

SHOWCASE PROJECT: GLADYS GARDENS

SOLUTION OVERVIEW

The Community Development Corporation of Long Island (CDCLI) launched a pilot project in 2015 to rehabilitate and increase the energy efficiency of local affordable housing, while also improving the health and well-being of residents. CDCLI provided funding to weatherize Gladys Gardens, a 30-unit public housing family development built in 1972 and owned by Hempstead Housing Authority (HHA), a public housing authority for the Incorporated Village of Hempstead, New York. The funding also addressed health and safety issues in the units, including trip hazards and barriers to accessibility.

SECTOR TYPE

Multifamily

LOCATION

Hempstead, New York

PROJECT SIZE

36,000 Square Feet

FINANCIAL OVERVIEW

Project Cost: \$378,400

SOLUTIONS

HHA partnered with CDCLI—its local Weatherization Assistance Program (WAP) provider—to undertake this \$378,400 rehabilitation project, which achieved a 40 percent reduction in overall source energy consumption.

Gladys Gardens is heated via a natural gas-fired boiler that supplies hot water through pipes to radiators in each unit and common areas. Prior to the rehabilitation, this heating and domestic hot water (DHW) plant, original to the building, was leaking, inefficient, and years past its service life. Other issues included a poorly insulated attic and leaking roof, drafty windows, and inefficient incandescent lighting.

CDCLI conducted an energy audit of the building, developed a scope of work, and put the project out to bid. HHA also hired Bright Power, an energy management firm, to develop specifications for the new gas-fired boiler and heating/DHW plant.

HHA received funding from multiple sources in support of this project. CDCLI applied for and

received a healthy housing grant from NeighborWorks America and the Chase Foundation. These funds were combined with money from the WAP program and the Low Income Home Energy Assistance Program. Additional funding from HUD's Public Housing Capital Fund Program (CFP) paid for HHA's owner's contribution to the project, boiler engineering design, and training expenses. Prior to the project in 2014, HHA spent an additional \$102,788 in CFP funds to replace and insulate the entire hot water piping system in the crawlspace of Gladys Gardens.

Key elements of the retrofit that reduced energy and water consumption included:

- Demolition of existing heating and DHW equipment and piping, and installation of new condensing boilers, piping, and boiler venting equipment, including fiberglass insulation of all heating, DHW, and cold water piping in the boiler room. Cost: \$173,400
- Replacement of all windows with Low-E argon-filled Thermopane windows, with air-sealing of frames. Cost: \$104,600 (\$54,078 WAP funds; \$50,522 owner CFP funds)
- Installation of 12" loose cellulose insulation in the attic, including air-sealing of roof leaks. Cost: \$44,500
- Replacement of all interior and exterior ceiling and wall-mounted light fixtures in units and common areas with LED fixtures between 1000 and 2600 Lumens. Cost: \$31,900
- Installation of bathroom fans for ASHRAE ventilation compliance. Cost: \$24,000
- As part of the project, HHA maintenance staff participated in Building Performance Institute Multifamily Building Operator training (funded by CFP and the New York State Energy Research & Development Authority).

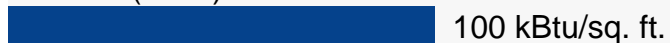
OTHER BENEFITS

Gladys Gardens, once considered the least desirable public housing development by Village of Hempstead residents, is now thought of as one of the best properties. In a follow-up survey conducted four months after the improvements were completed, residents reported increased comfort following the rehabilitation work, including warmer temperatures with fewer drafts, allowing them to sleep better. Residents said it was easier to breathe following ventilation improvements, and that they can identify trip hazards more clearly due to the improved lighting fixtures. They also found that the new windows greatly reduced outside noise as well as drafts.

Annual Energy Use

(Source EUI)

Baseline(2013)



Actual(2016)

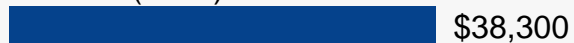


Energy Savings

40%

Annual Energy Cost

Baseline(2013)



Actual(2016)



Cost Savings

\$19,100



Gladys Gardens - street view



Gladys Gardens - overhead view