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HD **Con Edison Plans Major New York Power Upgrade**

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LP Consolidated Edison Inc., provider of electricity to nine million people in New York City and Westchester County, is pursuing a sweeping plan to upgrade its aging **electric** system, including installation of state-of-the-art superconducting electrical cable in midtown Manhattan. The power-line upgrade is a tiny part of a far bigger Con Edison proposal that would require unpopular rate increases.

The $39.3 million installation, set to be unveiled today, will be largely funded by the U.S. Department of Homeland Security. Agency officials say they are making the investment because the hardiness of electrical infrastructure in financial hubs like Manhattan is vital to the nation's **economy**. Superconducting cable, sold by several companies, carries far more power than conventional cable but is expensive and poses certain technical challenges.

TD The Con Edison project will use cable able to deflect power surges that was developed by American Superconductor Corp. of Westborough, Mass. American Superconductor hopes the marquee project will spur use of the cable by more utilities, which are notoriously cautious about new technology. "We hope this breaks the logjam," said Grey Yurek, chief executive of American Superconductor.

Jay Cohen, undersecretary of science and technology for Homeland Security, said he believes superconducting cable has the potential to "revolutionize" electricity delivery, making systems better able to bounce back from blows from lightning strikes, equipment failures or hostile acts. Mr. Cohen, who formerly was chief of research for the Navy, said his agency is picking up about $25 million of Con Edison's cost.

Superconducting cable uses ceramic material that loses its electrical resistance at very low temperatures. In **electric** lines, it is cooled to temperatures of minus 382 degrees Fahrenheit by running liquid nitrogen through a hollow core, giving it the ability to carry 10 times more electricity than conventional copper cable of similar size. That makes it perfect for congested urban centers like Manhattan where underground pipes carrying electricity, water, steam, natural **gas** and fiber-optic cable compete for space in tight rights-of-way.

Superconducting cable already is being used in demonstration projects by American **Electric** Power Co. in Columbus, Ohio, and by National Grid in Albany, N.Y., but this will be the first by a U.S. **utility** in a dense urban setting. It fits a broader strategy by Con Edison to change the architecture of its electrical system to something called "compact networks" that make **electric** systems more robust. Paris, London and Tokyo have adopted a compact-network approach.

Even though Con Edison's broad overhaul could reduce the odds of blackouts like the one that struck in Queens last summer, the **utility** is drawing fire because it would require steep rate hikes at a time when customers already are upset about energy costs.

The power-line upgrade is one tiny piece of a spending program that could cost customers $7.78 billion between 2008 and 2011, a 48% increase over Con Edison's authorized spending on infrastructure of $5.25 billion for the current rate period and more than double its authorized spending from 2002 through 2004.

The rate case filed by Con Edison on May 4 is being reviewed by the New York State Public Service Commission and could mean rate increases of as much as 20% for some customers, apart from increases in the commodity cost of electricity. New York City residents already pay some of the

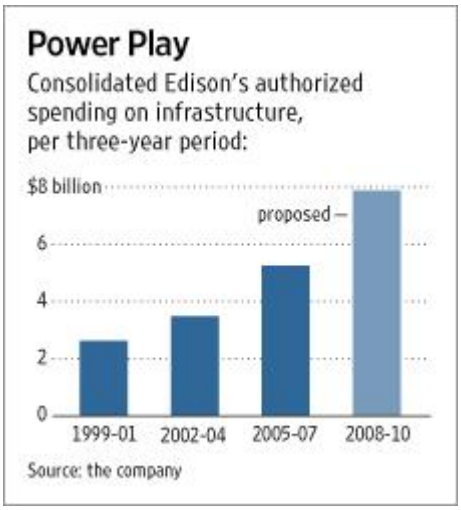
highest rates in the nation.

Con Edison officials assert that more infrastructure spending is needed to bolster reliability and capture design improvements. Currently, each Con Edison substation serves a different batch of customers. In a compact network, substations can substitute for each other so that if one is knocked out, another can step in. "If I had a grid to build from scratch, this is how I'd build it," said James Baumstark, vice president of central engineering for Con Edison.

The superconducting cable used in the Con Edison project will link two lower-voltage substations, approximately 1,000 feet apart in midtown Manhattan, giving Con Edison the ability to serve customers from either substation. Substations are essential grid features because they take electricity from power plants and bump it down to the lower voltages that are suitable for use by office buildings or homes.

One question regulators will want to answer in the coming rate case is whether Con Edison has identified projects that are truly needed. Another is whether the allocation of costs among different customer classes is fair. Under Con Edison's proposal, residential rates would rise 17%, or $12 a month for a typical customer, and would increase by smaller amounts in 2009 and 2010. A ruling on the rate case is expected in March so new rates could take effect in April.

The rate proposal comes amid rising commodity prices for electricity that make it harder for utilities to seek increases for infrastructure improvements. New York regulators have limited control over wholesale electricity costs, now that power sales are a deregulated function, but they look closely at energy-delivery costs that remain regulated.



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