

## **Inquiry into scrap metal theft**

**Submission No:** 12  
**Submitted by:** Powerlink Queensland  
**Publication:** Making the submission and your name public  
**Attachments:** See attachment  
**Submitter Comments:**

# The impact of metal theft on Electricity Transmission

## The metal theft risk to people and network

Particularly for Powerlink Queensland network security is a critical control for electrical safety to prevent the human cost of theft behaviour, widespread outage, interference and sabotage.

The experience of Powerlink is that metal thieves largely target earthing conductors of the operational, energised network. In doing so they create an electrical safety risk for themselves, workers and the community.

## Risks to thieves

The consequence of this risk is firstly for the thief to form part of the earthing system while making cuts to conductors and experience an electric shock.

There is also the possibility of the thief to encroach on energised conductors of the network when accessing High Voltage substations and other assets, and by doing so receive an electric shock.

## Risk to workers

There is a risk to personnel working on and around the network where the earthing conductors have been removed by thieves. The unidentified absence of earthing conductors is an electrical safety risk to workers because dangerous voltage may be present on the unearthed metal parts. There is also a risk to workers that in the rare occurrence of a High Voltage equipment failure, the compromised earthing may not be able to safely manage dangerous voltage and nearby workers could be in a situation to receive an electric shock.

## Risk to members of the community

Copper thieves leave unsafe situations for members of the community in a number of ways. Thieves cut access holes in substation fences and cut through the lock and chain of the substation gates. This situation has the potential to leave the High Voltage substation open to curious individuals.

## Network risk

The actions of the thieves also create the possibility of network risk, either directly by causing widespread outages to electricity consumers, bushfire ignition via fallen conductors, or by leaving the network at risk of sabotage.

## Construction project theft

Thieves also target construction activities, stealing newly installed conductors or material from drums locked in substations or construction site compounds.

## Incidence of metal theft

Powerlink's growing transmission network extends from the New South Wales border north beyond Cairns and west beyond Mt Isa. Powerlink's safety management system records occurrences that have an electrical safety or network security impact Across the state.

Since 2015 Powerlink's substations have experienced approximately 250 recorded occurrences of unlawful access resulting in metal theft.

### Cost to rectify

Powerlink is very sensitive to, and reacts swiftly to, occurrences of metal theft and unlawful entry. In the making safe initial emergency response and in the longer-term repairs Powerlink incurs significant costs, which inevitably passes through to electricity consumers.

Powerlink estimates that in the previous ten-year period, unlawful access has had a direct cost of approximately \$2.6 million.

Indirect costs are also incurred. All occurrences of unlawful entry with or without theft are reported to the Electrical Safety Office and the Queensland Police Service, of which Powerlink supports any investigations.

### Cost of prevention

Like other Electricity asset owners, Powerlink's program of installing electric fences for substations has responded to the threat of unlawful entry and metal theft. Powerlink continues to invest in network security upgrades.