

## **3M Company Wins Minnesota Tekne Award For Innovation For Its Capacity-Boosting Electric Power-Line Conductor**

The 3M composite conductor, an advanced composite cable designed to reduce electrical transmission congestion by increasing overhead electrical power-line capacity, has earned 3M Company and its Performance Materials Division the 2003 Tekne Award for established companies in the innovation category.

The annual Tekne Awards recognize Minnesota companies and individuals that lead in technological innovation, development, commercialization and management. Winners consist of one established and one emerging company in each of six technology categories. The Minnesota High Tech Association and Minnesota Technology Inc., in partnership with Medical Alley, MNBIO and Minnesota Project Innovation, sponsor the awards.

Currently undergoing advanced field testing by utilities in three states, the 3M composite conductor also is the subject of a pilot program underway at the National Transmission Technology Research Center at Oak Ridge National Laboratories in Tennessee with the support of the U.S. Department of Energy. The product has performed well in field tests so far, and may help provide near-term solutions to the bottlenecks and overload problems afflicting the nation's power grid.

The new cable is capable of transmitting two to three times more electricity than conventional power-line cables of the same diameter without additional weight or the need for more towers. The new heat-resistant conductor is aimed at reducing transmission bottlenecks by enabling utilities to increase power-line capacity on existing structures with no additional easements.

"Congestion is recognized as a key issue facing America's transmission grid and our unique conductor could well be an important part of the solution to this problem," said Tracy Anderson, who heads 3M's composite conductor program. "With our innovative conductors, utilities could be able to increase the capacity of existing lines without the need for additional rights of way or visual changes to the lines."

Composed of a ceramic fiber-reinforced aluminum core wrapped in aluminum-zirconium wires, the 3M conductor is lightweight and can be installed on existing towers using conventional installation equipment. The new conductor, also known as Aluminum Composite Conductor Reinforced (ACCR), sags less than conventional power lines - so it could potentially be used to span difficult geographic features, such as wide rivers, canyons or lakes.

The 3M composite conductor has performed well in field tests in Hawaii, North Dakota and Minnesota -- states where weather conditions pose significant challenges. The field tests are being conducted by Hawaiian Electric Co., Xcel Energy (Minnesota), and Western Area Power Administration (North Dakota), in addition to Oak Ridge National Laboratories.

More information about the 3M composite conductor is available at [www.3m.com/accr](http://www.3m.com/accr).

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