



Water Scarcity to Drive Future Demand for Copper

Study Name: Opportunities for Copper in Water and Waste Water Treatment
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Copper demand is likely to rise as the issue of water scarcity becomes more pronounced, according to research undertaken by strategic market intelligence company BSRIA WMI. The study anticipates copper use in water and waste water utilities could grow to 260,000 tonnes per year by 2027.

Overview

The increasing pressure on our global water supply—caused by a growing population and industrialization of the world’s developing economies—has brought water and waste water management processes and efficiency into focus. With copper a critical material in water management technology, demand in this sector is set to grow significantly.

BSRIA WMI’s research—commissioned by the International Copper Association (ICA)—shows copper already exists in large quantities throughout the water utility segment. 78% of it resides in pump motors while electrical wiring, heat exchangers, combined heat and power (CHP) units and other ancillary electrical equipment make up the remaining share.

As measures are put in place to improve efficiency, and ageing infrastructure is replaced, the current copper demand of 39,000 tonnes in the specific area of water utility is set to grow at an astonishing rate, driven largely by a need for more efficient

motors and heat exchangers in cogeneration and ancillary applications. The preliminary research suggests 200,000 tonnes of copper will be needed to satisfy the demand for motors alone in 2027.

Efficiency

With the trend of improving efficiency in the water industry, copper demand is predicted to rise by 50% per unit. This will be driven by motor efficiency, on site generation and efficiency in the most demanding processes, such as aeration and sludge treatment.

Growth

Growth in the global economy, urban population growth, and the need to update ageing infrastructure, will drive copper compound annual growth rate demand by a minimum +16% in the next 10 years.

Water Scarcity

The continuing problem of water scarcity and the related issues of climate change,

drought and storm management will lead to increases in water infrastructure measures. These include growth in desalination plant installations, water waste reduction methods and water remediation. The resulting investment in infrastructure is expected to grow by 100% in the next 10 years.

Key Findings

- Population growth, climate change and industrialization are driving developments in water supply and waste water treatment.
- Energy demand in water and waste water treatment will grow substantially, bringing efficiency into focus and paving the way for increased use of copper in applications such as pump motors.
- Heat exchange will grow in importance in ancillary applications as it helps maximize efficiency and reduce carbon footprint.

Forecast of Global Copper Demand (inc. Cu-Ni alloy), 2017–2027, in tonnes

