

## **AMSC INTRODUCES SURGE-SUPPRESSING, HIGH-CAPACITY SUPERCONDUCTOR POWER GRID TECHNOLOGY**

- *Proprietary System-Level Solution Enables ‘Secure Super Grids™’*
- *Superconductor Wires to Increase Capacity, Efficiency and Security of Power Delivery for Cities and Metropolitan Areas*

**WESTBOROUGH, Mass. – May 21, 2007** – American Superconductor Corporation (NASDAQ: AMSC), a leading energy technologies company, today introduced a new surge-suppressing, high-capacity superconductor power grid technology – a system-level solution that increases the capacity of power grids while also being able to rapidly suppress power surges. This technology is expected to significantly enhance the capacity, security and efficiency of electric power infrastructures in urban and metropolitan areas around the world, enabling “Secure Super Grids.” AMSC’s high temperature superconductor (HTS) wire, which conducts large amounts of electricity with very high efficiency, is a core component in Secure Super Grids.

“Secure Super Grids will provide cities and metropolitan areas around the globe with a powerful new tool to increase the security and efficiency of power networks and meet customer demand for more electricity in today’s digital, green economy,” said Greg Yurek, founder and CEO of AMSC. “Our proprietary Secure Super Grids technology builds on more than a decade of HTS power cable test and demonstration successes. This technology utilizes a new network-level solution approach that we believe can be readily adopted by utilities around the world utilizing a variety of power cable architectures operating at both transmission and distribution voltages. We expect this system solution to be a catalyst for rapid adoption of HTS technology in power grids.”

Secure Super Grids utilize multiple paths for electricity flow in city power grids to ensure system reliability when individual circuits are disrupted due to severe weather, traffic accidents or willful destruction. In addition, they utilize the special properties of superconductors to not only relieve grid congestion, but also instantly suppress power surges that often damage utility equipment and disrupt customer service. To view an animation of Secure Super Grids in action, please visit <http://www.amsc.com/products/hydra.cfm>.

In a separate press release issued this morning, AMSC announced that it has teamed with Consolidated Edison of New York and the U.S. Department of Homeland Security (DHS) to deploy the first Secure Super Grid to protect New York City’s power grid. The Department of Homeland Security will invest in the development of this technology to enable Secure Super Grids in the United States. Phase 1 of this project includes a system demonstration by the end of 2008. The second phase of the project will focus on the deployment of a Secure Super Grid system in New York City at an undisclosed location, with commissioning planned for early 2010.

Power cables made with HTS wire inside can conduct up to 10 times the amount of power of today's conventional cables of the same size, which are made with copper wire inside. By replacing copper cables with high-capacity HTS cables in cities using existing underground tunnels and ductwork, utilities can avoid digging up city streets while also relieving grid congestion and increasing the reliability and security of power networks. AMSC's proprietary technology goes a step further by integrating customized HTS wires known as 344 superconductors with ancillary control systems to allow the power grid to automatically and instantaneously suppress power surges that occur in city power delivery networks due to short circuits.

AMSC announced that it has chosen Southwire Company to carry out the detailed design work related to HTS cable and termination construction, as well as the manufacture of the world's first HTS power cable that will be used in a Secure Super Grid system. This cable will utilize Southwire's proprietary HTS Triax™ cable design and AMSC's proprietary 344 superconductors.

"The Southwire HTS Triax cable system that we installed in a substation near Columbus, Ohio in August 2006 has been working flawlessly," said Stu Thorn, CEO of Southwire. "The combination of Southwire's cost-effective HTS Triax cable with AMSC's Secure Super Grid technology opens tremendous additional opportunities for HTS cables around the world. We look forward to prototype testing and manufacturing the first HTS cable to be utilized in a Secure Super Grid and bringing this new product to market."

Many companies around the world including AMSC have been working to develop stand-alone superconductor fault current limiters that are capable of suppressing power surges – or "fault currents" – to prevent damage to expensive electrical equipment in today's power grids. AMSC's Secure Super Grids technology is the first to combine the benefits of high capacity HTS cables and fault current limiters in one system, providing compelling space and cost advantages, particularly for urban and metropolitan areas. AMSC expects the global market for this technology and stand-alone fault current limiters will exceed a billion dollars annually.

Much progress has been made over the past decade in developing and demonstrating HTS cable technology thanks in large part to cost sharing by the Department of Energy in several HTS cable projects in the U.S. The first HTS cable system operated in North America was energized in 2000 in Carrollton, GA and served the industrial load for Southwire Company's manufacturing complex for seven years. Today, distribution-voltage HTS cables are serving customers in Columbus, Ohio and Albany, NY. Later this year, a third U.S. HTS cable, operating at transmission voltage will be energized in Long Island Power Authority's grid. Seven additional HTS cable projects are underway in China, Japan, Korea and Mexico. AMSC's HTS wire is being utilized in 70% of the world's current HTS cable projects.

### **About AMSC**

AMSC (American Superconductor Corporation - NASDAQ: AMSC) is a leading energy technologies company. The company develops and sells a wide range of products and

solutions based on power electronic systems and high temperature superconductor (HTS) wires that dramatically improve the efficiency and quality of electricity during its generation, transmission, distribution and use. The company is a dominant force in alternative energy, offering grid interconnection solutions as well as licensed wind energy designs and electrical systems. As the world's principal supplier of HTS wire, AMSC is enabling a new generation of compact, high-power electrical products, including motors, generators, power cables, grid-level surge protectors, and advanced transportation and defense systems. AMSC also provides utility and industrial customers worldwide with voltage regulation systems that dramatically enhance power grid capacity, reliability and security, as well as industrial productivity. The company's technologies are protected by a broad and deep intellectual property portfolio consisting of hundreds of patents and licenses worldwide. More information is available at [www.amsuper.com](http://www.amsuper.com).

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