

**ULI Tenant Energy Optimization Program**

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# Project Initiation Guide: Pre-Lease

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## Project Initiation Guide: Pre-Lease

The Tenant Energy Optimization process is a proven, replicable approach that integrates energy efficiency into tenant space design and construction and delivers excellent financial returns through energy conservation. Choosing high-performance, energy-efficient commercial space begins before tenants even set foot in a building.

This pre-lease guide aims to advise tenants and real estate brokers on the process of selecting energy-efficient spaces to reduce operational costs while improving the work environment. Selecting a space within an already efficient base building will simplify the rest of the process by expanding the list of feasible energy performance measures (EPMs) and increasing the potential for financial return.



Top commercial markets such as New York City are optimal for the scalable Tenant Energy Optimization process. High energy costs and demand for metered utility billing present strong opportunities for economically efficient reductions in energy use. Photo by Timothy Schenck.

**Supply and Demand:  
The Role of the  
Broker, Tenant,  
Building Owner, and  
Consultants**



**Leasing brokers** are influential tenant advisers during the pre-lease phase. If experienced in energy efficiency conversations, brokers can help tenants demand and understand building energy performance information during the site-selection process. Brokers who highlight case studies or examples of work representing tenants in the selection of high-performance spaces may gain additional clients.



**Tenants** create demand for energy-efficient, high-performing space. Tenants also create demand for consultants who can advise them on how to reach their sustainability goals through the design and construction of energy-efficient space. By prioritizing energy-efficient space and working closely with their advisers, tenants can develop better workplaces to attract and motivate employees, attain recognition for sustainability leadership, and manage costs.



**Building owners** supply high-performance buildings that help tenants meet their energy performance and financial goals. Real estate owners can gain competitive advantages by marketing energy-efficient buildings' cost-saving energy and operations improvements to attract high-quality, sophisticated tenants. Tenants may prefer longer lease periods in highly efficient buildings that better align with their corporate environmental and social responsibility goals, provide financial benefits, and add recognition value.



**Consultants (e.g., architects, engineers, project managers, energy consultants, and contractors)** provide the expertise to optimize energy performance and present the technical options and economic case for a comprehensive, cost-effective, and high-performance space while meeting the tenant's schedule and budget. Consultants offering these services may attract additional clients by demonstrating cost savings and other benefits to tenant's business goals.



Selecting a space in a high-performance building is a key step in the Tenant Energy Optimization process.  
Photo by Wendy Fok.

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**Convene a workplace strategy and energy performance optimization workshop.**

Review the 10-step Tenant Energy Optimization process, which provides an overview of energy efficiency best practices during pre-lease, design and construction, and post-occupancy periods.

- Meet with internal facilities teams, the architect, and engineers to define goals and expectations of the space use, layout, and operations to ensure the space is optimized.
- Define the organization's vision, motivation, stakeholders, and commitment to locating in a high-performance building. Collect data through interviews, field observations, and surveys to identify current conditions as well as improvements necessary to optimize space to meet the organization's needs.
- Discuss desired physical conditions of the space and the benefits of separate submetering for energy use, good access to daylight and views, healthy indoor air quality, and up-to-date control systems.
- Outline how the prospective space will be used, and inventory existing equipment and number of workers.
- Discuss general market conditions, location options, and space availability presented by the leasing broker for standard and high-performance buildings.

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**Perform a financial analysis.**

- Collect detailed energy and water performance data on buildings and potential space, and perform a comparative analysis of each space's operating costs.
- Calculate the total cost of occupancy, including the actual total rent and factoring in annual and lease-term operational and maintenance amounts for utilities (base rate and administration fees), HVAC, common area maintenance, cleaning, and after-hours operations charges.
- Deduct amounts for work performed by the building owner and for any energy efficiency tenant improvement allowances.

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**Assess high-performance space feasibility.**

- Walk through the space being considered, and ask to see existing high-performance tenant space, if available. Assess the advantages and disadvantages of existing conditions, the mechanical and electrical systems already in place to support an energy-efficient space, and general cost considerations for new equipment or tie-ins to existing systems.
- Engage a space planner or architect to lay out the basic space in "test fit" plans to optimize space and accommodate a high-performance work environment, maximizing natural daylight (using an open plan or a combination perimeter/open plan), and identifying the location and size of spaces for mechanical cooling and heating equipment.

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**Negotiate lease terms that allow energy efficiency improvements.**

- Include language in the signed lease that will permit upgrades related to energy efficiency and sustainability. Additional resources and standard lease language can be found here:
  - [www.greenleaselibrary.com/](http://www.greenleaselibrary.com/)
  - [www.imt.org/finance-and-real-estate/green-leasing/infographic](http://www.imt.org/finance-and-real-estate/green-leasing/infographic)
- Given that upfront cost is a significant consideration in determining which EPMs will be pursued, structure the lease so that the energy cost savings accrue to whoever pays for the energy conservation measures.

## Selecting an efficient base building:

### Good:

- Building reports ENERGY STAR score
- Ongoing tenant-landlord energy efficiency coordination
- Landlord willing to allow submetered tenant space

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### Better—includes all of Good, plus:

- Building ENERGY STAR score of 75 or higher
- Central building management system (BMS) with tie-in of tenant heating, ventilating, and air conditioning (HVAC) and lighting
- Building energy audit, ongoing commissioning activities, and energy capital projects completed
- Submetered tenant space with energy billed on actual usage

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### Best—includes all of Better, plus:

- Subpanels to measure tenant lighting, HVAC, and plug loads separately
- Tenant energy management program (such as a dashboard)

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## Questions to ask the building owner:

**What is the building's ENERGY STAR score?** The EPA recognizes top-performing buildings that meet or exceed a score of 75. Even if a building has not achieved ENERGY STAR recognition, an owner that tracks and reports the building's score may be more willing to collaborate on energy efficiency efforts than one who does not currently monitor energy performance.

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**Is the space submetered, and is the utility billing structure based on actual use? What is the utility rate and average energy cost per square foot?** A recent study found that submetered spaces save 21 percent in energy compared to spaces without energy-use information.

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**What has the building done to improve and maintain energy efficiency and conservation, and when were the improvements installed?** Buildings with excellent natural daylight, energy-efficient windows and lighting, envelope walls, advanced equipment controls, and efficient HVAC equipment reduce tenant equipment and energy costs.

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**Does the building have resources or programs to help with design, construction, and ongoing management of energy-efficient spaces?** Request from ownership any design and energy efficiency criteria for the buildout of tenant spaces, recommended cost-effective energy measures with financial value analysis, or a building energy model for reference. Owner-provided resources are a starting point for sensible energy strategies and promote a collaborative relationship between the building owner and tenant. An existing energy model will reduce the upfront cost and effort of implementing the process. Experts can help identify opportunities for cost-saving lighting, outlet plug load, and HVAC opportunities throughout the lease term.

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**You've Found Your Space: Now What?**

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**Selecting an energy-efficient tenant space is only the first step in the 10-step Tenant Energy Optimization process.**

The Tenant Energy Optimization process is detailed in an overview and three-part series of resource guides, which advise building owners, tenants, brokers, and service providers seeking to capture the economic, environmental, and competitive advantages of energy-efficient space.



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**Overview**  
**10-Step Tenant Energy Optimization Process**



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**Resource Guide I**  
**Project Initiation Guide: Pre-Lease**



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**Resource Guide II**  
**Energy Value Analysis Guide: Design and Construction**



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**Resource Guide III**  
**Measurement and Verification Guide: Post-Occupancy**

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### **About the Urban Land Institute**

The mission of the Urban Land Institute is to provide leadership in the responsible use of land and in creating and sustaining thriving communities worldwide. Established in 1936, the Institute today has more than 39,000 members worldwide representing the entire spectrum of the land use and development disciplines. ULI relies heavily on the experience of its members. It is through member involvement and information resources that ULI has been able to set standards of excellence in development practice. The Institute has long been recognized as one of the world's most respected and widely quoted sources of objective information on urban planning, growth, and development.

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### **About the Center for Sustainability**

The ULI Center for Sustainability is dedicated to creating healthy, resilient, and high-performance communities around the world. Through the work of ULI's Greenprint Center for Building Performance, the ULI Urban Resilience Program, and other initiatives, the Center advances knowledge and catalyzes adoption of transformative market practices and policies that lead to improved energy performance and portfolio resilience while reducing risks caused by a changing climate.

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## **Acknowledgments**

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### **Case Study Participants**

The foundation of ULI's Tenant Energy Optimization Program is a ten-step process that, when implemented in ten pilot fit-out projects, yielded impressive energy and cost savings. Pilot projects applying this process were carried out in tenant spaces occupied by Bloomberg L.P., Coty Inc., Cushman & Wakefield, Estée Lauder Companies, Global Brands Group, LinkedIn, New York State Energy Research and Development Authority (NYSERDA), Reed Smith LLP, Shutterstock, and TPG Architecture. Case studies documenting their experiences were written to inform tenants, building owners, real estate brokers, project managers, architects, engineers, contractors, and energy consultants.

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### **Project Director**

ULI's Tenant Energy Optimization Program builds on the energy efficiency retrofit project conducted at the Empire State Building under the direction of Wendy Fok, principal of OpDesigned LLC. From 2011 to 2016, Fok led the development of a portfolio of tenant buildouts to create a financial and design template to incorporate energy efficiency in tenant spaces. Fok has been a key contributor to the standards set forth in the Energy Efficiency Improvement Act of 2015 (S. 535), which created the national Tenant Star framework. A registered architect, she received her degree from the University of Texas at Austin with real estate executive education from Harvard Business School.

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