

ASP Safety Alert

ASP Compliance and Practices



Alert Number: SA17_18

3 December 2018

Unintended discharge of electricity during live low voltage works

Ensure all authorised workers comply with Ausgrid's Electrical Safety Rules (ESR) requirements when undertaking live low voltage works on the Ausgrid network.

Incident Summaries

1. Whilst bonding in an LV UGOH, an ASP1 Lineworker was connecting a 95mm² ABC tail from the LV link box to the 95mm² ABC overhead in-service network, a flash over between B & C phase occurred.
2. Whilst re-tensioning live low voltage (LV) overhead (OH) mains, an ASP1 Lineworker cut the B-phase in-service conductor, causing it to contact a telecommunications steel catenary wire resulting in an arc-flash.

Expectations

Ausgrid's ESRs define live low voltage work as *"live LV work is carried out on exposed LV mains and apparatus that are live or have not been fully isolated. This includes work on insulated LV mains and apparatus where the work undertaken will or could compromise the insulation. The work must be done using insulating gloves (on each hand) and insulated (regarded as covered) tools, covers, mats or screens, as necessary for the work."*

It is expected that all authorised workers comply with Ausgrid's ESRs requirements when undertaking live low voltage works on the Ausgrid network. These include but are not limited to the following:

ESR 9.1.2 – Working with exposed live low voltage mains and apparatus

To work on live LV mains and apparatus, all of the following conditions are required:

- Only trained and authorised persons can carry out live LV work
- You must assess all live LV work and prevent any accidental contact with other live conductors, neutral conductors, earth conductors or earth by using approved precautions
- You must wear an insulation glove on each hand, safety eye protection, and any additional personal protective equipment (PPE) required when working on live LV mains and apparatus.

ESR 9.4.1 – Connecting and disconnecting low voltage mains and apparatus

Before closing the connections to any LV mains and apparatus, you must carry out appropriate tests to check for:

- Phasing
- Phase-to-phase faults
- Phase-to-earth/neutral faults

When energising LV mains and apparatus to a live LV source of supply:

1. Connect the neutral conductor first – if a neutral conductor is involved
2. Connect the live (active) conductors to the source of supply last

To ensure that a voltage difference does not exist at the connection, check the phasing from all possible sources of supply. If there is any possibility of interconnection to another power source, you must phase all new or disconnected connections before connections are made.

To check phasing, you must use approved equipment such as:

- Test lamps
- Voltmeters
- Indicating devices

ESR 9.5.1 – Exposed live low voltage mains and apparatus

You must wear an insulating gloves and leather outer gloves for the duration of the work. This applies even if the conductor being worked on (and every other conductor) has been totally screened by the application of temporary insulation (or by other means).

Every other conductor includes:

- Conductors of unlike phases of the same distributor and all conductors of a different distributor
- Street lighting conductors
- Neutral conductors
- Catenary (e.g. broadband communications cable)
- Earth conductors

Action Required

ASPs to communicate to all authorised employees, supervisors and project managers the requirements for arranging appropriate access to the network and working under all permits as per Ausgrid's Electrical Safety Rules.

Ausgrid

Project Officers