



# How Owners of Older Buildings Can Earn More By Going Green

Urban Land Institute Report Lays Out a Business Case



Owners of this Washington, D.C., office building built in 1963 made low-cost changes to improve energy efficiency. The changes helped reduce complaints from tenants by 90%. (Akridge)

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Owners of older office buildings could be leaving some green on the table by not taking steps to improve energy efficiency at their properties.

Lack of knowledge, time and money are the biggest factors holding owners back from making changes that could benefit the bottom line, according to a report, "Unlocking Hidden Value in Class B/C Office Buildings," from the Urban Land Institute, the Rocky Mountain Institute and the Building Owners and Managers Association.

The report makes the business case that owners of older buildings could reduce operating expenses, boost profits and increase property value by taking steps that cost little to nothing to implement.

"Doing good for the climate doesn't have to cost a lot of money," said Monika Henn, a manager with ULI and one of the report's authors. "It's not about making big changes and big investments."

Simple changes such as LED lighting and tweaking schedules and thermostats on heating and cooling systems would be a good start, the report notes. Owners of these buildings could save roughly 15% on energy costs by spending little to no money. The savings rises to 35% with "large investments that still reap a three-year payback period."

Based on a 75,000-square-foot building, an owner could increase operating income 1.9% to 4.3% per year and the property's value by \$4 to \$8 per square foot, according to the report.

The solution, however, may not be so simple, according to Comly Wilson, marketing director for Enteriv, a [New York City-based](#) technology company that specializes in collecting and analyzing building data. Its clients include ProLogis, CBRE and Colliers International. The report is telling owners of these types of buildings "to run before they walk. If these buildings aren't energy efficient, you can bet they aren't run well in any way, shape or form," Wilson said by email.

Still, owners eventually may be forced to pay closer attention to energy efficiency. Increasingly, cities have been approving new regulations as part of efforts to address climate change and applying them to ever smaller buildings, some as small as 10,000 square feet.

The American Council for an Energy-Efficient Economy recently announced that local governments around the country voted overwhelmingly to adopt an update to the

International Energy Conservation Code that would improve energy efficiency for commercial and residential buildings by an estimated 10% or more. Many municipalities around the country incorporate IECC into their building codes.

## Going Green

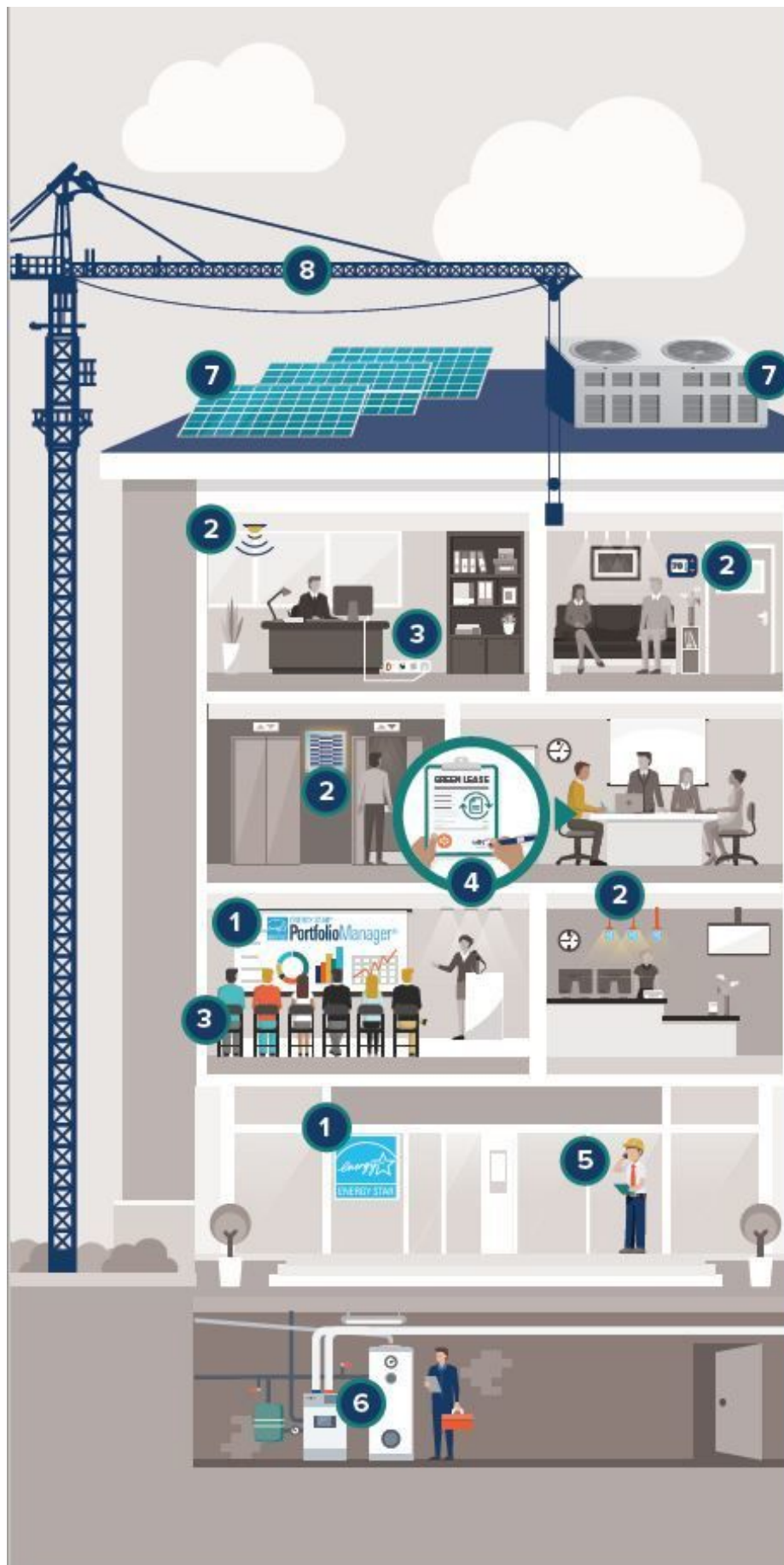
Making office buildings more energy efficient isn't a new concept. It has been part of a decadeslong movement to make office buildings more environmentally friendly and has become known as green or sustainable building.

The U.S. Green Building Council started in 1993 and created the LEED rating system, which stands for Leadership in Energy and Environmental Design. Projects earn points for design and materials used, ranging from the lowest level of simply certified to the highest level of platinum.

Green building efforts have picked up in earnest lately over climate change concern. Such efforts have focused largely on newer Class A office buildings developed and owned by investors with deep pockets, and many Class "B and C buildings have been overlooked," said Henn with ULI.

Definitions of Class B and C can vary depending on the cities where they are located and the amenities offered but usually refer to buildings built in the 1980s or 1990s and older. Age, however, isn't the sole defining factor for the class of a building. A 100-year-old building can be considered Class A if it has been fully renovated and has all of the modern amenities of new construction.

A Class B building in a strong location can rise back to top-tier status with renovations to common areas, a spruced up facade and technology updates. Class C buildings tend to be in less desirable areas and need more work to improve. In either case, the buildings need capital. Limited capital is the biggest reason most properties haven't gotten much attention on energy efficiency, followed by limited staff to make changes and "low priorities versus other business activities," the ULI report noted.



## Key Building-Level Strategies

The cut-out illustrates key strategies a building owner can take to improve energy efficiency and adopt green leasing in a building and/or across a portfolio, as described in more detail throughout this report. Recommended measures are labeled by number throughout the office and are roughly ordered from lowest cost/effort to highest:

- 1 **COLLECT PERFORMANCE DATA**, benchmark annually with ENERGY STAR Portfolio Manager, and consider certification
- 2 **IMPLEMENT LOW/NO-COST MEASURES** such as LED replacements, optimized HVAC schedules and setpoints, and ongoing preventative maintenance
- 3 **ENGAGE TENANTS** on energy efficiency through their own behavior with plug loads and lighting, and identify tenant efficiency opportunities via a night walk-through
- 4 **INCORPORATE GREEN LEASE CLAUSES** into standard lease forms that document efficient operations, establish efficiency standards for tenant fit-outs, and enable cost recovery for efficiency projects
- 5 **PERFORM AN ENERGY AUDIT** to identify additional cost-effective opportunities for improvement
- 6 **PERFORM RETRO-COMMISSIONING** (HVAC and building automation system) to ensure equipment is working properly and extend its lifespan
- 7 **CONSIDER CAPITAL IMPROVEMENTS** to the roof, HVAC, and envelope, or installation of solar panels, sensors/controls, and higher-efficiency equipment replacements at the end of useful life
- 8 **BUNDLE SUSTAINABILITY IMPROVEMENTS INTO PLANNED REPOSITIONING PROJECTS**

*These key building strategies are referenced throughout the report.*

Different ways owners can improve energy efficiency. (2020 Rocky Mountain Institute, Urban Land Institute, Building Owners and Managers Association)

If an owner is willing to spend more, that could mean adding a new roof, solar panels or higher-efficient equipment. Owners looking to reposition a property, perhaps elevating it from Class C to B or better, could bundle sustainability improvements into the overall plan, the ULI report said.

There are incentives and financing that can help cash-strapped owners. Many local utilities offer rebates and incentives, for example. Vendors may provide financing to help a project get done and get paid back by the rebate, the report notes. Other vendors may get paid back by a percentage of the energy savings gained. One national program, known as C-PACE that stands for commercial property assessed clean energy, offers specialty financing for green energy design and implementation and is [available in 20 states](#) and Washington, D.C.

The report suggests that building owners start with collecting energy performance data and then run the data through the Energy Star Portfolio Manager, a free online tool. The U.S. Environmental Protection Agency created the Energy Star program in 1992.

Through this, building owners can better understand a building's energy usage and cost and determine how it changes over time and possibly obtain an Energy Star certification. An owner, however, would have to hire a professional engineer or an architect to do the necessary verification.

### **Start With Monitoring**

By monitoring energy usage, owners may be able to “identify abnormal energy usage trends quickly” and optimize performance of the HVAC systems, the report says.

Enertiv’s Wilson said gathering just the energy usage information isn’t enough.

“They should be getting all of their information, not just energy, into one place and give operators tools to make their jobs easier,” he said. “Only then does it make sense to talk about optimization.”

By everything, that means collecting in one place, preferably digitally, all operational information on equipment, such as maintenance manual, critical parts lists, warranty

information and best practices in maintaining the equipment.

Connell McGill, Enertiv's chief executive officer, said doing this first can bring owners productivity gains with staff before gradually venturing into the complex issues that come with improving energy efficiency.

Landlords and their building engineer staffs are stretched thin because of a labor shortage as well as a skills gap, McGill said. He said improving productivity helps lower employee turnover, which saves money.

Monitoring energy usage worked for Rockville, Maryland-based The Tower Cos., which owns office properties around the Washington, D.C., area. The company used the data to identify conservation possibilities for a [Silver Spring building](#) built in 1963 and landed a grant from the Maryland Energy Administration to pay for some of the costs to implement the measures.

“With just a \$44,000 investment, the project was able to reduce energy use by almost 30% and return \$50,000 in estimated annual energy savings — less than a one-year payback,” the report says.

The report said using networked sensors and programmable thermostats help with efficiency. Those sensors and programs require funds, said Wilson with Enertiv, and without getting all of the data first, vendors might add more controls or sensors than needed.

Still, tenants themselves could be encouraged to participate in helping with energy efficiency, particularly through lease clauses that “establish efficiency standards for tenant fit-outs, and enable cost recovery for efficiency projects,” the report says.

Owners can do that through what’s called “retrocommissioning,” taking existing equipment and ensure it is working properly and make repairs that extends its life.

Akridge, a Washington, D.C.-based company, did that with a [D.C. office building built in 1963](#). Tenants had complained about the building’s heating system, specifically the induction units that draw air into the HVAC system.

According to the ULI report, building engineers cleaned all of the units and gave them a tune up. The work not only improved efficiency but also reduced complaints from tenants by 90%.

Nonetheless, Enteriv's Wilson is skeptical that interest will rise in improving energy efficiency among many owners of B and C properties.

“These are all smart things to do and will save energy and money,” he said. “But anyone who has seen what things look like in real life would never expect an owner of B/C properties to be able to do anything with this information.”

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