



## **WORLD'S FIRST TRANSMISSION VOLTAGE SUPERCONDUCTOR CABLE ENERGIZED IN LIPA'S POWER GRID**

- *Cable System Able to Carry 574 Megawatts of Power to Local Residents and Businesses*
- *Industry/Government Partnership Takes Major Step Forward in Development of Electricity Superhighways*
- *Very Low Impedance Characteristics Enable Self-Adjusting, Secure Power Networks*

**Hauppauge, NY - April 30, 2008** - Long Island Power Authority (LIPA) and American Superconductor Corporation (NASDAQ: AMSC) today announced the operation of the world's first high temperature superconductor (HTS) power transmission cable system in a commercial power grid. The 138,000 volt (138 kV) system, which consists of three individual HTS power cable phases running in parallel, was energized on April 22, 2008 and is operating successfully in LIPA's Holbrook transmission right of way. The cable system, including six outdoor terminations for connection to LIPA's grid, was designed, manufactured and installed by Nexans, the worldwide leader in the cable industry. The cable utilizes HTS wire produced by AMSC, which also is the prime contractor for the project. The 2,000-foot-long cable system is cryogenically cooled using a liquid nitrogen refrigeration system from Air Liquide.

The Department of Energy (DOE) previously funded \$27.5 million of the \$58.5 million total project cost, which advances the Department's ongoing efforts, through the Office of Electricity Delivery and Energy Reliability, to modernize the Nation's electricity delivery infrastructure.

The cable system contains hair-thin, ribbon-shaped HTS wires that conduct 150 times the electricity of similar sized copper wires. This power density advantage enables transmission-voltage HTS cables to utilize far less wire and yet conduct up to five times more power – in a smaller right of way – than traditional copper-based cables. When operated at full capacity, the new HTS cable system is capable of transmitting up to 574 megawatts (MW) of electricity, enough to power 300,000 homes. HTS power cables are envisioned by the DOE as a component of a modern electricity superhighway – one that is free of bottlenecks and can readily transmit power to customers from remote generation sites, such as wind farms.

HTS cables conduct electricity with virtually no electrical losses, meaning more of the power generated at power plants gets to customers. Conventional power grids typically lose seven to 10 percent of power due to the inherent electrical resistance experienced with copper wires. The higher electrical efficiency of HTS cables provides a means to reduce carbon emissions while meeting the growing demand for electric power in the digital age.

Alternating current HTS power cables have inherently low impedance, which means they can draw power flow away from overtaxed conventional cables or overhead lines, thereby relieving network congestion. They can also be specially designed to have very low impedance (VLI) characteristics. When deployed in strategic locations, VLI superconductor cables, such as the one currently operating in LIPA's power grid, can rapidly absorb additional power flows when conventional

power grid components are damaged during electrical storms or other events. Because HTS cables are self-adjusting, they are expected to become core components of intelligent, more secure power networks.

LIPA is the third electric utility in the United States to have deployed an HTS cable system in its power grid. In the summer of 2006, National Grid and American Electric Power energized distribution voltage HTS power cable systems in Albany, New York and Columbus, Ohio, respectively. At nearly half a mile in length, LIPA's HTS cable system is the longest of the three. It also is the first to operate at transmission voltages. After an initial operational period and following performance and economic reviews of the cable system, LIPA plans to retain the new superconductor cable as a permanent part of its grid.

In mid-2007, AMSC announced that it would lead the development of an extension of LIPA's HTS cable system. The new cable will be powered by AMSC's second generation (2G) HTS wire, branded as 344 superconductors. AMSC, who will again serve as the project's prime contractor and wire supplier, has chosen Nexans as the cable manufacturer and Air Liquide as the provider of the cryogenics system. The DOE plans to provide up to \$9 million in cost sharing for the \$18 million project.

A commissioning ceremony will soon be held at the site of the HTS cable system.

#### **[DOE's Office of Electricity Delivery and Energy Reliability \(OE\)](#)**

OE's mission is to lead DOE's national efforts to modernize the electric grid; enhance security and reliability of the energy infrastructure; and facilitate recovery from disruptions to energy supply. For more information, visit: <http://www.oe.energy.gov/>

#### **[About Long Island Power Authority](#)**

LIPA, a non-profit municipal electric provider, owns the retail electric Transmission and Distribution System on Long Island and provides electric service to more than 1.1 million customers in Nassau and Suffolk counties and the Rockaway Peninsula in Queens. LIPA is the 2nd largest municipal electric utility in the nation in terms of electric revenues, 3rd largest in terms of customers served and the 7th largest in terms of electricity delivered. In 2006, LIPA outperformed all other overhead electric utilities in New York State in all three major reliability categories. LIPA does not provide natural gas service or own any on-island generating assets. More information about LIPA can be found online at: <http://www.lipower.org>.

#### **[About American Superconductor \(NASDAQ: AMSC\)](#)**

AMSC is a leading energy technologies company offering an array of solutions based on two proprietary technologies: programmable power electronic converters and high temperature superconductor (HTS) wires. The company's products, services and system-level solutions enable cleaner, more efficient and more reliable generation, delivery and use of electric power. AMSC is a leader 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, the company is enabling a new generation of compact, high-power electrical products, including power cables, grid-level surge protectors, Secure Super Grids™ technology, motors, generators, 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.amsc.com](http://www.amsc.com).

####

*American Superconductor and design, Revolutionizing the Way the World Uses Electricity, AMSC, Powered by AMSC, SuperVAR, D-VAR, DVC, PQ-IVR, PowerModule, PQ-SVC, Secure Super Grids, Windtec and SuperGEAR are trademarks or registered trademarks of American Superconductor Corporation or its subsidiaries.*

*Any statements in this release about future expectations, plans and prospects for the company, including our expectations regarding the future financial performance of the company and other statements containing the words "believes," "anticipates," "plans," "expects," "will" and similar expressions, constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. There are a number of important factors that could cause actual results to differ materially from those indicated by such forward-looking statements. Such factors include: uncertainties regarding the company's ability to obtain anticipated funding from corporate and government contracts, to successfully develop, manufacture and market commercial products, and to secure anticipated orders; the risk that a robust market may not develop for the company's products; the risk that strategic alliances and other contracts may be terminated; the risk that certain technologies utilized by the company will infringe intellectual property rights of others; and the competition encountered by the company. Reference is made to these and other factors discussed in the "Risk Factors" section of the company's most recent quarterly or annual report filed with the Securities and Exchange Commission. In addition, the forward-looking statements included in this press release represent the company's views as of the date of this release. While the company anticipates that subsequent events and developments may cause the company's views to change, the company specifically disclaims any obligation to update these forward-looking statements. These forward-looking statements should not be relied upon as representing the company's views as of any date subsequent to the date this press release is issued.*

**Contact Information:**

Jason Fredette

Director of Investor & Media Relations

American Superconductor Corporation (NASDAQ: AMSC)

978-842-3177

[jfredette@amsc.com](mailto:jfredette@amsc.com)