

New York State

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GOVERNOR BREAKS GROUND FOR NEW SUPERCONDUCTING CABLE PROJECT

Albany Demonstration Project Will Promote Use of Advanced Energy Technology To Meet Growing Energy Demands in Our Cities

To Meet Growing Energy Demands in Our Cities

Governor George E. Pataki today joined officials from SuperPower, Inc., Sumitomo Electric Industries, Niagara Mohawk, and the BOC Group to break ground on a high temperature superconducting (HTS) power cable demonstration project for downtown Albany. The HTS cable project can carry three-to five-times more current than conventional power lines to help meet the growing demand for power in our major cities.

The New York State Energy Research and Development Authority contributed \$6 million toward the demonstration project.

"New York State is a national leader in promoting advanced energy technologies that are helping clean our air, improve our energy security, and encourage sustainable economic development," Governor Pataki said. "We're proud to support innovative projects like the HTS cable that offer the potential to enhance reliability and provide additional, affordable power for utility customers while protecting our environment. Smart investments like these are helping New York achieve our ambitious goal of becoming a world leader in the development of clean and renewable energy technologies."

SuperPower, Inc., a unit of Latham-based Intermagnetics General Corporation, is partnering with Japan's Sumitomo Electric Industries (SEI), a major international developer and manufacturer of electric power cables, and the BOC Group, a global leader in industrial gases, to fabricate and install a 350-meter section of underground cable between the Niagara Mohawk Riverside and Menands substations. The BOC Group will build the cryogenic refrigeration system (CRS) to cool the cables. The U.S. Department of Energy is also contributing \$13 million to the four-year, \$26 million demonstration project.

Major cities with extensive underground cable routes and radial wiring configurations are key targets for this technology. This Albany demonstration is a first step in testing the cable in an urban radial network used in major cities, particularly New York City.

Glenn H. Epstein, Chairman and CEO of Intermagnetics General said, "We, as a local company, are excited about the economic development opportunities this project offers for New York. This could

lead to considerable investment in new manufacturing facilities, with the addition of many high paying jobs in this area."

Senator Hugh T. Farley said, "This project is a showcase for the practical application of New York's highest technology products. I appreciate Governor Pataki's recognition of SuperPower of Schenectady, a remarkable firm with some of the best and brightest scientists and engineers. I am thrilled that this locally-developed technology will help to once again make Schenectady 'The City That Lights the World.'"

Assemblyman Ron Canestrari said, "It is imperative that we take the lead to utilize emerging technology to improve energy delivery to our cities and other high needs areas throughout the State. The HTS Cable project is another example of our commitment to providing energy in a reliable and efficient manner."

Albany Mayor Jerry Jennings said, "I am pleased New York's Capital City will be the site for this important and innovative project. I commend Governor Pataki and all the partners in this effort to introduce efficient and environmentally sound energy to downtown Albany and eventually beyond."

Peter R. Smith, President of NYSERDA said, "This project exemplifies the kind of technology we fund to improve our energy future, while providing potentially significant economic development opportunities and environmental benefits." Michael J. Kelleher, Senior Vice President of Business Services and Economic Development, Niagara Mohawk, a National Grid Company said, "Niagara Mohawk applauds NYSERDA's forward-looking investment in an innovation that will represent an important advance in the delivery of energy to consumers. We're pleased to be working with them on the successful demonstration of this new technology."

The HTS cable technology offers the potential to provide several benefits over existing technology. In addition to being able to carry three to five times more load than conventional cables, they are also lighter and easier to install and handle; will deliver power at lower voltages, reducing the need for step-up and step-down transformers; use liquid nitrogen for cooling, rather than flammable oils, avoiding fires or explosions in the event of a leak or overload; and HTS devices are more electrically efficient, which can help reduce line losses and generation demand that can produce greenhouse gas emissions.

SuperPower, Inc. employs 50 highly skilled Ph.D. scientists, engineers, technicians and professional staff at its Schenectady offices and has also been working on developing an underground cable-to-cable joint which is necessary for enabling long-cable lengths. The demonstration project will be the first in the world to incorporate this cable joining system, as well as commercially viable second-generation conductor. The second generation conductor technology is being developed and built by SuperPower in Schenectady. Sumitomo Industries will manufacture the commercial version of the cable and joining technology.

To date, NYSERDA has committed \$6.7 million to IGC SuperPower for HTS projects, including design-through-operation stages for a 5 megavolt-ampere HTS power transformer and the construction of a pulsed-laser deposition facility for the manufacture of long-length, second-generation, coated-conductor HTS wire, which will be demonstrated at this site. ###
