

# Tenants' choice

Multifamily design innovation brings natural gas to high-rise apartments.

By Drew Robb

**T**here is an acute need for rental properties and new-build residencies throughout North America. But for

developers to have the confidence to invest in a large multifamily property, they have to find a way to balance cost with the features that families want. And, at the top of the list is natural gas for heating hot water and to fuel appliances. A recent study by Market Strategies International, for example, found an 80 percent preference for natural gas among residential tenants.

To satisfy this demand, developers and manufacturers are finding ways to affordably add natural gas to multi-unit properties. They are using design innovation and system design to bring natural gas to a wider residential audience operating at a lower cost and far more efficiently.

## Savings at The Slate

Natural gas is always the popular choice for family dwellings. But when developers want to add natural gas systems and appliances to multifamily projects, their options are sometimes limited. If developers wish to install meters in each unit, strict venting and installation regulations can add significantly to the materials budget. Additionally, such requirements could impose limits on space availability. In many cases, these restrictions can make projects cost-prohibitive, and they require some help and creative thinking from one's local utility. That's why so many multifamily developments lack the natural gas amenities their tenants desire.

This was the challenge facing a project known as The Slate. Situated in Portland, Oregon, it is a 10-story building that

includes office and retail space on the lower levels as well as 75 studios, one-bedroom and two-bedroom apartments. These units offer dramatic skyline views, easy access to downtown, and a modern look and feel that is attractive to young families and professionals.

Looking for a way to incorporate natural gas into the project, The Slate's developers called in the help of system designers at NW Natural, the largest gas utility in the Pacific Northwest.

"In this competitive market, developers and renters seek out those amenities that set a project apart," said Mark Vuong, The Slate's project manager. "NW Natural's engineering team came up with creative design solutions that let us upgrade our units to natural gas cooktops while still meeting our price points."

As well as the precision and reliability of natural gas cooktops in every unit, the design included common-area heat, a gas-fired central boiler for domestic hot water, and gas heating for commercial and retail spaces. NW Natural engineers devised an innovative approach that cut the developers' costs by \$30,000, tracks usage by unit, and improves system safety and control.

A single regulator positioned outside the building eliminated the venting required when regulators are used indoors. Lower pressure extended service lines run from the regulator to meter closets on each level which contain all meters for the floor. This arrangement greatly reduced the amount of piping needed, as well as adding to the space availability of each unit.

When scheduled or unscheduled maintenance is called for, gas can be shut off to a single apartment or floor, rather than

The Slate residential, office and retail complex includes natural gas cooktops in every apartment unit, common-area heat, a gas-fired central boiler for domestic hot water, and gas heating for commercial and retail spaces.



having to shut down the entire building. Further, technicians can service equipment without disrupting tenants.

### Thomas Jefferson Tower rejuvenated

The Thomas Jefferson Tower (previously Hotel Thomas Jefferson, then Cabana Hotel) is a 19-story building, formerly a 350-room hotel, completed in 1929 on the western side of downtown Birmingham, Alabama. Listed in the National Registry of Historic Places, it had sat empty for decades.

Developer and building owner Reed Realty Group faced many challenges in bringing this iconic structure back to life. In exchange for preserving the historic features of the building, the company received tax credits. However, this imposed many design and engineering limitations. So Reed Realty turned to Spire Inc., a natural gas utility serving customers across Missouri, Mississippi and Alabama.

"The switch to gas from electric would not have been possible without the support and expertise of our local gas utility," said Alex Dzyuba, principal and director of construction, Reed Realty. "Spire's creative approach enabled us to save money on the front end and helped us to reduce the electrical infrastructure throughout the building."

Spire devised an aesthetic and economical system for the 96-unit Thomas Jefferson Tower. Placing three natural gas tankless hot water heaters in the me-

Thanks to the installation of the Rinnai Tankless Rack System at the 94-apartment Thomas Jefferson Tower in Birmingham, Alabama, each of the units feature a gas stove.



PHOTO COURTESY OF REED REALTY GROUP

chanical room on each floor, serving six residential units and installing gas stoves in each apartment. This reduced electrical system needs by over 5,000 amps. The selection of three tankless Rinnai Corp. water heating units per floor served by a centralized hot water system further enhanced project objectives.

"The Rinnai Tankless Rack System drastically reduces your cost, space and maintenance requirements, yet it has redundancy built into the system," said Rachel Young, commercial business representative, Spire.

The State Historic Preservation Office allowed the water heaters to be vented with a single-point exhaust at each level of the tower. This enabled a building configuration whereby it required only one fuel line to run vertically through the mechanical rooms of each floor. These simple but effective design adjustments meant there was no need to

run gas lines to each unit, only water lines.

"The design enabled the developer to not have to run individual fuel lines and 200-volt electric lines to all 96 units, and eliminated two 220-volt lines per unit," Young said. "It also saved the developer \$225,000 due to the reduction in electrical cost and gas piping requirements."

Young's advice for developers is to expand mechanical rooms slightly on floors as this saves far more space in each unit via a centralized water heating system design. She also recommends that owners and developers seek advice from their local utilities before submitting floor plans.

In short, natural gas is an environmentally friendly, energy-efficient fuel that allows users to do things faster and for less money, giving them more time to spend and save cash for other activities. And with new products by top manufacturers designed with multifamily in mind, there has never been a better time to add natural gas service.

"Our tenants love the fact that they have instant and endless hot water and the availability of gas stoves," Dzyuba said. ▀

PHOTO COURTESY OF REED REALTY GROUP



The Rinnai Tankless Rack System, featuring three natural gas tankless water heaters, was installed in the 16-story Thomas Jefferson Tower. The installation drastically reduced electrical system needs by 5,000 amps as well as decreased cost, space and maintenance requirements in the historic building.

