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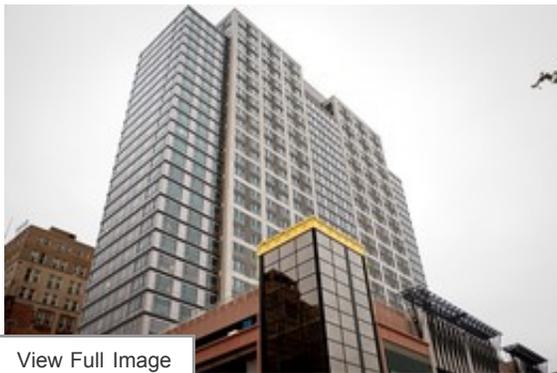
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Powering Up With New Fuel Cells

By [CRAIG KARMIN](#)

Two buildings in the New York region are poised to become among the first large-scale residential projects powered by fuel cells, an energy-producing technology that proponents say costs and pollutes less than conventional alternatives.

The fuel cells—weighing in at 60,000 pounds and about the size of a freight car—can provide 400 kilowatts of energy by converting natural gas to hydrogen, and then hydrogen and oxygen into electricity and heat. One is expected to start operating next month at a new 32-story New Haven, Conn., building known as 360 State St., where it will provide electricity to the common areas and heat and hot water for all the units.



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Paul Quitoriano for the Wall Street Journal

360 State Street, above, in New Haven, is among the first large-scale residential projects powered by fuel cells.

By December, the Octagon building on Roosevelt Island is expected to go one step further, switching from conventional power to fuel-cell energy to provide not only heat but electricity for every apartment.

"This is one of the least risky ways to improve economic performance of a building, and improve energy efficiency," says Bruce Redman Becker, president of Becker + Becker, the architecture and development firm behind both projects.

Fuel-cell technology has been used for years to power numerous commercial properties, such as hospitals, supermarkets and bottling plants. But residential buildings have lagged partly because of a thorny

regulatory environment.

In the majority of states, building owners are prohibited from delivering electricity directly to their residential tenants, which is the privilege of the local utility companies. New York state allows this practice, but in Connecticut Mr. Becker had to negotiate with regulators and the power company for two years before reaching an agreement, he said.

Also, some developers who specialize in green buildings say they considered using fuel cells on previous projects but decided that the upfront costs and other related issues made it prohibitive. "I didn't necessarily see the efficiency," says Francis Dobry, a project manager for Madison Equities, a New York-

based architecture and property development firm. "With fuel cells, you have to pay for generating equipment that you have to maintain and are responsible for."

Mr. Becker says his firm and an investment partner paid close to \$4 million apiece to get fuel cells at the two locations, but those costs can be earned back in five years. That's because a combination of federal tax credits and grants from state agencies reduced the initial costs, he says.

Residents at these two buildings can expect to pay half the amount in utility bills compared with the average building, Mr. Becker says.

The technology is economical partly because the fuel cells produce more energy than the buildings need; each one generates enough power to light up about 675 homes, according to UTC Power, the manufacturer of the fuel cells. Mr. Becker's company plans to sell that excess capacity from the New Haven building back to the power company in that area to make back the rest of his firm's investment there.

In New York City, the local power company doesn't permit the resale of excess capacity. But Becker + Becker believes it will be able to recoup its investment by selling electricity directly to residents.

In New Haven, about 125 of the 500 units have been rented at 360 State, which is the second tallest building in town, Mr. Becker says. It is a mixed-use building that will also include 28,000 square feet of retail space, including a co-operative grocery store as the anchor tenant.

The Octagon, which opened on Roosevelt Island as a residential building in 2006 on a site that previously served as a sanitarium and later a hospital, has 500 rental apartments and a day-care center.

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