



1047 Commonwealth Avenue Boston, MA

Background

The 1047 Commonwealth Avenue project received energy efficiency incentives from the Sponsors of Mass Save® through the Massachusetts Residential New Construction Program. Located in the Packard's Corner neighborhood of Boston, the property includes commercial space and apartments tailored to the college market near Boston University. The six-story complex houses up to 180 tenants in studios and one-bedroom micro suites ranging in size from 300 to 400 square feet. A 6,200-square-foot coffee shop occupies part of the ground level. Other amenities include a fitness room and lounge on the first floor, as well as a small roof deck.

Project Overview

The developers had sustainability in mind when they chose to build Boston's first micro suites. Already a trend in the Pacific Northwest, micro suites allow great use of space as well as comfortable housing for those who live a minimalist lifestyle. The units, while cozy, offer all the necessities, including efficient appliances as well as a stacked washer and dryer. With its great location, access to public transportation just outside the building, and wide range of retail options, many cars are kept off the road, helping drive the goal of sustainability and energy efficiency.

Several energy-saving technologies and mechanical systems were implemented in the building to boost a low-carbon footprint, including water source heat pumps and an efficient, whole-building central boiler system. Energy recovery ventilation for the units and corridors is captured via an independent rooftop unit. In addition, the building enclosure was updated from the former brick and concrete masonry to an insulated building with new stories added to maximize space.



The apartments were designed by Neshamkin French Architect, Inc., in association with French 2D Architects. The Michaels Organization developed this innovative project and utilized the Metric Corporation to bring the building to life in the vibrant area by the university. The structure was rebuilt with resiliency in mind. A mechanical room of efficient systems is located on the upper floors, preventing the potential for water or flood damage. The building leaves a minimal footprint because of the measures implemented in this low-impact, efficient, and overall green building.

Sponsors of Mass Save

- **Electric:** Eversource
- **Gas:** National Grid

Project Team

- **Design Group:** Neshamkin French Architect, Inc., in association with French 2D Architects
- **Developer:** The Michaels Organization and the Metric Corporation
- **Program Sponsors:** Eversource and National Grid

Equipment

- Lochinvar SBN1500 condensing boilers at 96% efficiency
- Johnston Controls vertical stacked heat pump cabinets with ECM motors
- Baltimore Aircoil Company FXV cooling tower
- Yaskawa variable frequency drives

Green Features

- Rehabilitated insulated enclosure
 - R15 and R21 continuous insulation for concrete masonry unit, steel, and wood-framed walls
 - R25 continuous roof insulation
 - Average U-value of .28 solar seal glazing
- High-efficiency LED lighting as well as natural daylight from windows
- Insulated domestic hot water piping
- Variable frequency drives and ECM motors for mechanical systems
- Central systems located on the roof
- Water source heat pump: Average 4.56 coefficient of performance and average 13.74 energy efficiency ratio
- Energy recovery ventilation system: 72% sensible, 64% latent

1047 COMMONWEALTH AVENUE ENERGY SAVINGS INFORMATION

Number of Units	180
Heating Fuel	Gas
Domestic Hot Water Fuel	Gas
Annual Electric Savings	39,218 kWh
Annual Natural Gas Savings	3,681 therms
Annual H₂O Savings	127,414 gallons
Annual CO₂ Savings	103,237 pounds
Cars Off the Road	9
CO₂ Sequestered	Equivalent to planting 7,941 trees

Electric Savings				Gas Savings				Total	
kWh	Savings Percentage	Annual Cost Savings	Sponsor Incentive	Therms	Savings Percentage	Annual Cost Savings	Sponsor Incentive	Total Cost Savings	Total Sponsor Incentive
47,981	5.48%	\$3,980.62	\$11,756.82	7,409	32.30%	\$11,113.36	\$10,017.88	\$15,093.99	\$21,774.70

About Mass Save

Mass Save® is a collaborative of Massachusetts' natural gas and electric utilities and energy efficiency service providers, including Berkshire Gas, Blackstone Gas, Cape Light Compact, Columbia Gas of Massachusetts, Eversource, Liberty Utilities, National Grid, and Unitil. We empower residents, businesses, and communities to make energy efficiency upgrades by offering a wide range of services, rebates, incentives, trainings, and information.

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