

Single Family Home Maspeth, NY



This two-story, 3-bedroom masonry and wood framed home in the New York City Borough of Queens was constructed in 1955.

The Problem:

The senior citizen homeowner had such high heating bills that she maintained her thermostat at low temperatures to save on heating. During the heating season, she supplemented her heat with portable electric space heaters to heat only certain rooms. While this lowered her overall cost, it sharply reduced the habitable area of her home and increased her electric bill, and created fire and trip hazards.

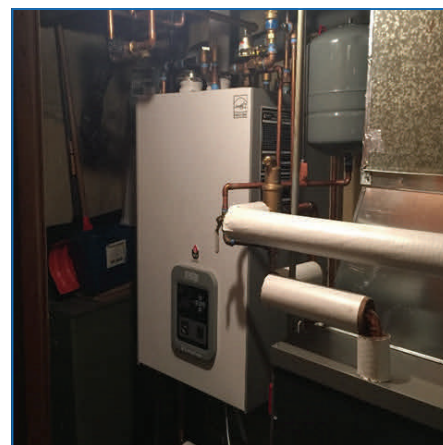
Project Summary:

Energy efficiency measures installed:

- ◇ Replaced old atmospheric domestic hot water maker and furnace with Hydro air system
- ◇ Dense pack insulation of basement of walls
- ◇ Replaced existing refrigerator
- ◇ Installed CO and Smoke Detectors
- ◇ Air sealed the house using caulk and weatherstripping



Old domestic hot water maker and furnace



New high efficiency boiler and air handler

Savings Summary:

WAP Funding: \$16,000

Additional Funds Leveraged: \$3,950*

Cost to Owner: FREE to income-eligible homeowner

Estimated Annual Savings:

Electric Energy Savings: 519 kWh

Electric Cost Savings: \$124

Gas Energy Savings: Therms or BTU

Gas Cost Savings: \$476

Estimated Total Annual Cost Savings: \$600

Pre-Weatherization Energy Factor: 10.3

Post-Weatherization Energy Factor: 7.5

* NYSERDA EmPower program funding

The Solution:

AEA conducted a complete energy assessment. The audit revealed inadequate insulation and air sealing, leading to substantial loss of conditioned air through the building envelope. This burdened the already-inefficient furnace and domestic hot water heater, creating high heating expenses that forced the homeowner to under-heat her home. The home had an inefficient refrigerator, and lacked working smoke/CO detectors. AEA developed a work scope and project specifications, initiated a competitive bidding process, and chose a qualified heating contractor, Everyday Mechanical, with over 10 years of Weatherization experience.

AEA's crew installed dense pack insulation in the basement walls, and air sealed the house to reduce heat loss with caulk and weather strip. AEA performed construction management and quality assurance of the heating system installation to ensure that the weatherization work scope was completed as specified.

As a result of Weatherization work, this homeowner receives heat and hot water cost-effectively. Safety hazards are reduced by replacing the atmospherically vented DHW and furnace, eliminating space heaters, and installing CO and smoke detectors. She can expect substantially lower electric bills and will be able to occupy her entire home year-round. Leveraged funds from NYSERDA's EmPower program assisted in making it possible to complete a comprehensive work scope in this project.



Weatherization
Works

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