

Case Study

Better than a boiler: Window heat pumps cut costs in garden-style complex

This 1950s multifamily garden-style senior-living building complex had a boiler system at the end of its life and aging pipes that were causing property damage and weekly calls to plumbers. Faced with a multi-million dollar boiler replacement, this building chose instead to install **window heat pumps** to provide units for both heating and cooling, which cost significantly less money upfront and reduced building heating energy use by 80 percent.



Retrofit snapshot

Before

- Window ACs for cooling
- ~50 heating complaints per month
- Failing steam radiators, frequent leaks

After

- Window heat pumps for heating and cooling, serviced by existing building maintenance staff
- Heating complaints dropped to a few minor requests
- **80 percent reduction** in energy used for heating

What we heard

"The heating is [perfect]. It's excellent."

"It's not noisy at all."

"5/5"



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The building

Built: 1959

Size (SF): 37,500

SF/Unit: 800

Units (#): 47

Type of occupancy:
Rental

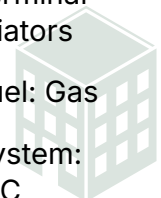
Pre-retrofit systems:

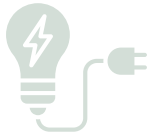
Heating distribution:
Steam

Heating terminal
units: Radiators

Heating fuel: Gas

Cooling system:
Window AC





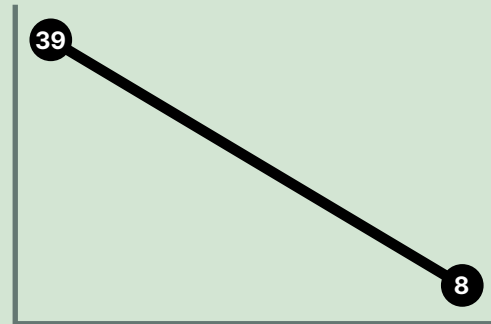
Energy use impacts

Cutting space heating energy is the fastest way for buildings to reduce energy use since space heating typically accounts for more than half of the building's energy use.

80%
Heating EUI
reduction

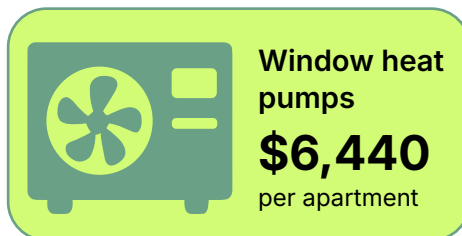
Pre-retrofit EUI: **39** (kbtu/sf/yr)

Post-retrofit EUI: **8** (kbtu/sf/yr)



Retrofit costs

Window heat pumps are likely the most affordable way for a building to electrify space heating. Installation costs can vary based on a building's existing electrical readiness, the need to remove existing equipment, and the use of in-house labor versus contractors for installation.



This retrofit resulted in more than \$4,000 in annual utility cost savings for the building in its first year

Notes:

This retrofit took place in Summer 2025.

The heating energy analysis is based on data through Spring 2026. Heating EUI savings will be updated as new data becomes available.

This building is located in Massachusetts, and the installation was carried out by in-house labor. We estimate that this same installation in an NYC building would be approximately \$2,000 more due to differences in labor, material and compliance costs.

Gradient packaged window heat pump units were used for this retrofit.

Retrofit cost is for a one-bedroom apartment with two window heat pump units.

