months.

5.3 Reporting of Suspect Poles (Mandatory)

Site Lead

Suspect poles need to be reported immediately to Faults and Emergency call centre on 131093, to minimise any further potentially dangerous situations.

During Work Hours

Call the Asset Inspection Site Lead or if unavailable contact the suitable Program Delivery Lead. Attach "awaiting inspection" tag to pole. Also, make sure that access to the base of the pole is cleared enough to allow the inspector to excavate around pole.

After hours

Call the on-call supervisor who will organise an Asset Inspector to attend. Attach "awaiting inspection" tag to pole. Also, make sure that access to the base of the pole is cleared enough to allow the inspector to excavate around pole.

6. DEFINITIONS

Terms defined in this document are used in accordance with the Networks Glossary.

TERM	DEFINITION
MEWP	Mobile Elevated Work Platform
POA	Point of Attachment

7. REFERENCE

- 📖 Evoenergy Safety Rules (The Blue Book)

Legislation

- 📖 Work Health and Safety Act 2011
- 📖 Work Health and Safety Regulation 2011

Standards

- 📖 AS 3000 Wiring Rules

Instructions

- 📖 SM1188 – Pole and Line Inspection Manual
- 📖 PR4625 Job Risk Assessment (Pre-Start) Procedure

Procedure

- 📖 SM4615 Energised Low Voltage Works Manual
- 📖 SM4613 Low Voltage Testing Manual

8. RECORDS

All pole inspections are recorded in the works management system

- 📖 Safe to Climb methods should be recorded on the “PR4625 Job Risk Assessment (Pre-Start) Procedure”

VERSION CONTROL

VERSION	DETAILS	APPROVED
1.0	Initial Document	example

DOCUMENT CONTROL

DOCUMENT OWNER	PUBLISH DATE	REVIEW DATE
Overhead assets manager	12/1/2019	12/1/2021