

Hot metal

Jim Farrell

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Kilometres of copper cable being installed in the latest LRT extension have become a prime target for nighttime thieves as the price of the metal soars.

"I understand that from July to December the LRT alone has lost close to a quarter-million dollars because of thefts," Const. Randy Kuntz of the EPS commercial crime unit said this week.

Copper is bought and sold by the pound. Five years ago, the price of the metal was a dollar a pound; today, it's closer to \$2.85.

There are risks as well as rewards in stealing copper for resale.

The current in power lines such as those used by Epcor often have voltages measured in the tens of thousands. The copper cable used to prevent corrosion by grounding LRT tracks has virtually no voltage and presents a much more benign target for thieves.

"There are kilometres of that cable being used in the LRT southside expansion," said Kuntz. "They are losing it nightly."

The financial loss to the LRT is due mainly to the costs of installing new ground cables rather than the cost of the cable, said Brad Griffith, the project's director of design and construction.

A copper grounding line runs underground alongside the tracks to bleed spare current from the rails and the metal posts that hold the system's overhead power lines. Since stray current will corrode the tracks and the poles, copper cables connect those structures to the underground line.

When those connections -- called pigtails -- are cut off and stolen, the cost to replace them can far exceed the value of the copper.

"When you cut them off flush where they go through concrete, the cost of replacing them can amount to \$2,200 a pole," said Kuntz. "That's a lot of damage for 10 bucks in copper."

With the ground now frozen, the thefts have decreased, Griffith said. In the near future, fixes may ensure they remain low.

"What we are looking at now is covering the stuff in the ground with concrete," Griffith said. "We are also holding off putting wire in the ground until the last minute. Once the trains are running, that will make it harder to take it because the thieves will be seen."

Closed-circuit television cameras around the LRT's new stations will add more eyes, said Griffith.

Epcor's losses to thieves are minuscule by comparison, said Ross Johnson, Epcor's security manager.

"For us, it's just an irritant, but we are taking copper theft very seriously, not because of the theft but because we don't want people being hurt."

In mid-January, a 32-year-old man in Ontario man was found dead on top of a power transformer after he broke into a power substation with bolt cutters.

Police said he was electrocuted when he came into contact with a 44,000-volt conductor. To date, no one in the Edmonton area has been killed or injured.

New security measures are being introduced as the market in hot copper continues to thrive. Epcor has begun spraying tiny microdots less than 1 mm in diameter on power cable to help identify stolen utility wire. Each silicon dot is outfitted with a PIN number and web address that identifies the owner of the copper. If the line is stolen, the owner reports the ID number to a web address. If a scrap metal dealer wants to ensure the line is not stolen, that dealer can read the line's ID number with a 30-power magnifying glass, then go online to see if it was stolen.

The co-operation of scrap metal dealers is crucial, Kuntz said.

"We are now in the process of trying to get the bylaws changed so scrap-metal dealers have to take the same precautions as pawn shops."

Under that system, a seller would have to produce identification so they can be tracked down if the copper turns out to be stolen.

jfarrell@thejournal.canwest.com

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