



Replacing an Old Boiler Saves Money and Maintenance Chores

CASE STUDY



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The outdated boiler at Campus Inn Apartments ran constantly, forcing tenants to open their windows during winter to stay comfortable.

For tenants at Campus Inn Apartments in Milwaukee, Wisconsin, the idea of a new boiler and water heater was surely a comforting thought.

The Campus Inn's large, outdated boiler had heated the 75-unit renovated hotel for 50 years. But it ran constantly and lacked adequate temperature controls, driving up temperatures and forcing many tenants to open their windows in the dead of winter just to stay comfortable.

New owner Pete Pusateri knew something had to be done. His call to Focus on Energy was his first step to improved tenant satisfaction and reduced energy costs.

ASSESSING THE SITUATION

Pusateri was concerned that his old 10' by 10' by 30' boiler would need to be removed—a costly approach, especially if asbestos was found. However, a Focus on Energy energy advisor and contractor surveyed the situation and found the boiler environmentally safe.

"In most cases, it's better for everyone to just leave a boiler of this size alone," said the contractor. "As long as there's no asbestos or harmful fumes, the situation is secure."

Pusateri was relieved, and grateful for his Focus on Energy contact. A less cost-conscious contractor might have downplayed the option of leaving the boiler in place.

IN WITH THE NEW

Even with the old boiler still in place, there was still room in the boiler room for a whole bank of smaller, modulating, high-efficiency boilers, as well as new indirect domestic water heaters that would operate off the new boilers.

Compact in size, the new boilers measured just 26" high by 21" wide by 22" deep. This made installation easy; only the old hot water tank needed to be removed to make room. With the connection lines to the old boiler well within reach, the contractor simply cut a few connections and hooked up the new equipment.

Now, Pusateri can rest easy knowing his new boilers are reliable, requiring only routine maintenance checkups. Their fully modulating design also keeps energy costs down by continually adjusting the amount of gas burned to match the heating load.

The new "outdoor reset" control also helps save gas by adjusting the hot water temperature according to the weather. As the outdoor temperature drops, the control automatically raises the hot water temperature delivered to the apartments to keep them warm enough without overheating them. Tenants no longer need to open their windows in winter to stay comfortable!



The old boiler cost its owner more than just money—it also demanded time-consuming maintenance chores.



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The new, efficient boilers self-modulate their operation, using only the gas necessary to meet demand.

COST AND TIME SAVINGS

Reviewing Pusateri's utility records, the Focus energy advisor found savings of \$12,000 in the first year compared to the year before he replaced his old boiler and water heaters. In addition, Pusateri saved \$1,000 through the use of low-flow faucet and showerhead aerators, another Focus on Energy recommendation. And these savings have continued to mount year after year as energy costs rise.

But Pusateri saved more than money. Prior to calling Focus on Energy, Pusateri spent a great deal of time maintaining the outdated boiler. "It was a grueling routine," said Pusateri. "Once a week, the boiler had to be blown down, meaning I had to drain a large pipe that runs along the bottom of the boiler. Had I not kept a strict schedule, sludge would have formed inside the boiler, blocking the exit of steam. Worst-case scenario, it could cause an explosion. And that was just one of my many chores."

Pusateri also had to constantly monitor the aging boiler's water level, steam traps and valves, plus contend with water leaks. "It's not an agenda I would wish on anyone," he said. "I also had to completely shut the boiler down every spring for two or three days just to have it serviced. And there was always another costly problem that needed fixing."

With his new boilers, Pusateri no longer has to slave away on maintenance. "I couldn't be more pleased with the results that Focus on Energy and its affiliates have provided," he said. "I just wish I would have made the call sooner."

Pusateri also potentially saved untold thousands of dollars by addressing the problem proactively. Had he waited for the old boiler to fail in the middle of winter, an emergency replacement would have subjected him to a punitive labor premium.

CALL FOCUS ON ENERGY TODAY

Focus on Energy Apartment & Condo Efficiency Services Program helps owners and developers of apartment and condominium buildings make good energy decisions that result in reduced operating and maintenance costs, improved tenant comfort and satisfaction, and smart energy practices. To find out how Focus on Energy can help you save energy and improve your bottom line, call 800.762.7077 or visit focusonenergy.com.

Focus on Energy works with eligible Wisconsin residents and businesses to install cost effective energy efficiency and renewable energy projects. Focus information, resources and financial incentives help to implement projects that otherwise would not get completed, or to complete projects sooner than scheduled. Its efforts help Wisconsin residents and businesses manage rising energy costs, promote in-state economic development, protect our environment and control the state's growing demand for electricity and natural gas. For more information call **800.762.7077** or visit focusonenergy.com.

TIPS FOR REPLACING YOUR BOILER

Are you ready to upgrade to a new, more efficient boiler? Here are some tips to help you get the job done smoothly.

1. Compare competitive boilers

Base your purchase decision on features that provide higher seasonal efficiencies.

- Atmospheric burners: the least efficient replacement option.
- Power burners: more efficient because the design allows precise control over the air/fuel mixture.
- Advanced modulating burners: at least as efficient as power burners and can be more efficient because the firing rate is controlled to match the load.

2. Consider overall system design

Condensing boilers are the most efficient; however, make certain the replacement system will take full advantage of the condensing feature.

3. One large boiler versus several smaller, sequentially fired boilers (modular system)

Modular systems offer several advantages, including:

- Availability of backup if one boiler fails
- Ease of installation and maintenance in small boiler rooms
- Ability to turn off and on as needed
- Higher overall system efficiency
- Controls can alternate boiler firing order to even out usage across all boilers

4. Choose controls that maximize energy savings

Specific recommendations depend on your particular situation. Consult with your contractor to determine the best setup for you.

5. Plan ahead

Larger commercial equipment may need to be ordered, so consult with your contractor and give yourself plenty of lead time.

6. Get it in writing

Write down your desired equipment specifications so each contractor is bidding on the same system.

7. Call Focus on Energy

We're here to help with advice and assistance. Call us at 800.762.7077.



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