

Triple Concentric Cable Identifier

The following problem statement has been developed by the innovation teams within the UK's Gas and Electricity Networks for the 2024 Energy Innovation Basecamp.

Theme: Building Better, Faster and Safer

Network Areas: Electricity Distribution, Electricity Transmission, Electricity System Operator, Gas Distribution, Gas Transmission (Delete as Appropriate)

What is the problem?

Before cable jointing takes place on any cable, it must be correctly identified. Signal injection identification techniques are used, but they rely on the roll of the cores within the cable. Paper Insulated Lead Covered (PILC) triple and double concentric cables cannot be positively identified using these methods as the cores are concentric and have no roll.

Currently to identify a triple concentric cable the method is as follows:

- Digging a larger joint hole to expose all cables in the immediate vicinity.
- Once all other cables have been identified, the remaining cable must be the concentric cable.
- This is then confirmed by digging back to an expected joint, requiring extra excavation work.

What are we looking for?

A method or tool to be able to identify a triple and double concentric cable without having to excavate for a positive identification.

What are the constraints?

The solution must:

- Must operate when the cable is energised to avoid supply interruptions.
- Provide an unambiguous identification.
- Avoid any form of "cross-talk" with other cables.
- Must also work with a dead cable. An AC supply may be available from a busbar.

The solution should:

- Simple to operate so it becomes "method of choice".
- Portable as it needs to be carried into a joint hole.

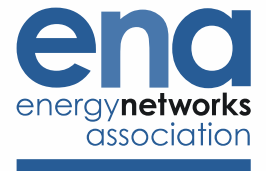
Who are the key players?

This solution will be adopted by UKPNs frontline Network Operations staff. In gaining approval for the method, we will also work closely with our Health and Safety and Standards team to ensure it can be safely deployed.

Does this problem statement build on existing or anticipated infrastructure, policy decisions, or previous innovation projects?

No.

Energy Innovation Basecamp 2025 Problem Statement EIP144



What else do you need to know?

No.

Innovator submissions to this problem statement will be open [here](#) during March and April, but we encourage you to submit your response as early as possible, as networks will be able to review submissions as soon as they come in.

You can also use the virtual Q&A on the Smarter Networks Portal to ask for more information about this problem statement. Questions may be answered online or at the ENA Problem Statement Launch in March 2024. More information on last year's Basecamp programme can be found [here](#).