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Energy Trackers

Multifamily firms that want to obtain green certifications, grab tax incentives and rebates, or simply comply with the law are finding it necessary to decrease their buildings' overall energy loads. The first step in that process? - Benchmarking utility usage.

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Miles Orth wasn't surprised last summer when e-mails started flooding Campus Apartments' online resident customer service portal at one of the firm's Tucson, Ariz., properties. Campus was replastering the community pool and expected some pushback from the Gen Y University of Arizona students. But these e-mails weren't asking when Joe and Jane Co-ed could resume their fun in the sun. Instead, residents were asking—in droves—what

Campus had done with the pool water, and what attempts were being made to recycle and otherwise conserve energy and resources at the property.

"We had 25 residents in separate e-mails ask us what we did with the water," Orth says. "Unfortunately, we had already drained it, and, of course, the chlorination makes reuse somewhat challenging, but we're fortunate that student residents are very into sustainability and environmental initiatives. These are very smart, confident young people who want to save the world, and they want to start with where they live."

According to Orth, it was student activism that led Campus Apartments to switch all of its community incandescent bulbs to CFLs two years ago, and that same activism is now pushing for LED lighting to replace CFL lighting in the parking lots and appropriate common areas. Add to that efforts to install water-saving devices in bathrooms and switch out obsolete and inefficient boiler and HVAC systems, and you've got a full-on sustainability business unit to manage. "Across our national portfolio, one of the things we've been trying to work on over the past several years is benchmarking," Orth says. "In particular, trying to determine what are the right ways to go about finding the information to improve the infrastructure we have and add to some of the sustainability initiatives we've begun."

The payoff is clear: Operators, utility billing specialists, policymakers, and green building experts agree that energy benchmarking creates specific opportunities to add to NOI. What's more, the penalization is looming: Municipalities across the country will eventually mandate benchmarking. In New York City, Local Law 84 requires benchmarking using the EPA's Portfolio Manager tool and will apply to most Big Apple apartment buildings as of May 1. Similar mandates are under way in Seattle; San Francisco; Austin, Texas; and Washington, D.C., and expectations are that benchmarking regulations will only proliferate (see "Power Policies," below).

Put more simply, Campus Apartments—like the majority of multifamily apartment operators—is trying to figure out how much energy its apartment communities consume, how much that energy costs, and how to reduce both consumption and costs over time. And benchmarking is taking a front-row seat in this effort.

A Tale of Two Energies

Still, the efforts to mandate energy benchmarking, particularly those that require mandatory reductions in energy usage, are not embraced with universal optimism. Part of the concern is that commonly accepted thresholds for energy consumption across garden, mid-rise, and high-rise apartment buildings have yet to be

Payback Time

These two federal tax programs can provide quick green ROI.

Like most green efforts, finding incentives for sustainable building and operating can involve navigating a plethora of utility company rebates and state regulatory agencies. But just as changing your incandescent bulbs out for CFLs can provide immediate ROI, two federal programs can bring

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determined. Meanwhile, in-unit energy consumption remains a data metric shared between residents and utility companies and protected by privacy laws.

“There are so many different kinds of multifamily buildings, from three-story, wood-framed with individual systems, to mid-rise steel-and-concrete central-system buildings, to high-rise podiums on top of multilevel garages,” says Adelaide Grady, a LEED Accredited Professional and vice president of development at Atlanta-based Wood Partners, where she oversees the firm’s “Green Team” sustainability unit. “So it’s very difficult to make blanket statements about multifamily in terms of green energy and energy efficiency.”

Also critical for those involved in multifamily energy benchmarking efforts is to distinguish between two specific types of energy consumption: common-area and central-systems energy use versus in-unit, resident-controlled plug loads and water consumption. “In terms of the challenges in measuring apartment energy use, you have to look at it from the perspective of the owner and the perspective of the residents,” says Robin Hughes, CEO and president of Abode Communities, a Los Angeles-area affordable housing developer that just received LEED Platinum certification for the 70-unit Casa Dominguez property in East Rancho Dominguez.

“For common areas, we can definitely measure how changes are reflected in utility consumption when we add sustainability features—that’s not difficult at all,” Hughes says. “But from a resident standpoint, it is difficult to control and manage usage, particularly because their utility data is private information between the resident and the utility company.”

Since LEED certifications are granted post-occupancy, getting residents on board with energy conservation was nonetheless critical at Casa Dominguez, where—as at many green-pimped communities—education and outreach have been anecdotally successful in decreasing in-unit energy usage, even if the true measurements of that conservation continue to elude operators. “Individual usage is the holy grail,” says Michael Miller, president of Oak Brook, Ill.-based multifamily utility billing service provider American Utility Management (AUM), which processes more than 55,000 apartment property utility bills a month. “Fannie Mae, the EPA, the Department of Energy—they’re all trying to figure out how to benchmark multifamily, and the big thing they’re staring at is individual unit energy usage. I think those agencies recognize they would like to have that data, and I think you might see a request to the utilities from DOE to that end in the future.”

Getting Audited

Before the Feds pull state and regional utility companies into the multifamily energy conservation conversation, however, it appears they’ll make an initial effort to get more apartment operators reporting common-area and central-systems energy usage themselves. Their primary tool: Portfolio Manager, a dashboard-like data-tracking system administered by the EPA as part of the EPA/DOE joint oversight of the Energy Star program. Originally designed for nonresidential commercial real estate, Portfolio Manager tracks dozens of metrics across energy, financial, and environmental data categories and was a key tool in establishing the Energy Star building certification program.

For multifamily, the Portfolio Manager tool allows apartment building owners and operators to track weather-normalized energy use data over time and compare performance across a portfolio of multifamily buildings. According to the EPA, multifamily adopters are tracking some 1,500 apartment assets with the software and are using the system to prioritize cap-ex investments; verify and track progress of projects; identify under-performing facilities; be more responsive to utility issues; and identify billing errors.

some quick green payback.

45L tax credits: Under Internal Revenue Code Section 45L, apartment operators may be eligible for a \$2,000 federal tax credit for each energy-efficient dwelling unit constructed in the past three years. “To better illustrate the tax savings, a 50-unit apartment complex would be eligible for up to \$100,000 in tax credits,” says Dori Eden, director of business development for Pasadena, Calif.-based tax consultancy and cost recovery firm KBKG.

The process for obtaining the credits requires a detailed energy analysis that must be certified by a qualified third party, one reason why the credits are often left unclaimed.

“In order to qualify, a dwelling unit must provide a level of heating and cooling energy consumption that is significantly less than certain 2004 energy standards,” Eden says.

“Given that current energy codes have evolved tremendously over the past five years, many developers are already building to specifications that qualify them for the credit, plus there is an opportunity to retroactively claim any missed tax credits, if you amend your return before the three-year federal statute of limitations.”

179D energy tax benefits: For mid-rise and high-rise properties, the 179D energy tax benefits allow up to a \$1.80 per square foot deduction for the design of energy-efficient buildings, including retrofits. “Most property owners who invest in green technology are able to capitalize on this deduction,” Eden says, “but there is a surprisingly low level of awareness regarding these green building tax benefits.” According to Eden, lobbyists from the National Association of Real Estate Investment Trusts (NAREIT) and other groups are in talks with the Treasury Department to change 179D language and turn the deduction into a tax credit, better allowing them to take advantage of the incentive.

Power Policies

Not that Portfolio Manager is the only player in the energy auditing game.

Building makers across the country are requiring multifamily owner/operators to track and benchmark energy usage at their properties. Here are the ins and outs of three such programs.

Seattle: Passed in January 2010 and enacted in May 2011, the Seattle Building Energy Benchmarking and Reporting Legislation (Ordinance 123226) requires building owners to conduct annual energy performance benchmarking using the EPA's Portfolio Manager. On demand, building owners are required to release building performance information to any current or prospective renter, buyer, or lender involved with a real estate transaction, lease, or application for financing or refinancing of the building. Owners must also authorize the city of Seattle to download annual energy performance data for each building. The program will first apply to nonresidential buildings and extends to multifamily buildings 10,000 square feet or larger in April 2012.

New York City: Effective since May 1, 2011, New York City's Local Law 84 requires energy benchmarking of multifamily buildings larger than 50,000 square feet, with penalties for noncompliance (currently \$500 per quarter). After two years of benchmarking, all energy data will become public information. In March, New York City mayor Michael Bloomberg announced that multifamily buildings would be granted a grace period lasting until Aug. 1 before fines would be levied. The New York State Energy Research and Development Authority has established a hot line on the citywide 311 system where building owners can call with questions regarding the law or the use of Portfolio Manager.

Austin, Texas: Austin's Energy Conservation Audit and Disclosure Ordinance requires that eligible commercial facilities (including multifamily residential buildings with five or more units) calculate their energy performance ratings not later than June 16, 2011, using a rating system approved by the director of the Austin Electric Utility. Building owners must disclose this information to a purchaser or prospective purchaser of the facility before the time of sale. The city has further defined the EPA's Portfolio Manager as the approved system for buildings with more than 5,000 square feet of space. The ordinance does not apply to properties transferred via a foreclosure sale, trustee's sale, or deed in lieu of foreclosure transfer.

Independent energy consultants, as well as utility companies and utility billing service providers like AUM, are all reporting a growing demand for energy audits from apartment operators looking to begin a benchmarking program—and they're happy to deliver. "We send our chief energy officer to the property, and we'll inspect lighting, boilers, HVAC, pipes, insulation, pools, pool heat pumps—really everything. The result is a report 12 to 15 pages long," explains Miller, who says audits average around \$3,500 but offer operators a glimpse at their total energy profile compared with aggregate usage data across the AUM client base.

What's more, energy audits offer apartment operators a prioritized hierarchy of no-cost to low-cost to high-cost investments that can be used to immediately create an energy investment strategy, which can then be tracked over time via benchmarking. "With a \$3,500 charge, operators don't want a list of changes that cost one million bucks apiece," Miller says. "Sure, you might benefit from changing out a boiler to a co-generation or fuel-cell plant, but energy investment initiatives typically have to start with very granular savings and work their way up."

Energetic Supporters

Indeed, Wood Partners' Grady points enthusiastically to one of the best green investments multifamily money can buy: For \$6.35 at any big-box retailer, you can get a tube of acrylic latex caulk and a caulk gun that can immediately begin saving the typical apartment community thousands of

dollars. "A huge source of energy loss in a building is via air leakage," she says. "If you can fill the gaps and holes in the sheathing, you can quickly recoup significant savings for a very low-cost effort that is \$100 per unit, max."

At Campus Crossings in Durham, N.C., Campus Apartments switched all of its water fixtures and generated \$20,000 in water and sewer savings in just four months. "There are so many different ways of improving things. And this is only a 6-year-old property," Orth says. "Every multifamily property, even a new one, can find ways to improve their bottom line. There's no question that if you can reduce your energy consumption by 5 percent on a multifamily community, there is a direct improvement to NOI."

Benchmarking results over time can involve doing ongoing, periodic energy audits or using software like the EPA's Portfolio Manager, or it can be as simple as making balance-sheet comparisons in the accounts receivable and accounts payable departments. While qualifying for certain state and federal energy incentives may require the use of certain systems or procedures (see "Payback Time," opposite), benchmarking methodology will often depend on the size of the energy investment and, consequently, the relative importance of achieving an analytically definable ROI.

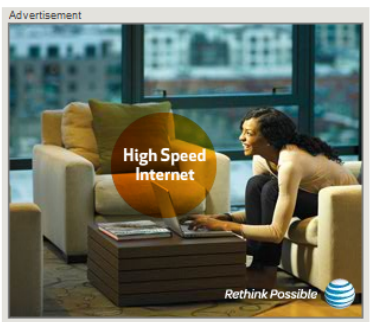
"At one of our properties, we are currently making a \$500,000 investment to do some energy-efficient retrofitting and expect to see our utilities go south of 60 percent once those improvements are in place," Abode's Hughes says. "We have another building where we're putting in \$2 million in cap-ex, and about half of that is energy retrofitting. Both are historic buildings where we are taking out really old systems, so those will have more comprehensive energy audits. But for something where we are changing out toilets, we simply expect to see our utility costs go down and use our utility bills year over year as a benchmarking comparison."

Some apartment operators are understandably wary of benchmarking mandates. But energy agencies and regulators are trying to be cognizant of the administrative burden and respond with resources accordingly. "New York state in general has some aggressive energy goals—the plan we have right now is to reduce our buildings' energy consumption by 15 percent and generate 30 percent of our electricity from renewable sources by 2015," says New York State Energy Research and Development Authority (NYSERDA) project manager Ryan Moore.

That's why NYSERDA launched an initiative this spring making \$7 million available to support commercial real estate benchmarking efforts leading to energy conservation. For multifamily participants, NYSERDA provides \$3,000 to help cover the costs of an energy audit report that is commonly the first step in any longer-term benchmarking effort. "Our objective is to help owners find areas where they can make low-cost and no-cost improvements to their buildings that help them quickly find energy conservation and savings," Moore says. "We want to use it as a feeder program into our other multifamily programs to encourage owners to take a first step into better understanding how to manage their energy consumption."

And for the most part, apartment owners, operators, and developers agree that the effort to collect energy usage data is part of a broader collaborative effort to reduce energy loads, which should save apartment operators in the long run. "We think benchmarking is important as part of a broader effort to evaluate where we are as an industry," Grady says. "Once we know more about where we are, we can make much better decisions about where we are going to go from here in terms of achievement thresholds. And benchmarking helps you figure that out."

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