



333 Earle Ovington Boulevard  
Suite 403  
Uniondale, NY 11553  
(516) 222-7700 Fax (516) 222-9137  
<http://www.lipower.org>

**For Immediate Release:  
August 2, 2006**

**Contact:  
Richard M. Kessel  
516-222-7700**

## **LIPA and American Superconductor Bring the Largest Superconducting Transmission Cable to Long Island**

**Hauppauge, NY—August 2, 2006—** As in the midst of a scorching heat wave, and part of its commitment to ensure economical, safe and reliable electricity to its customers, the Long Island Power Authority (LIPA) held a Groundbreaking Ceremony today in Holbrook to announce the construction phase of the world's largest and highest-voltage superconductor electric transmission cable system. The 138,000 volt (138kV) cable system, nearly one-half mile in length, will be the world's first superconductor cable installed in a live grid at transmission voltages and will carry more power than all previous high temperature superconductor (HTS) cable demonstrations combined.

The project is being undertaken by a government-industry partnership. Other partners participating in the ceremony included the United States Department of Energy, American Superconductor Corporation (NASDAQ: AMSC), Nexans and Air Liquide.

The purpose of this project is to demonstrate the operation of a high voltage superconducting cable within an electric utility transmission system. The cable will be installed by early 2007 in LIPA's Holbrook transmission right of way running north/south for about 2,000 feet. Both ends will be connected to LIPA's existing transmission system.

"LIPA is very pleased to be a pioneer in this remarkable technology," said LIPA Chairman Richard M. Kessel. "Superconductivity can provide an invaluable tool to assist LIPA in contributing to provide a high level of reliability to its customers. During this heat wave, innovations like this make more sense than ever."

Superconducting cables can carry three to five times the power of conventional cables. They also conduct electricity without resistance below a certain temperature. Resistance is undesirable because it produces losses in the energy flowing through the cable.

**-More-**

## **Page 2... Largest Superconductor Cable comes to Long Island**

The main project objectives are twofold. The first objective is to identify the key issues and concerns that need to be addressed to enable HTS cables to be operated effectively in a power grid at transmission voltages. The second key objective is to develop, design, produce and operate this HTS cable system.

“The year 2006 is clearly a turning point for HTS technology. With a wide variety of commercial and demonstration projects underway, HTS wire has emerged from the laboratory and is poised to become a major force in the world’s electric grids,” says Greg Yurek, chief executive officer, American Superconductor, the prime contractor for the system. “Visionary utilities such as LIPA see the distinct advantages HTS wire offers, and very soon so will their residential and commercial customers. I offer my warmest congratulations to Richard Kessel and everyone at LIPA on their significant achievement.”

LIPA, as host utility, is providing the site engineering and preparation as well as guidance to the design and testing of the cable system. As prime contractor, American Superconductor is providing project management, technical input and is also the supplier of the HTS wire for the cable. Nexans is the cable and cable termination supplier, providing the development engineering and qualification of the cable, cable cryostat and terminations. Air Liquide is the cryogenics partner, providing the refrigeration system modifications, system engineering and installation support.

"At a time when power grids across the nation are being severely stressed, superconductor technology is being examined by US utilities as a new tool to increase capacity and reliability on their systems. This project is one of three being co-funded by DOE that will demonstrate different designs and applications of high-capacity, low-profile superconducting cable technology. The LIPA project will be the first use of superconductors at electricity grid transmission level voltages. We continue to view superconductivity as a powerful enabler of the next-generation energy delivery system," said Kevin Kolevar, Director of the Office of Electricity Delivery and Energy Reliability at the US Department of Energy."

"As the worldwide leader in the cable industry, Nexans has been actively engaged in research into superconductors over the past few years. From our Superconductivity competence center's laboratories based in Germany to Long Island's grounds, we have made huge progress, so today, we are delighted to be part of this major project that will result in the world’s first transmission voltage superconducting power cable installation in a live grid. At a time when world energy demand keeps increasing, growth opportunities for superconductor cables are becoming bigger. Nexans is taking up this industrial and market challenge to provide power transmission solutions of very high ratings utilizing high temperature superconductors," said Gordon Thursfield, President, Nexans North America.

**-More-**

### Page 3... Largest Superconductor Cable comes to Long Island

“In the context of ever increasing needs for electricity and the crowding of transmission grids, Air Liquide is proud to contribute to the development of new technologies, such as the LIPA Superconductor Cable, that could lead to significant energy gains, “ said Mike Smith, president, Air Liquide Advanced Technologies U.S. LLC. “The proven reliability of Air Liquide’s cryogenic technologies used for cooling, as well as its leading expertise in the operation and maintenance of such technologies are being mobilized to ensure the success of this project. Positive results in this first worldwide installation could lead the way to a greater control over energy consumption.”

With HTS cables gaining broader acceptance by power utilities worldwide, it has become increasingly important to understand the issues surrounding the integration of these cables into existing power grids. In addition to developing a first-of-its-kind HTS cable at unprecedented length and voltage, this project is developing the necessary tools to assure the reliable integration of this technology into the grid. Once the cable system and integration tools are developed, high-capacity superconductor cables will allow utilities to serve much higher power loads than is possible with today’s power cables in any given voltage class. This power density advantage translates into easier permitting, smaller rights of way and smaller substations.

The superconductor wire in HTS cables can carry more than 150 times the power of a conventional copper wire of similar size. Thermally-independent, compact HTS cables can be installed into existing rights of way, thus helping reduce the cost and environmental impact of future grid upgrades. With much lower impedance and resistance than conventional technology, superconducting cables can be strategically placed in the electric grid to draw flow away from overtaxed conventional cables or overhead lines, thereby relieving network congestion and providing a more environmentally friendly power solution than copper-based systems.

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. LIPA and American Superconductor have also discussed plans to install high capacity, low-environmental-impact HTS cables elsewhere in the LIPA grid to address the growing electric power needs on Long Island.

For more information about LIPA’s Superconductor cable project, call (516) 222-7700 or visit our website at [www.lipower.org](http://www.lipower.org) , or visit American Superconductor at [www.amsuper.com](http://www.amsuper.com) .

*LIPA, a non-profit electric utility, owns the retail electric system on Long Island and provides electric service to 1.1 million customers in Nassau and Suffolk counties, and the Rockaway Peninsula in Queens. LIPA does not own any electric generation assets on Long Island and does not provide natural gas service. More information about LIPA is available on the Internet at [www.lipower.org](http://www.lipower.org).*

