



Case in Point

Efficiency Upgrade at Michigan Apartment Community

Delivers Outstanding Energy Savings

In 2009, the facility management team at Coogan Terrace, a senior high-rise apartment community in Melvindale, Michigan, embarked on an efficiency upgrade project. In order to increase efficiency and decrease operating costs at the 25-year-old property, they set out to replace its water heaters. Although they expected to see a significant decrease in energy consumption, the extent of the resulting energy savings was astounding.

Based on previous experience with Lochinvar® products and support from the local factory sales representative, the Coogan Terrace team chose to update the domestic water heating system with new Lochinvar equipment. The facility's existing water heating system was comprised of the original Lochinvar Copper-Fin® commercial gas water heater installed in 1985

and two storage tanks. Lochinvar representative Jason Loverich recommended that they replace these units with three SHIELD® Commercial Water Heaters (SNA500-125). In addition to its 96 percent efficiency and full modulation with 5:1 turndown, SHIELD was an appealing option since its compact size allowed the contractor, Kropf Mechanical Service Company, to easily transport the units to the penthouse mechanical room using the building's elevators.

Shortly after replacing the water



heaters, it was discovered that one of the property's two heating boilers had a failed section and would need to be replaced. Pricing was gathered to replace the failed boiler, including a quote for replacing it with high-efficiency equipment. Upon review of their options, the Coogan Terrace



PROJECT:

EFFICIENCY UPGRADE
COOGAN TERRACE
APARTMENT COMMUNITY



LOCATION: MELVINDALE, MI

LOCHINVAR PRODUCTS INSTALLED:

3 – SHIELD COMMERCIAL WATER
HEATERS
2 – SYNC CONDENSING BOILERS

DESIGN ENGINEERING:

Jason Loverich, Lochinvar, LLC

Kropf Mechanical Service Company,
Livonia, MI



team determined that although the high-efficiency equipment would cost more initially, the operating cost savings would justify their installation – especially if the savings were anywhere near the 30 percent reduction in fuel usage they had already realized with the new high-efficiency water heaters.

While all parties involved thought it would be best to



Two 98% thermal efficient Sync boilers carry the load of the building and an existing boiler remains as a back-up boiler.

replace both of the existing heating boilers, the budget only allowed for the replacement of the single failed unit. Therefore, the remaining boiler was to be left in place for use as a backup heat source if needed. The team at Kropf Mechanical Service Company, with the help of Jason Loverich, then went to work to determine the best way to integrate two new one million Btu/hr SYNC® condensing boilers (SBN1000) with the existing system. Using the SYNC's advanced SMART TOUCH™ operating control, the team was able to front-end load the boiler system by using the two new SYNC units as the lead boilers and the existing boiler as backup in the event more heat was required to satisfy the facility's demand. As with the water heater installation, the SYNC's compact size allowed the contractor to easily move them up the elevator to the mechanical room. After prefabricating a portion of the piping off-site at the Kropf Mechanical fabrication shop, they were able to complete the boiler installation in just five days.

To date, the boilers and water heaters are in their third season and both systems have operated flawlessly. The city now has the funds to replace the old boiler and, based on the performance of the Lochinvar equipment, they have plans to replace it with a third SYNC SBN1000 boiler in the spring of 2012.

As successful as the installation was, the Coogan Terrace team was the most satisfied with the energy savings that quickly resulted from the new equipment. Based

on the energy bills for the first two years following the installation, the new heating system has afforded Coogan Terrace an annual savings of \$20,645. Upon the installation of the final SYNC boiler, the increased annual savings will translate to an estimated payback of 4.7 years.

“Between the impressive mobility of the SHIELD and the SYNC's user-friendly SMART TOUCH operating control, the installation and system setup for both the water heaters and boilers could not have gone more smoothly,” stated David Williams, President/Sales Manager at Kropf Mechanical Service Company.

“We are beyond pleased with the results of this efficiency upgrade,” said Ken O'Rourke, manager of maintenance for Coogan Terrace. “Not only is the new system already saving us a tremendous amount of money on our energy bills, we're confident that this high-quality equipment will continue to deliver this level of performance for many years.”

[For more information, visit www.Lochinvar.com](http://www.Lochinvar.com)

ABOUT LOCHINVAR

Lochinvar, LLC is a leading manufacturer of high-efficiency water heaters, boilers, pool heaters and storage tanks. Based in Lebanon, TN, with facilities in Detroit, Orlando, Tampa, Pompano Beach, Dallas, Phoenix and Chicago, Lochinvar stocks all products in all locations.

