

# Safety Notice

## Notice to all network stakeholders

Issue 3 | Rev. 0 | February 2025

### Stray electrical current

In December 2024, a contractor was inspecting Powerco's Cathodic Protection system in Lower Hutt Wellington. Upon opening the protective cover, it was found that the back plastic panel melted. No signs of tampering were detected, and stray current was suspected.

Inquiries with KiwiRail and Wellington Electricity, found no clear source, no recent faults, and no damage to spark gaps on overhead gantries. Investigations are continuing; however, the **cause remains unknown**.

As a reminder to the recently updated *Hazardous Voltage Management Standard 394S115 (April 2023)* which applies to all regions where Powerco own and operate below ground steel pipelines, above ground metallic structures and equipment. Please refer to the Hazard Maps on GIS for more information.

### What is it?

The source of the hazardous voltages near a steel pipeline could be from:

- High voltage power networks,
- Rail electrification,
- Power generation plants,
- Earthing wires
- Stray current from lightning storms,
- Solar generation
- Electric vehicle chargers

Even when power systems are working correctly, faults can still occur and cause danger. Dangerous voltages can affect pipelines through two main ways: Low Frequency Induction and Earth Potential Rise.

1. **Low Frequency Induction:** This happens when electrical currents create magnetic fields that induce voltages in nearby pipelines.
2. **Earth Potential Rise:** This occurs when a fault causes the ground voltage to increase, which can then transfer to pipelines.



**Melted CP test point**



**Artist impression**

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**All metallic gas assets are at risk of hazardous electrical currents.**

## Action Points:

All workers are reminded to conduct thorough hazard identification prior to work commencing. All hazards need to be minimised, if they cannot be eliminated.

In line with the Powerco's Safety Fundamentals, all workers need to:

*Taken from Powerco's H&S Fundamentals*

- The work is planned well, and hazards are identified.
- Ensure all risks are controlled before works begin.
- Use testing equipment – before touching.
- Bonding allows electrical continuity.
- Use equipotential matting as an engineered and control;
- Have the appropriate equipment and PPE.



### Test before you touch

Always test before work commences.



### Bonding Equipment

Bond to ensure electrical continuity prior to cutting or breaking a conductive gas pipe and/or equipment.



### Protective matting

Ensure approved equipotential matting is used to prevent exposure to hazardous electrical currents.

**Please distribute to all relevant staff immediately**

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