

Case Study

Utility incentives cover 90% of an energy efficiency upgrade at a senior living apartment complex.

An assisted living apartment complex needed a partner to help analyze existing energy usage and propose comprehensive solutions to drive savings.

CHALLENGE

Titan Energy worked with a high rise assisted living complex to identify energy savings opportunities and available utility incentives. The residential building with 328 living spaces supports elderly, low income and special needs residents.

APPROACH AND SOLUTION

Titan Energy engaged in a technical assessment identifying energy saving opportunities including air sealing, hot water conservation, lighting upgrades and refrigeration replacements. United Illuminating of Connecticut contributed an incentive to cover 90% of the total project cost. These energy efficiency upgrades are expected to save the facility ~\$115,000 annually.

The blower door tests of each of the 328 residential units allowed Titan Energy to understand where air sealing needed to be applied. The utility offered incentives covering the complete cost for air sealing of the building as Titan Energy was able to ensure Indoor Air Quality ("IAQ") standards were met.

AT A GLANCE

- ▲ **Building Type:** High-Rise Assisted Living Community
- ▲ **Programs:** Affordable Housing, Section 202 Supportive Housing for the Elderly Program
- ▲ **Services Performed:**
 - Air sealing
 - Hot water conservation measures (installation of low-flow, high efficiency shower heads and faucets)
 - Lighting upgrades
 - Installation of ENERGY STAR © certified refrigerators
 - Wi-fi thermostats

PROJECT COSTS

- ▲ **Total Cost:** \$392,900
- ▲ **Total Incentive Value:** \$352,600
- ▲ **Out-of-Pocket Cost:** \$40,300
- ▲ **% Utility Incentive:** 90%

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Photos of residential living area before (left) and after energy efficient LED lighting upgrade.

NATURAL GAS CONSERVATION MEASURES AND RESULTS

Hot water conservation measures included replacing inefficient showerheads and faucet aerators with low-flow, high efficiency alternatives. From the technical assessment, each apartment was outfitted with 1 low-flow showerhead or handheld showerhead, 1 dual thread aerator, and 1 flip swivel aerator.

ELECTRICITY REDUCTION MEASURES AND RESULTS

To reduce electricity consumption in common shared spaces as well as residential units, over 3,400 fixtures were replaced with high efficiency LED fixtures. Tier 3 building controls were installed and the facility management staff were trained in how to adjust controls as needed for building use. These measures were able to reduce energy costs by \$78,979 and, much to the delight of residents, improved lighting quality throughout the building.

NATURAL GAS

- ▲ Annual Reduction: 24,292 ccf
- ▲ Lifetime: 341,662 ccf
- ▲ Peak Reduction: 215.05 ccf
- ▲ Annual Energy Cost Savings: \$30,365

ELECTRICITY

- ▲ Annual Reduction: 394,893 kWh
- ▲ Lifetime: 3,621,798 kWh
- ▲ kW Reduction:
 - 35.45 KW [Summer]
 - 26.92 KW [Winter]
- ▲ Annual Energy Cost Savings: \$78,979

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