

A billion dollar global problem

COMBATING COPPER THEFT

**An analysis of the changing
construction facility landscape and how
to protect your investment, work, and
workforce in the 21st Century**



ERICO[®]

POWERING THE ECONOMY



Copper theft costs American businesses nearly **\$1 Billion** in losses annually. ^[1]

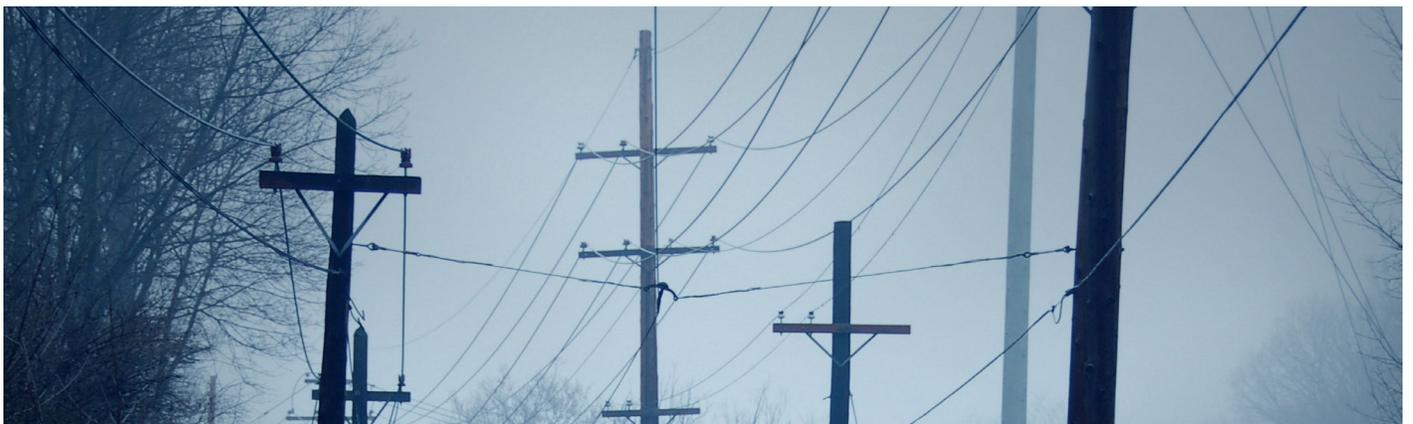
-US Department of Energy estimate

The utility sector is vital to national, state, and local economies - providing thousands of jobs and billions in revenue worldwide. This sector fuels every facet of the global economy and is critical to economic development and growth. As a result, the steady and uninterrupted flow of electricity is of absolute importance to ensure critical infrastructure is not disrupted.

Copper is the global standard for electrical connectivity due its high current carrying capacity compared to most metals. Copper is also often used as the metal won't break or stretch easily yet is malleable enough to provide the movement and form fitting attributes necessary in some applications.

With construction booms in developing nations across the globe, demand has increased significantly in recent years for copper. The international copper trade makes it easier for thieves to sell the metal, increasing the incentive for theft. **As global construction increases, the threat of copper theft is likely to increase even further in the next decade.**

In the UK, Copper theft is estimated to cost the nation **£360 [\$576] million a year. ^[2]**



COPPER THEFT: A GLOBAL EPIDEMIC

Not having proper guard against copper theft puts your infrastructure and workforce at great risk.



Copper theft presents multiple issues for businesses - the gravest of which is the possibility of the death of someone coming in contact with a compromised electrical system. Every year, people die of electrocution due to exposed wiring and currents not being diverted after copper has been stolen from utilities and other locations. Stolen copper can also be costly to replace; the US Department of Energy estimates that **copper theft can cost more than 10 times its initial cost to repair**^[3]. This is due to the replacement cost, down time, additional labor, and other costs that add up to far beyond the actual cost of the copper itself.



Copper theft doesn't only cost you in replacement time and money but also in system reliability. The potential impact of power outages due to copper theft can effect critical local infrastructure through service disruptions and reduced system output.

As a result, it is essential for utilities and companies to take effective safeguards in their copper infrastructure.

CASE STUDIES

United Kingdom

The Church of England loses **£10 [\$12] million** each year from copper theft.^[4]

United States

Sound Transit in Seattle, WA faced total replacement costs of **\$1.3 million** due to 4.3 miles of copper theft in 2011.^[5]

Canada

In 2011, telecom provider TELUS estimated that copper theft cost the company **\$20 million** in British Columbia and Alberta alone.^[6]

France

The number of reported copper theft incidents rose to **over 9,000** in 2013.^[7]

Jamaica

Telecom provider LIME reports that copper theft costs the company **\$2 million** per incident.^[8]

SAFEGUARDS AGAINST COPPER THEFT

Potential strategies to prevent copper theft include:

SECURITY: The most obvious solution to combat copper theft and protect your investment is growing your security force. However, bulking up your security can be costly and cut into your revenue on a daily basis.

MARKING: Marking each cable can serve as a method to capture thieves once they try to sell the copper. However, doing so is an after-the-fact method and won't stop thieves from walking away with your copper.

ALARM SYSTEMS: Alarm systems specifically exist for protecting copper cables. However, by the time an alarm is signaled it can be too late to catch the theft in progress - allowing thieves to make off with the stolen copper.



ERICO® has engineered a new solution to combat copper theft with even more features of protection than traditional methods provide.

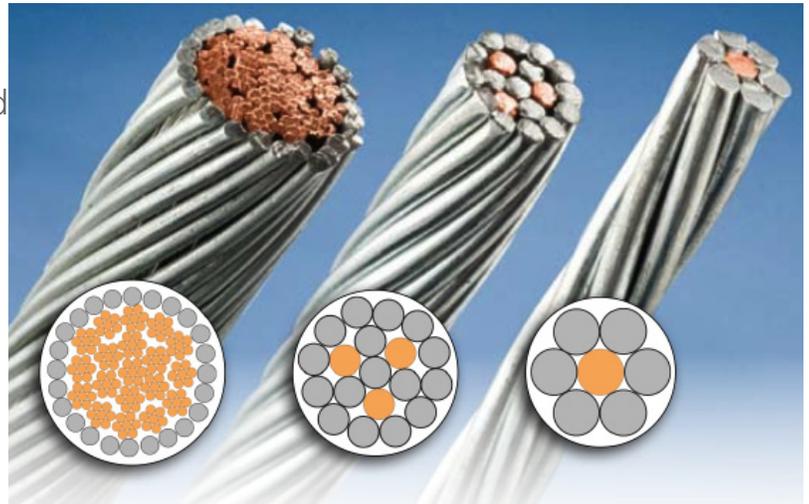
ERICO® CU-BOND Composite Cables function as copper conductors, but appear to be non-copper conductors and are difficult to cut and steal. These conductors are ideal for exposed electrical distribution grounding leads where copper theft may occur. Theft deterrent conductors offer a solution to safeguard your facility's copper infrastructure. In addition, the conductors are compatible with ERICO® CADWELD® PLUS welded electrical connections.



ERICO® CU-BOND Composite Cable

ERICO® CU-BOND Composite Cables are concentric stranded conductors that consist of tinned strands of copper-bonded steel which protect and conceal the internal tinned copper strands.

These conductors are ideal for exposed electrical distribution grounding leads where copper theft may occur. The conductors are difficult to cut with hand tools and the outer steel deters thieves looking for copper.



ERICO CU-BOND Composite Cables are suited for use in substation risers to connect the grounding grid to substation equipment and structures. The conductors can be used on power and grounding connections to rail tracks. The CC5A05CB is the electrical equivalent to a 4 AWG copper (16 mm²) and is ideal for transmission tower, distribution pole and street-light, bridge-light, or platform-light grounding.



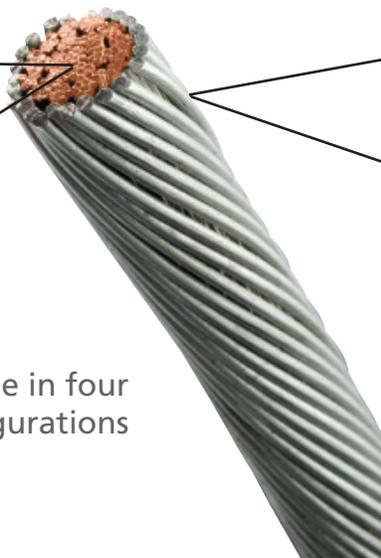
Copper stranding inside of conductor increases conductivity and conductor flexibility

Copper stranding is tinned for superior corrosion resistance

Copper strands are hidden by ERICO® CU-BOND tinned copper-bonded steel

Outer strands are comprised of ERICO CU-BOND tinned copper-bonded steel for corrosion resistance

Available in four configurations



Go to erico.com or contact your nearest representative to learn how ERICO can save your company valuable time, money, and more

COMBATING COPPER THEFT

SOURCES CITED

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