

Guidelines for electrical inspection and verification testing of properties affected by flood waters

Purpose

To provide practical guidance on inspection and testing requirements for properties affected by flood waters.

Application

Energy Safe Victoria provides the following advice to electricians and registered electrical contractors engaged to perform electrical inspections and or repair works to properties affected by flood waters to ensure these activities are performed in a safe manner.

The recent floods may have caused the presence of water and other foreign external influences to affect premises and result in an unsafe electrical situation. Potential risks include poor insulation resistance, earth leakage and short circuits.

Inspection and testing

Energy Safe Victoria requires all electricians and registered electrical contractors to carry out work in a safe manner including the performance of a safe approach. This would include:

- A check of testing equipment to ensure it is functioning correctly.
- Ensuring appropriate safety apparel is being worn and the work environment is suitable to perform the work safely.
- A test to prove any exposed conductive parts and parts that would be live in-service 'de-energised'.
- A check for isolation of supply (Distributors).
- A check for isolation of supply (Alternate, e.g. generator/solar).
- A re-check of testing equipment to ensure it is still functioning correctly prior to touching parts of the installation.

Visual inspection

A visual inspection must be carried out before or in association with mandatory testing before the electrical installation is ready to be placed in service including:

- General condition of the electrical equipment, e.g. signs of damage that could impair safe operation, signs of ingress of water to electrical equipment.

Where water has entered electrical equipment, these parts should be replaced or disconnected prior to re-energisation of the electrical installation.

Mandatory testing in accordance with AS/NZS 3000:2007 Amt 1

The following mandatory tests shall be carried out on low voltage electrical installations prior to them being placed in service:

- Continuity of the earthing system (earth resistance of the main, protective earthing and bonding conductors).
- Insulation resistance (of all fixed wiring and appliances to be connected).

- Polarity.
- Correct circuit connections.
- Verification of impedance required for automatic disconnection of supply (earth fault-loop impedance).
- Operation of RCDs (if supply is available).

Certificates of Electrical Safety

- In circumstances where the distribution company has isolated supply to the individual installation, a Certificate of Electrical Safety is required to be completed certifying the electrical installation is safe to be reconnected to supply by the distribution company.
- In circumstances where the installation has undergone any associated repairs, a Certificate of Electrical Safety is required to be completed.
- Upon application, Energy Safe Victoria will issue replacement Certificate(s) of Electrical Safety to Electricians and Registered Electrical Contractors where they have performed electrical repair work to premises affected by flood water, for no profit or gain.

For more information contact the Energy Safe Victoria technical advice line on:

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