Endeavour Energy

A message from

Customer Network Solutions

37/2025
Safety Notice - Incorrectly connected cable

20 November 2025

Following a recent incident where an incorrectly connected cable caused an explosion, we're sharing key learnings and the actions required to strengthen design detail, communication, and construction practices. The aim is simple: *keep people safe and protect the network*.

Incident learnings (summary)

- **Scope and isolations:** Incomplete scoping of works, Access to isolation points & site-specific conditions, plus ineffective cross-party communication contributed to the incident occurrence
- **Forms:** SDI120 did not fully outline testing/identification requirements for abandoned cables (SDI forms are currently under review to manage future projects)
- **Handover:** Multiple project hand-offs between project management teams may have introduced miscommunication and been a likely factor in the incident
- **Design detail:** Missing specifics (e.g., cable sizes), whether a cable extension was needed for new terminations, and whether plinth extensions were required for the network upgrade
- **Scope changes:** Known changes were not effectively communicated, causing scope creep and changes to Access Authority (AA) conditions
- **Abandoned cables:** Proposed abandoned cables were not short-circuited and earthed to MCI0006 requirements.
- **Work request:** The description did not fully reflect the end-to-end scope

All documents referenced below can be found on the Endeavour Energy ASP Portal.

Level 1 ASPs

Plinth extension when replacing Holec → ABB Safelink

When replacing existing Holec switchgear with ABB Safelink, consider any pad-mount plinth extension required.

- Refer to SDI182 for installation instructions and Endeavour Energy Drawing 506649 for approved product details
- Ensure this scope is noted in the certified design

Terminations at switches (and potential jointing/extension)

When replacing HV or LV switchgear, check whether existing cables will reach new terminations. If a cable may be "short," put contingency plans in place:

- Identify and mark cable cores immediately after disconnection
- Plan for section replacement via STJ/TTJ where required
- Request extension of isolations as needed to ensure cables are correctly identified

Pre-commencement cable identification (MCI0006 & ESR extracts)

As per MCI0006 clauses 3.2.4 & 3.2.5 and Electrical Safety Rules (ESR) clause 8.6.6, cables must be appropriately identified if they are not immediately terminated or are proposed to be abandoned. Extracts below:

3.2.4

The following steps must be taken when abandoned paper insulated cables are left in the ground:

- Cut the cable away from its previous termination and below ground level, clear of any earthed or potentially live equipment;
- Remove 100-150mm from the outer serving/outer sheath/wire armours to expose the outside of all 3 conductors.
- Hammer two clouts 80% into the cores on opposite sides of the cable.
- Use 80A – 1.63mm tinned Cu fuse wire to wrap around one clout, then bind all cores tightly together with at least 3 wraps so the fuse wire has reasonable surface area contact direct with exposed conductor, then finally wrap fuse wire around the second clout.
- Hammer the clouts in completely to secure the Cu fuse wire;
- Install a 300mm long mastic/adhesive lined heat shrink from the end of the cores down the cable;
- Apply a single layer wrap of mastic sealing tape around the heat shrink sleeve, 100mm from the end of the cable;
- Install an approved mastic/adhesive lined heat shrink cap or suitably sized, approved cold applied end cap;
- Secure with cable ties or binding wire a suitably durable metal tag (refer to 3.2.5) etched or scribed “Abandoned Cable” to the end cap.

Typical cable sealing details MCI0006 17 To assist the location and excavation of buried end capped cables and conduit ends, a section of 50mm conduit is to be marked with the approximate depth of the end caps and buried vertically adjacent to the end of the cable or conduit and cut 200mm below ground level to avoid a trip hazard, but still easily locatable during initial excavation. Reference measurements of all end capped cables are to be recorded on WAE documents.

3.2.5

All laid cables which are not terminated immediately or have been abandoned must be clearly identified by information, (detailed below) etched or scribed into a suitably durable metal tag. 50mm x 100mm Cu tags are available on stock code 1544048 and are secured near the cable end cap with cable ties or binding wire. End capped cables left above ground in substations or on UG/OHs must be clearly identified by information written on the cable serving with a permanent marker pen or by using suitably durable metal tags if exposed to the elements.

Suitable information is required to identify the location that the cable originates from (point of supply) or is end capped e.g.:

- (Tag information at the remote end cap) SP12334 in PS5432 Smith Street or;
- (Tag information at the point of supply end cap) UG/OH at 21 Jones Road.

8.6.6

Identification of high voltage underground cables (ESR)
Before working on high voltage cables remote from their exposed terminals it is essential that they be positively identified. Cables are deemed to be positively identified if the cable has been visually and/or physically traced throughout its entire length from one point of isolation where an earth can be applied, or for newly installed unearthed cables, physically traced by means of the installation process and pulling eyes. For cables which cannot be positively identified visually, then the following approved methods and requirements must be met for positive identification. For HV Cables (rated less than 33kV), LV cables and pilot cables, at least one of the following methods in Table 8.6.6A are required for positive identification. The identification must also be verified by a second person.

When the cable has been identified, it shall be suitably labelled by the identifying officer by attaching a metal tag with sealing wire and seal. The tag shall be inscribed with the voltage of the cable, substation and switch numbers or geographic location of other ends, date of identification and identity of the identifying officer. Alternatively, unterminated cables left above ground in substations or other enclosures which provide protection from the elements may be clearly identified by information written on the cable serving with a permanent marker pen. A cable that has been identified greater than four weeks previously, or if the label is missing or illegible, must be identified again in accordance with these rules. A cable which is terminated to labelled apparatus at both ends is identified in accordance with these rules. Where a cable is connected at one end only, a Warning Tag shall be attached to the apparatus at the connection point to indicate the cable is not able to be energised and identify the location of the remote end. All unterminated cable ends shall be short-circuited and labelled in accordance with MCI0006 Underground distribution construction standards manual.

Responsibilities of Access Authority holder

It is the responsibility of the Person accepting an Access Authority to understand to conditions outlined on the Access Authority, Please refer to wording as part of the sign on process:

I ……(print name) understand my responsibilities as an Authorised Access Authority Holder. I understand the contents of this Access Authority, all isolation points, earthing points and location of nearest live electrical apparatus. I am satisfied that the items above will permit me to carry out the described work in accordance with Endeavour Energy's Electrical Safety Rules and will ensure that all members of the work party are aware of the conditions of this Access Authority and any local safety precautions.

If an alteration to scope of works, isolation and/or earthing outlined in the Access Authority is required, the person accepting the Access Authority must seek to have the Access Authority cancelled and re-issued by Endeavour switching staff to reflect any required scope changes.

Changes to scope of works:

All known changes identified before a scheduled outage are to be submitted in writing to the relevant Construction Coordinator for review and approval. This includes proposed works to be captured through the WAE process. Any short-notice or outage-related changes must likewise be reported to the Construction Coordinator, as they may require amendments to Access Authority conditions, including cancellation and re-issue, to ensure ongoing safety compliance.

For Level 3 ASPs

Certified designs must:

- Be prepared by an Accredited Service Provider listed on the NSW Climate and Energy public register
- Use only materials approved for use on Endeavour Energy's network
- Specify minimum safety clearances and construction requirements per Endeavour Energy standards
- Identify project-specific land interests
- Outline construction, environmental or network constraints relevant to the proposed works

Specific notes to include where relevant:

- Holec → Safelink replacements: a plinth extension is required to accommodate the HV arrangement change. Reference SDI182 and note this on the certified design
- Cable data: Conductor type and sizes must be clearly identifiable and labelled on certified designs. See SAD0001 for information

Please reach out to us should you need any further clarification or information at cwadmin@endeavourenergy.com.au.

Kind regards,

Customer Network Solutions