

1199 HOUSING COOP MULTI-MEASURE RETROFIT CASE STUDY

OPERATIONAL 2022



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Project Summary

- Client: 1199 Housing Co-Op
- Measures: On-Site Generation and Steam System Upgrades
- Structure: Energy Service Agreement (ESA)
- RENEW Investment: \$10 Million +
- Operating Term: 20 years
- Climate Impacts: Eliminate 189 Mtons CO₂/year
- Status: Operational since 2022

Project Description

RENEW Energy Partners, LLC (RENEW), with its implementation partner funded, designed, procured, built and now owns and operates a 1.75 MW Combined Heat & Power (CHP) system designed to deliver over 7 million kWh/yr. of electricity and 40,000 mmBtu/yr. of thermal energy to the Housing Co-Op's 1,600 apartments and to first-floor retail uses.

As an additional feature of the project, RENEW completed modifications to the existing steam heating distribution system to improve the overall operating performance and efficiency of the Housing Co-Op's heating system.

The CHP system consists of three separate distributed energy plants designed to supply power and thermal energy to four low rise/high rise buildings across the Housing Co-Op's entire campus. Each of the outer buildings (Buildings A and D) on the campus have 2 x 250 kW CHP energy plants and the two center buildings (Buildings B and C) are served by a 3 x 250 kW CHP plant.

The plants are designed to meet the campus's domestic hot water heating system's pre-heating and pool heating loads throughout the year. Moreover, the systems are designed with black start capability and will provide for islanding operation for extended periods of time in the event of a power system outage.

Working with RENEW and its partners, the Co-Op was able to implement this distributed energy system and heating system upgrade without using its capital budget or adding debt to its balance sheet. Under the ESA, RENEW is funding the project and will sell the energy to the Co-Op at fixed pricing over the 20-year term of the contract.

Key features and benefits

The 1199 Housing Co-Op is an affordable multi-family building in the New York State Mitchell Llama Program.

No up-front capital investment required

Energy and operational savings over the full term of the agreement

An annual reduction in CO2 emissions

Resiliency in the event of utility outages

Share of Demand Response Revenues

The Agreement stays with RENEW and is not sold to a third party

An improvement in building performance and comfort

Full operations and maintenance by RENEW for the 20-year term

