



# Energy Efficiency Case Study

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## Fuse Cambridge Cambridge, Massachusetts

### Background

Fuse Cambridge is a six-story apartment building located near the Alewife transit station in Cambridge. It has 244 residential units, extensive amenity areas, and a leasing office.

During development, the building achieved a LEED Silver® certification, and several residential units also received the WELL building standard. Developers saw the investment in green features as a way to stay competitive in the marketplace and tailored toward the robust lifestyle of the building's future occupants.

### Outcomes

The Sponsors of Mass Save® provided Residential New Construction incentives to help cover costs to upgrade building equipment, lighting controls, and the building envelope.

The building features a variety of energy efficiency measures, such as common area lighting controls, high-efficiency mechanical equipment, high-efficiency common area lighting, and improved window and wall insulation. Because this development is selling at market rates, the incentives from the Sponsors of Mass Save helped the developer's bottom line and justified to investors the increased cost for these energy efficiency measures.



### Number of units

- 244

### Heating fuel

- Gas

### Domestic hot water fuel

- Gas

### Annual electric savings

- 387,043 kWh

### Annual natural gas savings

- 13,912 therms

### Annual H<sub>2</sub>O savings

- 1,105,153 gallons

### Annual CO<sub>2</sub> savings

- 772,296 pounds

### CO<sub>2</sub> sequestered annually

- Equivalent to planting 59,407 trees or taking 64 cars off the road

### About Mass Save:

Together, we make good happen for Massachusetts. Your local electric and natural gas utilities and energy efficiency service provider are taking strides in energy efficiency: Berkshire Gas, Cape Light Compact, Eversource, Liberty Utilities, National Grid, and Until. As one, we form Mass Save®, with the common goal of helping residents and businesses across Massachusetts save money and energy, leading our state to a clean and energy-efficient future.

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## Development team

- **Developer:** Hines
- **Architect:** DiMella Shaffer
- **Contractor:** Callahan Construction
- **MEP Engineer:** Wozny/Barber & Associates

## Green features

- Residential heating
  - Hydronic loop from the domestic hot water system coupled with an in-unit air handler with ducted distribution
- Residential cooling
  - Mini-split air conditioning system with a high-efficiency 16 SEER condenser unit coupled with an evaporator coil in each residential unit air handler
  - Ducted distribution within each residential unit
- Common area heating and cooling
  - Natural gas-fired, commercial hydrotherm high-efficiency boilers with variable frequency drive pumps coupled with fan coil units in the amenity and common areas
- Residential domestic hot water
  - Natural gas-fired, high-efficiency direct-vent 50-gallon storage tank
- Lighting
  - LEDs throughout the building, and advanced lighting controls for common areas in the amenity spaces and corridors

- Residential hot water fixtures
  - Showerheads and wands at 1.5 gallons per minute
  - Lavatory faucets at half a gallon per minute
  - All other faucets at 1.5 gallons per minute
- Building envelope
  - Double-pane, fiberglass-frame windows with advanced Low-E coatings and argon; average U-factor of 0.27 and average solar heat gain coefficient of 0.30
  - Wood-stud framing with R15 fiberglass batt insulation in 3.5-inch stud cavities, with 1 inch of continuous rigid insulation outboard of the sheathing with an R5 rating
  - Low-sloped, single-ply roofing system with tapered polyisocyanurate; rigid insulation outboard of the deck with an effective R-value of R27.5; R20 batt sound insulation in the truss cavity



**Have a question? We are here to help: 1-866-527-SAVE (7283)**

• [MultifHR@icf.com](mailto:MultifHR@icf.com) • <https://www.masssave.com/en/multi-family/new-construction-support>

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