

RESIDENTIAL CO-OP FINDS PERFECT FIT FOR UPGRADES

Energy efficiency makeover helps historic Manhattan building improve comfort and comply with local building energy laws



Project Overview

New York City's International Tailoring Company Building is a 156,000-square-foot structure built as a garment factory in 1921. The 13-story building was converted into a residential co-op building in 1980. With help from NYC Accelerator in 2018, the building connected with a reliable service provider, Ecosystem Energy Services, to make upgrades to enhance comfort for residents. The energy efficiency improvements reduced annual energy use by 38% and ensured compliance with local building energy laws through 2050.



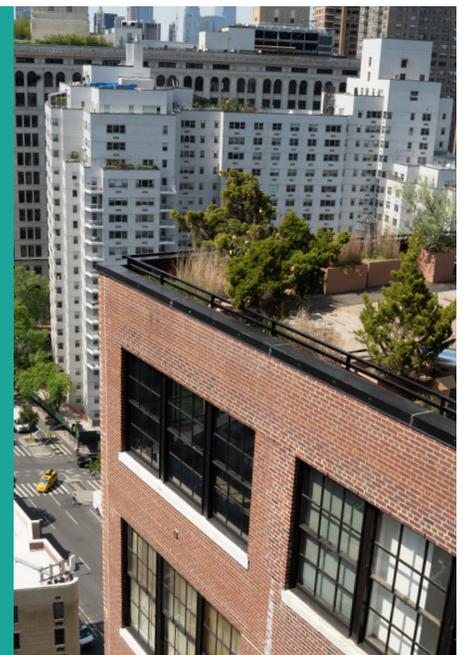
- **\$6.05 million** Net project cost (after incentives)
- **\$7.7 million** Total project cost (before incentives)
- **\$1.65 million** Incentives received (27% of net project cost)
- **Mortgage refinance** Financing
- **\$97,000/year** Estimated energy and cost savings
- **\$100,000 in 2030** Estimated Local Law 97 (LL97) penalties avoided
- **3 years** Project duration

The Opportunity

Though the building underwent several design makeovers since it was constructed over 100 years ago, the original infrastructure was causing inconsistent heating and cooling.

In 2017, the co-op board began researching ways to improve the outdated building infrastructure. A couple of years later, New York City enacted LL97, which requires buildings over 25,000 gross square feet to meet stringent carbon emissions limits – or face annual penalties.

- **An aging two-pipe hydronic switchover system** was operational but required around the clock maintenance and caused uneven heating and cooling throughout the building.
- **Massive steel-framed windows** in units faced different directions, allowing direct sun to some apartments while others remained shaded.





Air-source heat pumps improve energy efficiency and reduce carbon emissions.



An adiabatic dry cooler increases savings by reducing the energy required for cooling.

The Solution

The building's co-op board got in touch with NYC Accelerator and received:

Free technical guidance on hydronic heating and geothermal technology

Connection to a trusted service provider – Ecosystem Energy Services, an integrated design and construction firm – that implemented a turnkey solution while **guaranteeing performance and fixed costs**

Installation of a hybrid heating plant and hybrid fan coils by combining both air-to-water heat pumps and a condensing boiler system to increase comfort and recycle energy between apartments for peak efficiency while significantly reducing carbon emissions

The Benefits

- Customized heating and cooling control with smart thermostats in each unit to enhance resident comfort
- New equipment that requires less maintenance and avoids LL97 penalties projected through 2050
- Incentives to offset upgrade costs
- Lower energy use and costs on utility bills

“We wanted to allow people to control their own destiny regarding comfort. When LL97 came about, we pivoted the pieces of the puzzle to align with the law’s objectives more closely.”

Eric Einstein, Co-op Board President
International Tailoring Company Building

Want to help your building improve comfort, lower costs, and comply with local building energy laws?



Contact NYC Accelerator today to get started.

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NYC Accelerator is a program of the NYC Mayor's Office of Climate & Environmental Justice.