Decentralized approach to heating yields 25 percent energy savings

Case Study

Location:
Grant Village Apartments, Syracuse, NY

Challenges:
• Three outdated central boilers serving 45 buildings in an apartment complex
• Inefficient underground system for energy distribution

Solutions:
• Installed separate boilers for 27 of the 45 buildings, eliminating the need for underground distribution of heat and hot water
• Insulated the attic in each building
• Incorporated low-flow showerheads, sink aerators, and ENERGY STAR® qualified CFL bulbs for all 520 units

Benefits:
• Annual energy savings of more than $293,000 in heating and electricity costs
• Reduced amounts of wasted energy moving heat and hot water underground to multiple buildings
• Seamless upgrades for residents

Overview

Dawn Homes Management had a problem at Grant Village Apartments in Syracuse, NY. The 520 apartments in 45 buildings were relying on three dated, failing atmospheric boilers for heat. The underground distribution pipes also leaked enough heat to melt snow and leave odd pathways between Grant Village’s buildings each winter. Because heat and hot water are included in resident’s rent, the wasted heat equaled wasted money for Dawn Homes. “Heat and hot water included” is an important part of Grant Village’s marketability among its budget-conscious college student resident base. Maintaining the inherently wasteful distribution cost meant that Dawn Homes would have to absorb the rising cost of unused energy.

A smarter more energy-efficient solution

Instead of replacing Grant Village’s three existing central boilers, they installed new separate boilers in over half of the buildings in the complex. This approach represented an increase in upfront costs, but eliminated the wasteful practice of piping steam from centralized boilers. To push steam to the farthest buildings, the three old boilers had to run at peak capacity. The boilers couldn’t keep up with demand and were on the verge of failure. Replacing the boilers wouldn’t really solve the problem because the distribution pipes leaked heat, leaving farthest units chilly.

In combination with other upgrades, Dawn Homes’ decision cut Grant Village’s energy use by 25%, which translated to an annual savings of more than $293,000 in electricity and natural gas costs.

Learn how you can lower operational costs, improve tenant satisfaction, and reduce maintenance time.

Visit nyserda.ny.gov/multifamily or call 1-866-NYSERDA to learn how you can reduce your energy consumption and costs.