



Aging systems open the door for major energy savings



Carnegie House, Manhattan, NY. Photo credit: NYSERDA

More than 50 years after it was built, some aspects of Carnegie House weren't aging gracefully. Carnegie House is a 317-unit building located around the corner from the famous music hall in midtown Manhattan that shares its name. Although its classic brickwork looked fine, many of the 21-story midtown Manhattan co-op's mechanical systems were far past their prime and nearing failure. Energy costs had risen, and the building manager realized he had an opportunity to improve Carnegie House's building performance as a whole, rather than simply replacing old equipment. Carnegie House embarked on a top-to-bottom energy efficiency upgrade project, making a range of improvements to mechanical and lighting equipment.

Contractors replaced Carnegie House's absorption chiller, along with aging pumps, motors, pipes, ventilation fans, and valves. Steam line leaks were repaired, and pipes were insulated. Carnegie House also upgraded lighting in common areas and mechanical rooms, and added energy-saving motion sensors. A new building management system made it easy to keep the upgraded equipment running efficiently.

Passing savings on to residents

Carnegie House was able to keep its mechanical systems in operation while installing the new upgrades, making the conversion virtually invisible to residents. The project was a success, resulting in a major cost cut — more than \$139,000 a year in energy savings. This cost control translates into significant savings — up to \$475 per year for individual residents. The project will pay for itself in just over five years.

Get Started

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SNAPSHOT

Challenges

- 50-year-old mechanical system had escalating maintenance and energy costs
- Leaky pipes, dated pumps, and inadequate ventilation system created energy waste
- Incandescent bulbs and 24-hour building lighting added to energy costs

Solutions

- Upgraded ventilation system, pumps, motors, and absorption chiller
- Repaired steam line and insulated pipes
- Installed energy-efficient lighting fixtures and motion sensors in common areas and mechanical rooms
- Added a new building management system

Benefits

- **\$139,000** a year in energy savings
- **Avoided failure of outdated mechanical system**

