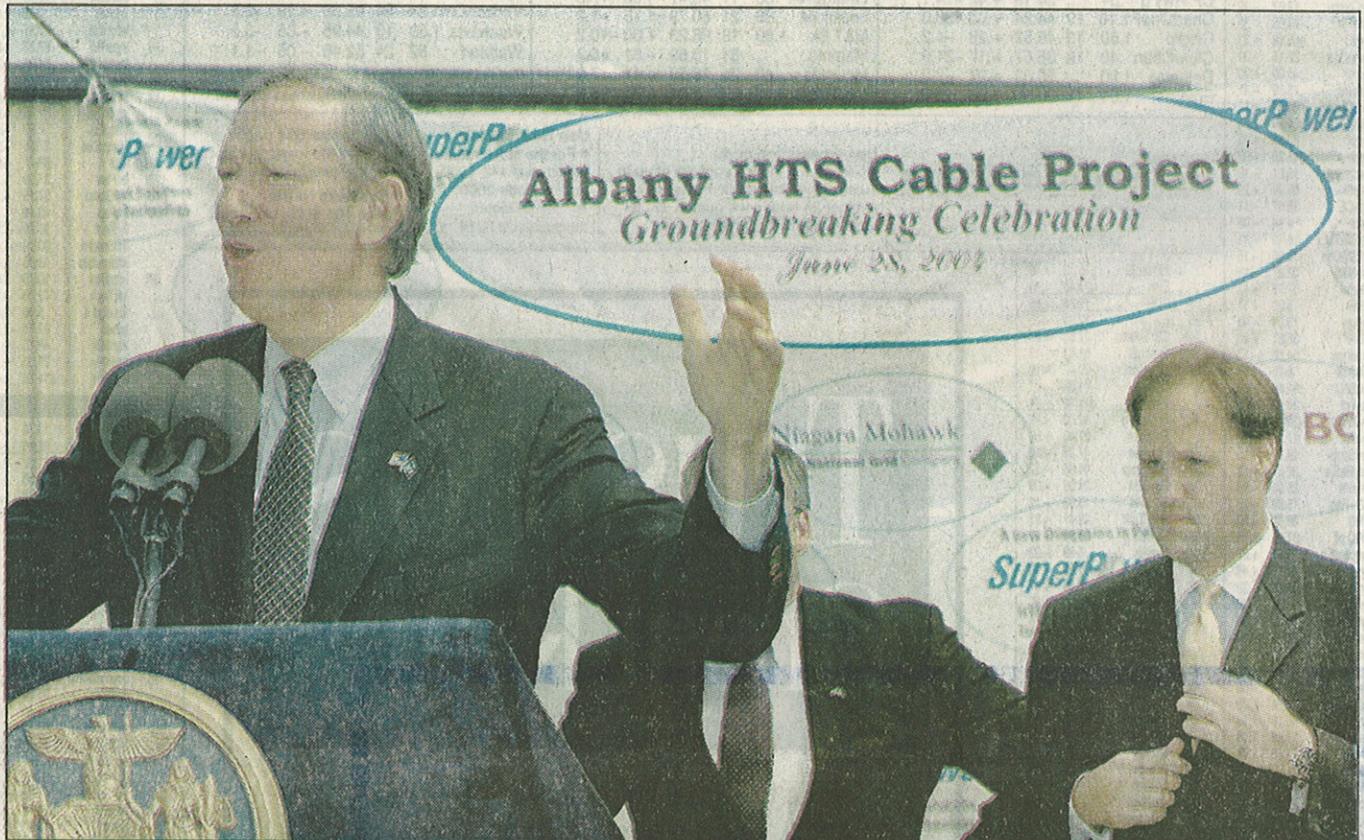


TUESDAY, JUNE 29, 2004

SUPERCONDUCTING CABLE



PHOTOS BY LUANNE M. FERRIS/TIMES UNION

GOV. GEORGE PATAKI, speaking at the groundbreaking to install superconducting cable in Albany, predicts the world will want to buy the wire built by SuperPower of Schenectady. Jimmy Glotfelty of the U.S. Department of Energy is at right.

SuperPower wire to debut in real world

Albany \$26M demonstration project will use ultraefficient material for NiMo transmission

By **SARA CLEMENCE**
Business writer

Poking their ceremonial shovels into a pile of ceremonial dirt, government officials and company executives officially broke ground Monday on what could be called the Albany SuperProject.

For the first time, a piece of superconducting cable, containing superconducting wire made by SuperPower Inc. of Schenectady, will be installed underground in a utility's transmission system.

The four-year, \$26 million demonstration project involves running 350 meters (about

383 yards) of cable between two Niagara Mohawk substations in Albany.

"We have no doubt that as the demonstration project plays out over the next few years, the world's going to be watching, and they're going to say, 'Where do we get some of that?'" said Gov. George Pataki, sounding breathless with excitement at the groundbreaking, held near the Riverside Substation on Broadway.

The project is likely even more thrilling for people who have been intimately involved with developing the wire.

"Ten years go, this was just some idea in someone's head," said Jodi Reeves, senior materials scientist for SuperPower, who snapped digital photos of the governor as he spoke.



CABLE made by Sumitomo Electric Industries in Japan is on display at the groundbreaking.

Please see **PROJECT E6** ►

PROJECT: NiMo set to use cable

▼ CONTINUED FROM E1

Three years ago, the company was able to make only a centimeter of the high-tech wire, said Reeves, who has been working in the field for a decade. In March, SuperPower set a world standard by shooting power through a 57-meter length of wire.

"Now we have the world record, and we're going to put it in downtown Albany," she said. "To know we made it is awesome."

When cooled to low temperatures, superconducting wire allows electricity to flow virtually unhindered. That means that the wire can carry current for a long time without losing energy the way traditional copper wire does. Because it is more efficient, the wire requires less power to be generated and takes up less space, so is considered more environmentally friendly.

Speakers at the event repeated the same themes over and over:

The technology will provide more reliable power transmission, environmental benefits and jobs.

"This is economic development, this is technological development, this is homeland security," said Jimmy Glotfelty, director of the Office of Electric Transmission and Distribution for the U.S. Department of Energy.

The Energy Department is putting up \$13 million for the demonstration project, and the New York State Energy Research and Development Authority is contributing \$6 million in public money.

The rest of the costs will be shared by three private companies. SuperPower, a subsidiary of Intermagnetics General Corp. of Latham, is providing the wire it developed. Sumitomo Electric Industries, a Japanese company, will make the cable. And The BOC Group, a British firm, will build the cooling systems for the

cable.

The line will run from the Riverside Substation to Erie Boulevard, then under Interstate 90 to the Menands Substation.

While the groundbreaking Monday involved a pile of dirt that had been placed in a parking lot, the real work will begin within the next two months, with trench digging and the construction of a cryogenics building to house cooling gases, which are pumped through the cable, said Traute Lehner, spokeswoman for SuperPower. To work, the cables need to be cooled with liquid nitrogen, a brisk 321° below zero.

The cable will be made of so-called first-generation wire. Once the system is up and running, a 30-meter section will be replaced with second-generation wire, which is being developed for commercial use, with focus on consistent performance and manufacturing costs.