

# Understanding the Business of Real Estate

Information for the successful implementation  
of a building performance policy



March 2020

When it comes to developing and implementing commercial or multifamily building performance policies, many cities desire long-term and mutually beneficial relationships with their local real estate communities. These relationships enable cities to more effectively drive legislation forward that reaps maximum benefits and ensures a thriving, resilient community for all. However, policy development and implementation can be challenging when neither building owners nor tenants have absolute control over energy consumption and are disincentivized to make building performance improvements. To overcome this hurdle, it is important that policymakers understand the business side of real estate. Until then, building performance policies will not be able to achieve their fullest potential impacts.

This document aims to enhance city personnel perspectives on how the real estate industry functions—including how different market actors work together throughout the various phases of a building’s lifecycle—and foster more meaningful conversations with stakeholders.



# Contents

<b>Common Lease Structures</b>	<b>4</b>
<b>Green Leasing</b>	<b>7</b>
<b>Common Barriers</b>	<b>9</b>
Commercial Offices	11
Market-Rate Multifamily	14
Affordable Multifamily	19
Hospitality and Lodging	22
Retail	25
Hospitals	27
Universities	29



## Common Lease Structures

# Understanding Common Lease Structures

When driving investment in building performance is the ultimate goal, the key to crafting effective messaging and lasting relationships is understanding how capital and operational expenses flow between building owners and tenants. The first step in understanding this flow is to learn about the typical lease types used in commercial and/or multifamily buildings.

The typical lease is a legally-binding contract that governs the landlord-tenant relationship—including how both parties expend and recover costs within a building. In many commercial lease structures, the party responsible for paying for an energy efficiency upgrade, such as an equipment upgrade to a higher-performance model, does not typically benefit from the energy savings created by that upgrade (e.g. lower utility bills)—an economic misalignment that is widely known as the split incentive. Let's look at how this plays out across typical gross and net lease arrangements.

## Gross Lease

The gross lease is an all-encompassing lease where a single amount, simply known as the "rent," typically includes the rental fee, operating costs, maintenance services, insurance premiums, and real estate taxes and other expenses. Gross leases are most often used when buildings have complex operating needs, such as a central HVAC system or shared services within a building. Under a gross lease, the landlord/owner is responsible to maintain, operate, and repair the building's infrastructure and the rent covers these costs.

## Modified Gross Lease

In a modified gross lease, the tenant pays rent that covers expenses to operate the building. However, it also creates a mechanism for expenses to increase over time—due to inflation

or other such economic conditions—while still allowing for services agreed upon at the lease signing to be delivered at the same level of quality. A key component of a modified gross lease is that the calculation of first-year occupancy costs establishes a baseline of operating expenses known as the "base year." The landlord prepares, based on the budget, a statement that details which rental costs will increase in any year after the base year to maintain the services for the building. The added expenditure is passed through to the tenant, who pays a pro rata, or percentage share. While this lease structure is preferred by owners, it creates a split incentive that in certain situations does not reward both parties for investing in and achieving energy savings.

Typical building types that use this lease include:

- Multifamily buildings that are rental properties, such as high-rises, garden style, or affordable options
- Federal, state, or municipally-owned buildings
- Universities buildings such as classrooms, cafeterias, labs, or dormitories
- Hotels and lodging
- Civic and public spaces, such as hospitals, community centers, parking garages, and entertainment and sporting venues

## Net Lease

In a net lease, the tenant(s) pay a base rental fee, as well as their pro rata share of a combination of the following: cost of the insurance, common area maintenance (CAM) cost, and real estate taxes. This lease type is used when the common area is a benefit and is used by all tenants, and the cost for these items is distributed evenly. Some examples of CAM expenses are snow removal, landscaping, or parking lot lighting maintenance. Tenants with net leases will typically pay their own utility bills, have higher maintenance responsibilities within their individual rented spaces, and may be responsible for their own equipment maintenance.

Net leases come in three types:

**Single net lease:** A tenant pays rent plus their share of real estate taxes.

**Double net lease:** A tenant pays rent plus their share of real estate taxes and cost of insurance.

**Triple net lease:** A tenant pays rent plus their share of real estate taxes, cost of insurance, and common area maintenance costs.

Typical building types that use this lease include:

- Industrial, such as heavy industrial and manufacturing; warehouse and distribution centers; and refrigerated warehouses
- Retail, such as open air shopping centers, stand-alone, or pad sites
- Multifamily condominiums and co-ops with a tenant ownership structure, rather than a single building owner.





# Green Leasing

# Green Leasing: Addressing the Split Incentive

Conventional leases often result in a split incentive where owners are responsible for capital costs for energy efficiency and sustainability investments and tenants reap all the benefits through reduced operating expenses and better building performance, or vice versa.

Green leases, also known as high-performance or energy-aligned leases, include lease clauses that effectively break down pervasive barriers in the commercial, industrial, and retail sectors by equitably aligning the costs and benefits of energy and other sustainability investments by landlords, tenants, and real estate teams. With a green lease, landlords and tenants can better work together to save money, conserve resources, and ensure smarter, more efficient operation of buildings. Solutions include:

## A Cost-Recovery Clause

This can allow owners to justify energy-saving improvements that boost overall building performance.

## Amortization

One common form of repayment for capital expenses that an owner can use is amortization, which is a method of spreading out capital expenses for assets over a specific period of time—often the asset's predicted useful life—for accounting and tax purposes. Amortizing capital expenses allows building owners to recoup their capital expenses from tenants, who enjoy the benefits of lower energy bills.

## Savings Pass-through

Landlords can choose to avoid amortization and other payback mechanisms in favor of adopting lease language that simply allows the landlord to recoup all operational savings resulting from energy efficiency improvements, up to the point where the landlord has been repaid for their

original capital expenditures. While the benefits to the landlord are obvious, there is slight additional risk taken on in case improvements or retrofits fail to meet projected savings.

## Energy-Efficient Tenant Build-out

The tenant reserves the right to design its own space, however, by requiring in the lease or building rules that tenants meet basic sustainability guidelines, landlords can commit tenants to making their spaces as high-performing and efficient as core building spaces. For example, a landlord could require that a build-out meets the requirements of a green certification standard, without specifying the need to officially earn such a certification.

## Recommended Resources

### [Green Lease Library](#)

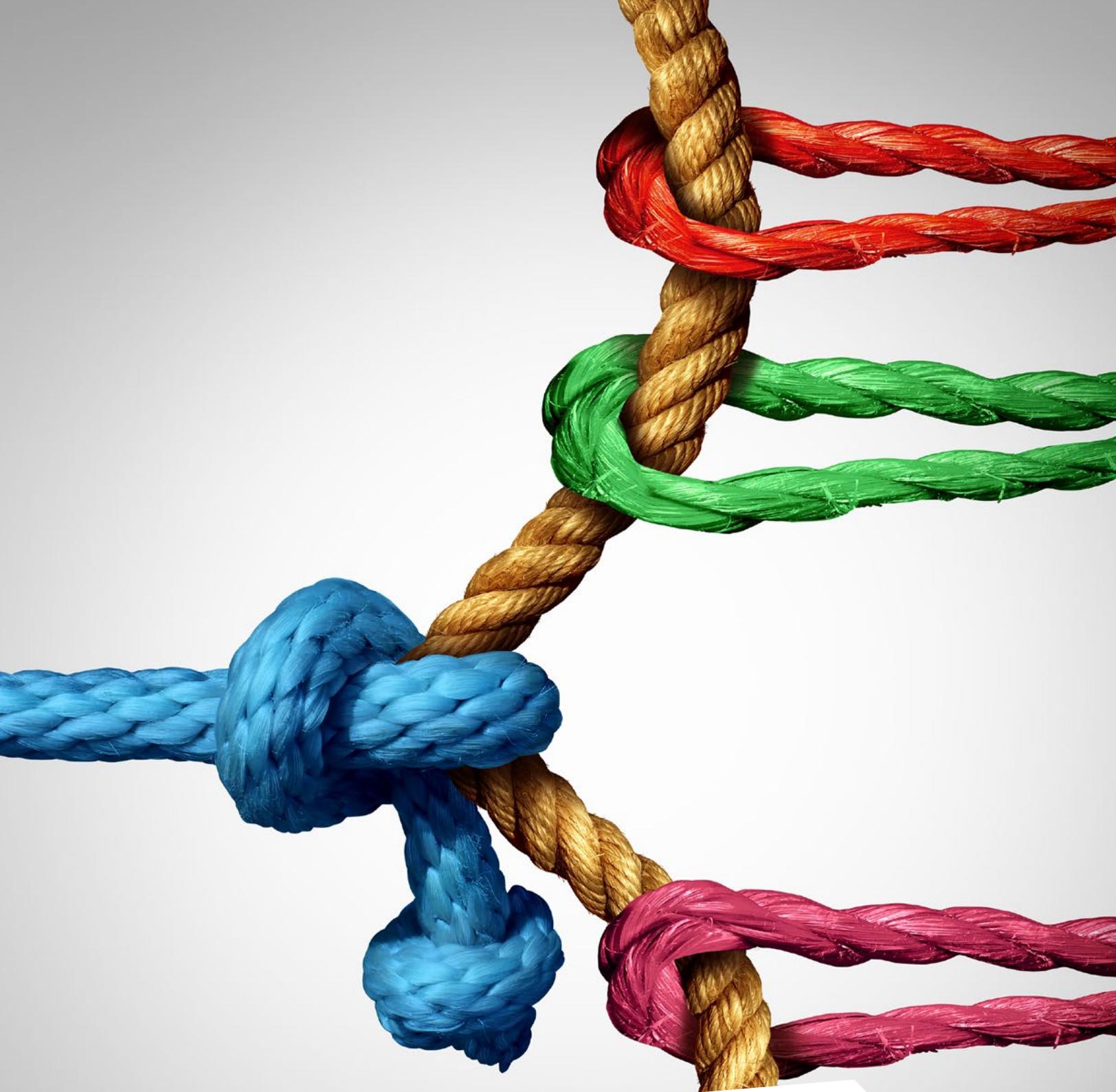
A one-stop-shop for green leasing resources.

### [Tenant Energy Optimization Program](#)

A 10-step process to achieve energy savings in tenant spaces.

### [Green Lease Leaders: Using the Lease to Drive Innovation and Clean Energy](#)

[What's in a Green Lease? Measuring the Potential Impact of Green Leases in the U.S. Office Sector](#)



## Common Barriers

# Common Barriers to Energy Efficiency Across Building Types

A building performance policy has a greater chance for successful implementation if policymakers consider the business side of the real estate industry—that is, not just the building type, like commercial office or multifamily residential, of those structures that may be affected.

The following section describes various building types and their operation and business priorities, and summarizes some existing barriers for making energy efficiency improvements.

Before diving into specific building types, it is important to note that despite differences, some common barriers can be found among most buildings:



**Access to information**

Many owners, property managers, engineers, or tenants lack the knowledge on how to take action to improve energy efficiency or how to plan for it.

There is often a lack of time and resources to gather information about what actions and savings are possible.

Information from a city about energy efficiency improvements is often not received by the correct, decision-making party.



**Investment considerations**

Long-term payback periods for improvements are often not feasible.

More attention is paid to short-term, day-to-day repairs, which makes it difficult to plan for long-term improvements.

Potential changes in ownership affect investment decision making.



**Competing Interests**

There are often competing priorities for capital investment dollars.

There are often competing priorities and interest for the time to plan and execute improvements.



**Perceived Risk**

The building industry is adverse to risk, and new technologies or equipment are often seen as risky.



**Lack of Tenant Demand**

Tenants aren't demanding efficiency, therefore owners are less inclined to take action.



## Commercial Office

An office building is a center for commercial activity, where the primary use is a business workplace. The owner is typically responsible for all maintenance and operational elements. These buildings can be owner-occupied, however, it is more typical that businesses rent these buildings to house their professional workforces.

As commercial buildings are meant to provide comfortable offices that foster productivity, they are more energy intensive due to the heating and cooling needs of the occupants.

### Key Decision Makers

#### Asset or portfolio managers

Asset or portfolio managers are typically charged with the overall operational success of multiple properties. They have the ability to make decisions to finance and implement energy or water efficiency upgrades to buildings. Their major priorities are their bottom line and the impact of improvements to it. In many cases, the asset manager functions similarly to an owner, making the critical decisions about how the buildings are funded and operated.

#### Property managers

Owners of large buildings may employ property managers on their staff, but they often outsource property management responsibilities to third-party property management firms—many of which are large, national firms. Property management teams are the best equipped to identify opportunities for energy improvements and can provide recommendations to building owners and asset managers. A property manager's priority when implementing energy-efficient systems is the impact to their bottom line, ease of maintenance, and a reduction in tenant complaints.

#### Brokers & in-house real estate team

Owners will have a mix of in-house expertise, as well as third-party real estate leasing and sales representation. The tenants will also hire their own representatives to help advise them through the leasing process. Brokers typically negotiate and establish the contract between landlords and tenants, with support from the legal professionals. The lease, if it incorporates green leasing principles, can significantly aid in overcoming the split incentive by aligning the costs and benefits of operational improvements and setting terms that include efficiency and sustainability.

### Recommended Resources

#### [Landlord-Tenant Energy Partnership Efficiency Toolkit](#)

This toolkit gives landlords and tenants essential strategies and key questions to ask to act on energy efficiency.

#### [Energy Efficiency Finance For Commercial Buildings Insights From Lenders](#)

Opportunities to increase the finance of energy efficiency projects for commercial buildings.

### Barriers to Better Energy Performance

A tenant uses energy and pays for its share of utility consumption. The owner can incur two types of costs: operational costs, which can be passed through to the tenants, and capital costs, which are the owner’s expense. Improvements to the building’s structure or systems can be considered capital costs and are typically not able to be passed down to a building’s tenants, even though they are the users of that building. Therefore, energy-saving endeavors, which can be the owners’ costs, benefit the tenants. This is the

split incentive – the one who pays is not the one who sees the benefit. This can occur when a gross lease is present.

### Opportunities for Energy Savings

In a commercial office building, different stakeholders have various abilities to reduce energy usage through a variety of means. There are only a few points of intervention where major upgrades to a building are likely to occur: point of sale, tenant lease up or vacancy, or as part of an annual capital expenditure plan.

An owner can reduce energy usage by addressing the:

- Centralized mechanical and water systems
- Building management system
- Building envelope
- Commissioning of building systems
- Capital expenditure plans: These typically occur annually, in conjunction with operating budgets. While dependent on the accounting calendar, companies can plan budgets during the summer in anticipation of the needs for the following calendar year and will forecast out five years.

A tenant can reduce energy usage by addressing the:

- Lighting
- Plug and process loads
- Submetering
- Operating hours
- Density and use

Owner and tenant teamwork can:

- Implement green leasing practices and principles to align the costs and benefits of high-performance building improvements.



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## Market-Rate Multifamily

COURTESY OF DAVID BAKER ARCHITECTS  
PHOTO BY BRUCE DAMONTE

# Owned Units

Condominiums or cooperatives are owned-unit multifamily buildings, where each unit is individually owned.

An owner is responsible for maintenance and repair within their own unit and pays a homeowner association (HOA) fee each month to cover the maintenance of shared amenities and infrastructure, such as janitorial services or landscaping elements. This fee can also be used to establish reserve funds for larger capital expenses. There will be significant variations in shared resources depending on amenities, common areas, and whether or not the mechanical equipment is a central system such as heating boilers or condenser water for cooling towers, or if each unit has its own separate mechanical or hot water system. Therefore, the ability to reduce or manage energy or water usage depends on the buildings' systems. The differences in building system types and infrastructure will affect how and who can take action, who is responsible, or how to finance improvements to the individual units.

Owned-unit buildings pose challenges to advancing energy efficiency because there needs to be collective action among the multiple owners within one building, with each owner making improvements to their own unit.

## Key Decision Maker

### The homeowner association

In the context of improving building performance, the HOA will have the responsibility to achieve compliance or reduce collective energy consumption on behalf of all unit owners. This type of shared ownership creates many

challenges depending on variations in equipment and infrastructure. Most critically, the HOA is often staffed by owners who typically do not have any relevant experience in making building energy performance improvements. Additionally, it may be difficult to reach a consensus amongst owners for how to gain approvals for any necessary upgrades.

Often times, a building's bylaws will compel an HOA to hire a third-party to manage the building and act as the property manager. This entity can provide services such as accounting and administrative functions but will lack specific technical expertise about building systems. While perhaps not as knowledgeable about the building infrastructure, the property manager might be hired by numerous buildings, and can therefore be a conduit to reach numerous properties. They also typically have day-to-day contact with the building occupants, and can therefore directly connect with the residents. In addition, there are networks of homeowners associations which can be leveraged to connect with multiple properties at once.

## Recommended Resources

### [The Multifamily Energy Savings Project](#)

A compilation of research on best practices for multifamily program design and implementation

## Opportunities for Energy Savings

A unit owner can reduce energy usage by addressing the:

- Individualized mechanical and/or hot water systems
- Lighting
- Plug loads

An HOA can reduce energy usage by addressing the:

- Building common areas (such as the lobby and amenities)
- Building envelope

The property manager can take control of the:

- Operations and maintenance of shared building systems
- Outreach to residents

# Leased Units

Multifamily buildings and complexes lease short-term, typically yearly or monthly, residential units.

Within the rental agreement, the owner of a market-rate multifamily building commonly includes maintenance of the common area, structure, envelope, plumbing, HVAC, in-unit fixtures (oven, refrigerator, light fixtures, etc.), and preventative maintenance of the systems. The tenant is primarily responsible for the care, cleaning, and replacement of some consumables, such as light bulbs.

## Barriers to Better Energy Performance

### Short-term leases

Short-term leases can make engaging with tenants individually on energy usage an ongoing difficult and time-consuming process. Owners also have little control over their tenants' energy use because any action a tenant takes will be voluntary. Often times the energy savings achieved through tenant engagement initiatives do not equal the effort and the effects may not last.

### Cost pass-through

An owner's ability to pass through capital improvement costs to the tenants may be hindered by the terms of the lease, regulatory constraints, or a moral issue.

### Access to units

While an owner may technically be able to access units to install energy-efficient upgrades per the terms of a lease, they may face pushback from tenants who strongly object to this access.

## Recommended Resources

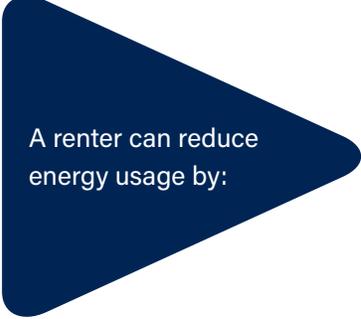
### [Reducing Energy Costs in Rental Housing: The Need and the Potential](#)

This report looks at the energy cost burden on renters and potential solutions

### [Increasing Energy Efficiency in Small Multifamily Properties in the Northeast: Recommendations for Policy Action](#)

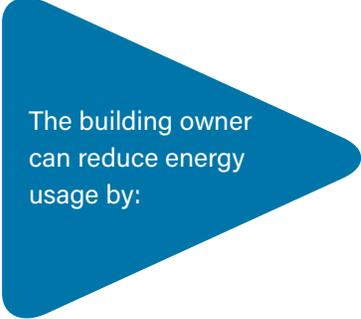
Recommendations for multifamily buildings with 5-20 units

## Opportunities for Energy Savings



A renter can reduce energy usage by:

- Monitoring energy and water consumption within their own unit, however, they may not be aware of their consumption if they do not receive or pay their own utility bill.
- Maintaining awareness of local environmental goals and regulations to understand how their actions impact larger jurisdictional goals.



The building owner can reduce energy usage by:

- Optimizing all building systems and infrastructure. However, an owner may have difficulty gaining complete access, especially for components located inside apartment units. Frequent tenant turnovers provide an ideal time to make capital upgrades in addition to general maintenance and upkeep.
- Engaging with tenants through informational materials and online resources that can be shared repeatedly with new tenants, reducing the administrative burden of recreating materials.



The property manager can:

- Control the operations and maintenance of building systems.
- Use their frequent interactions with tenants and leverage their physical presence within a building to communicate priorities with residents.
- Leverage the knowledge and resources that many large national property management companies have to drive energy savings and actively support city building performance policies and initiatives.



## Affordable Multifamily

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PHOTO BY BRUCE DAMONTE

# Affordable Multifamily

There are two high-level categories of affordable multifamily housing: subsidized and unsubsidized (also known as “naturally occurring”).

Subsidized housing is supported through a series of programs overseen by the U.S. Department of Housing and Urban Development (HUD). The programs target residents at 80% below Area Median Income (AMI). HUD’s common programs include Public Housing, Section 8, and the Low Income Housing Tax Credit program. A multifamily property is considered “naturally occurring” affordable housing if it is affordable for households in low-income neighborhoods. It may also receive the designation due to other market factors such as demand, building age, or quality. This type of building may include tenants with Section 8 Housing Choice Vouchers, but because these subsidies travel with the tenant, the building may not be considered subsidized.

## Barriers to Better Energy Performance

### Utility costs

Who is responsible for the cost of utilities varies widely depending on housing type, level of support, and even age of the building. Newer buildings sometimes include in-unit HVAC systems, which allow tenants to have greater control over their usage. However, older buildings typically include shared heating systems and common water meters. As a result, tenants, who may only pay for in-unit electricity, often lack control over the mechanical systems (and therefore, set-point temperatures) in their units and look for alternate ways to adjust the

temperature. For example, in the winter residents may use space heaters for extra warmth or open their windows to cool down the unit—both major wastes of energy that raise utility costs.

### Competition for capital

Capital for energy efficiency upgrades will compete with, and often lose to, more pressing building needs. In addition, the cost for improvements may not be able to pass through to the tenants via rent increases because it could cause the rates to no longer meet the criteria for being considered affordable.

## Recommended Resources

[Program Design Guide: Energy Efficiency Programs in Multifamily Affordable Housing](#)  
Identifies best practices for policymakers, regulators, and program administrators to help affordable multifamily building owners invest in energy efficiency.

[Public Housing: A Tailored Approach to Energy Retrofits](#)  
Best practices for Public Housing Authorities to integrate energy efficiency in a cost-effective way.

## Opportunities for Energy Savings

### Find co-benefits

Finding ways to couple energy efficiency improvements with high-priority building repairs is the best way to ensure implementation and that every dollar spent gets its maximum value.

Energy efficiency upgrades can provide or be a co-benefit to other building improvements, for example:

- **Upgrades to life safety systems**—a high-priority item—can also be an opportunity to achieve energy savings by making sure the type of equipment or lighting that is installed has a high efficiency rating.
- **Improvements to building accessibility** can be an opportunity to look at whether or not there are occupancy sensors or controls present or if they should be added.
- **Replacing a roof** can be an opportunity to add insulation or seal any leaks.

### Aligning timelines

Subsidized affordable housing typically runs on 15- or 30-year financing cycles. Therefore, any holistic improvements to energy efficiency need to align with that time frame, when the building is able to receive money for capital improvements.

### Provide technical assistance

A city can provide resources to help time-strapped personnel make informed decisions around energy efficiency upgrades. This could be in the form of incentives for audits or educational best practice resources.





## Hospitality and Lodging

# Hospitality and Lodging

Hotels represent a large opportunity for advancing energy efficiency. Barriers to adoption exist due to relationship dynamics in hotels being less clear than other asset classes. On the operator side, there is the building owner, who may be separate from the operator, and a hotel chain that is licensing the hotel chain's brand. On the user/occupant side, there are the hotel guests and facilities such as restaurants, conference centers, or spas that guests and non-guests alike patronize.

The relationship between the operator and building owner is where the energy cost savings and capital deployment become most difficult to influence due to complex lease agreements with longer terms. Hotel leases are also subject to many individual permutations of business agreements that affect the distribution of income and responsibility for capital investment. However, regardless of business arrangements, hotels stand to benefit the most financially from energy efficiency improvements while having negligible impact on customer experience.

## Barriers to Better Energy Performance

- Getting to the right audience
- Complex ownership and lease structures
- Perceived risk of sacrificing guest comfort
- 24/7 operation
- Guest behavior

## Recommended Resources

### [Hotel and Motels](#)

Quick fixes and long term solutions to reduce energy consumption for hotels and motels

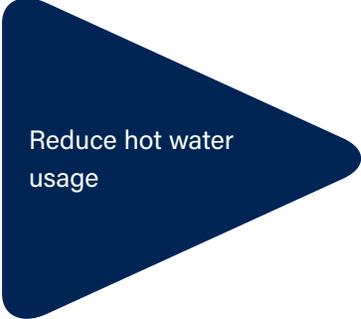
### [Hotels: An Overview of Energy Use and Energy Efficiency Opportunities](#)

Opportunities and messaging energy efficiency to hoteliers

### [Environmental Sustainability in the Hospitality Industry: Best Practices, Guest Participation, and Customer Satisfaction](#)

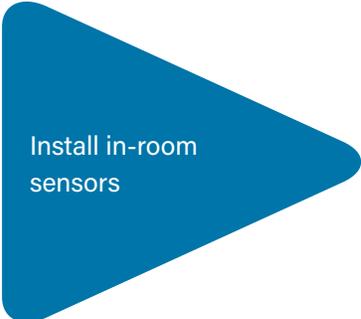
How to integrate energy efficiency and sustainability into hotel operations

## Opportunities for Energy Savings



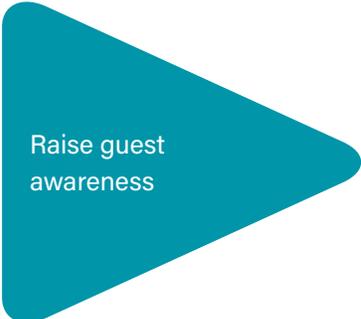
Reduce hot water usage

Hotels use a large amount of hot water for laundry services and guest showers. Reducing hot water needs, such as in housekeeping services, can reduce the energy needed for hot water.



Install in-room sensors

Occupancy sensors in the guest rooms may be able to determine vacancy, and as such, turn off the lights or mechanical system when the room is empty.



Raise guest awareness

Many hotels will now ask guests if they are comfortable reusing linens (which saves energy on hot water for laundry). Providing guests with in-room education might make them more aware of how their behavior affects energy consumption.



Align the priorities of the owner and operator

Lowering energy usage in hotels will likely have additional barriers due to the increased number of internal stakeholders in this asset class. It is important that all parties involved with a hotel are committed to energy efficiency and that the staff working at a hotel are properly trained in what is expected of them. Owners and operators would be well suited to start an open dialogue about the way that improvements can be achieved and how to best comply with regulations.



# Retail

# Retail

Within the retail sector, there are many variables that affect the business arrangement. Many variables affect the business arrangements of retail facilities, including open-air shopping centers, enclosed malls, big box stores, and stand-alone “pad” buildings.

While the end-mercantile use appears similar, the lease agreements, services provided, and associated infrastructure for each require different leasing practices.

## Barriers to Better Energy Performance

The split incentive exists in several different forms for the retail sector. In open-air shopping centers, which are often associated with neighborhood shopping and grocery-anchored centers, the lease type is predominantly triple net with many leases having capital recovery options excluded. This can be a barrier for investing in new equipment in a common area, such as parking lot or garage lights. Additionally, the standard business practice is for the landlord to provide working HVAC systems to the tenant at move in. The tenant will typically be responsible for the utilities their space uses and for the maintenance of their individual equipment. This can lead to a limited opportunity to achieve ROI for installing more efficient equipment. With the operational responsibility transferred to the tenants, the ability for the landlord to control the energy consumption in the tenant space is also limited.

Enclosed shopping malls often have a variation of a gross lease, with the landlord providing HVAC, electricity, and other energy services as part of the rent. Some modifications to the gross lease assign energy costs to the tenants through mathematical or engineering calculations or by submetering spaces. The ability to reconfigure the energy calculations can be done during the lease term, but it is not as straightforward in the shopping mall.

Single-tenant, stand-alone buildings in shopping centers (such as banks or restaurants) or large anchor tenants in enclosed malls (such as a Macy’s or Nordstrom) will often have different

lease language than either scenario described above. The difference in these spaces is because the tenant will often invest in the construction of the building, have more owner-like responsibility, be tied to a longer (10+ year) lease term, and be the decision maker for energy efficiency investments and actions.

## Opportunities for Energy Savings

Regardless of the variations in lease type and split incentives that occur, the retail sector has the opportunity to move past traditional barriers and reduce energy through:

- Operational improvements through HVAC maintenance
- Replacement of HVAC and equipment upgrades
- Controls, timers, and occupancy sensors
- Common area, garage, and interior lighting upgrades

## Recommended Resources

[Retail: An Overview of Energy Use and Energy Efficiency Opportunities](#)  
Energy-efficient opportunities, investments, and messaging strategies

[Managing Energy Costs in Retail Buildings](#)  
Short-term fixes and long term solutions

[Retail Buildings: Assessing and Reducing Plug and Process Loads in Retail Buildings](#)  
Strategy to reduce energy consumption by plug and process loads



Hospitals

→  
EMERGENCY

→ Emergency Patient Parking  
→ Main Entrance  
→ Physician Parking

EMERGE

# Hospitals

## Barriers to Better Energy Performance

Similar to other asset classes, understanding the larger benefits of energy efficiency can get lost in the day-to-day shuffle. It is proven that there is a direct connection between our environment and our health, which should make adopting and investing in energy efficiency and sustainability an easy charge for healthcare facilities to pursue. However, healthcare systems operators are just as concerned about ROI timelines as other building owners. They certainly see the benefits of reduced operating expenses, but might only invest if the payback is within a few years timeframe.

Healthcare facilities tend to be more energy intensive because they are operational 24/7 (i.e., the building systems and lights always stay on); lab equipment is energy intensive (a significant plug load); and ventilation requirements are greater than other typologies. Healthcare facilities have the highest average EUIs (ref. table below) of any building type.

Building Typology	Site EUI (KBTU/Sq.Ft.)
Bank Branch	88.3
College University	84.3
K-12 School	48.5
Supermarket	196
Hospital	243.3
Hotel	63
Multifamily Housing	59.6
Office	52.9
Retail Store	51.1
Non-Refrigerated Warehouse	22.7
Refrigerated Warehouse	84.1

## Key Considerations

### Large healthcare system

Engaging with either or both the facilities directors or engineering directors is the most effective way to understand possible energy savings opportunities within a building or campus, as they manage facility investments and improvements. If those buildings are a part of a large healthcare system, those individuals typically report to senior leadership within a facilities and real estate department who have larger jurisdiction over an entire organization.

### Small healthcare system

For smaller organizations, third party property managers may be hired to manage the property or to advise an in-house facilities team. They may be also be hired when a system is completing a large project or upgrade to oversee that process.

## Opportunities for Energy Savings

Engaging with healthcare systems could be most successful if a city partners with an energy service company (ESCO) to assist with outreach efforts. Since the nature of energy efficiency improvement projects are typical large and require access to capital and management expertise, the ESCO partner would be well versed in discussing the means and methods for deploying energy efficiency to this unique customer type.

## Recommended Resources

### [Business Energy Advisor: Hospitals](#)

Quick fixes and long term solutions to reduce energy consumption in hospitals

### [Healthier Hospitals: Leaner Energy Resources](#)

How-to-guides for those enrolled in their challenge program



## Universities



# Universities

Whether public or private, large or small, universities are microcosms of cities and their facilities that range from office buildings to energy-intensive labs to sports complexes that require a significant amount of energy, water, and resources to operate.

## Barriers to Better Energy Performance

University campuses are comprised of numerous building types - all of which will need to be considered and addressed independently, as the approach to energy savings measures might vary wildly depending on the use, occupancy, and age of a building. Many universities have aging building or infrastructure that may not have been ideally maintained over time, which will make improvements more challenging. Cash-strapped facilities teams and intense bureaucratic structures could make getting financial resources dedicated to energy efficiency challenging.

## Opportunities for Energy Savings

Many schools have a campus master plan and/or sustainability goals. These should be updated to reflect the changing demands of the student body, which are increasingly focused on environmental issues. A recent survey in 2019 by The Princeton Review found that 63% of college applicants would sway their decision

based on a school's commitment to environmental issues. Many schools want to be viewed as forward-thinking, meaning that maintaining and operating high-performance buildings should be a top interest. Research universities can also be testing grounds for new building energy savings technologies, and can foster new relationships between the local community or businesses.

## Recommended Resources

[Zero Energy University Campuses: A 2018 Progress Update on Reaching Campus Energy Goals](#)

Best practices and strategies for university campuses to meet sustainability goals

[Higher Education: Better Buildings](#)

Best practices, as shared by 30 universities



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TRANSFORMATION

[imt.org](http://imt.org)