Humidity can ravage a facility. Mold creeps over surfaces, appliances rust, anything wood warps and asthmatic occupants suffer. This is a problem the J.L. Young Apartment Community (J.L. Young), Tampa, Florida knew all too well. Most of J.L. Young’s 450 apartments date back to 1970, and with no real air conditioning in place, humidity took its toll on both the 23,000-square-foot facility and its elderly residents. The owner, Tampa Housing Authority (THA), Tampa, knew that action had to be taken before the facility deteriorated entirely. That action took the form of a new ductless HVAC system from Mitsubishi Electric US, Inc. Cooling & Heating Division (Mitsubishi Electric).

Terrance Brady, CEM, THA director of energy services and special projects, said, “We were getting a lot of condensation. We had huge mold issues and anything metal was rusting out. We needed to address the humidity or the building would have deteriorated and eventually been condemned.”

To address the humidity through a new cooling and heating system, THA worked with the U.S. Department of Housing and Urban Development (HUD). Brady explained, “It’s HUD policy to not subsidize A/C, but we petitioned them to put in A/C for better indoor air quality.” Mary Fox, formerly THA’s director of energy services, said, “The building had moisture issues causing mildew within the units. This was a liability for the THA because of indoor air quality concerns, which could trigger legal action from the residents. So the THA requested a waiver that would allow for air conditioning and dehumidification as a means of maintaining proper humidity.” HUD reviewed the waiver and agreed on the need for a cooling, heating and dehumidification system.

From there, system selection took place. Brady said, “Central air was not a possibility because this was a retrofit.” The facility’s concrete walls and low ceilings made ductwork expensive if not impossible. “So we looked at mini-split systems and thought they were a good solution because of minimal piping, minimal electrical demand, easy control of the system, easy operation for residents, easy maintenance and, of course, dehumidification.”

Having settled on ductless technology, THA looked at both Mitsubishi Electric and LG. “Mitsubishi [Electric] was a much superior product. Mitsubishi [Electric] took seven or eight of our people to train them on how easy it was to disassemble and work on the equipment. We all agreed on the decision,” said Brady.

Fox added that “Mitsubishi [Electric] was the only brand with dehumidification. The units actually take the humidity out of the air, so with the Mitsubishi [Electric] units, we knew we wouldn’t be making the residents uncomfortable as we would with standard air conditioning, but we could still bring down the humidity. This resulted in a win-win for everyone.”

Fox “also liked Mitsubishi [Electric] because of its SEER\(^1\) rating. “ That SEER rating gave THA a one-time rebate from their local utility company: $225 for each unit installed.

\(^1\)Seasonal Energy Efficiency Ratio

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Egner also spoke to energy savings. “It’s a great energy savings because of the low amount of amperage the units use. We saw a good drop in consumption with Mitsubishi [Electric].” How good? The 2014 numbers are now in: The yearly HVAC consumption was reduced by 1,149,980 kWh, equating to a yearly expenditure reduction of $97,207. “That’s real money. Plus we’re coming in short on payback. We thought it would be 15 years, but it’ll be 10 to 12. It’s impressive,” said Brady.

From Michael Colon’s perspective, as J.L. Young’s assistant property manager, “It’s also an incredible system in terms of simplifying building maintenance. A great benefit is that you don’t have to replace the filters, you can just clean them.”

Another perk that Brady mentioned: “Our residents are very excited about the system being cutting-edge. They’re proud to have a smaller carbon footprint.”

Keith Egner, manager of THA’s measurement and verification team, elaborated on the positive effects of the new system: “After the renovation, I noticed that apartments were being kept cleaner. It was a better environment. It didn’t feel like an elderly facility anymore; it felt new. Plus, people used to have bad asthma. We’ve really cut down on that with the Mitsubishi [Electric] units.”

“We experimented with LG and Mitsubishi [Electric] systems, and went with all Mitsubishi [Electric].”
- Keith Egner, manager of THA’s measurement and verification team