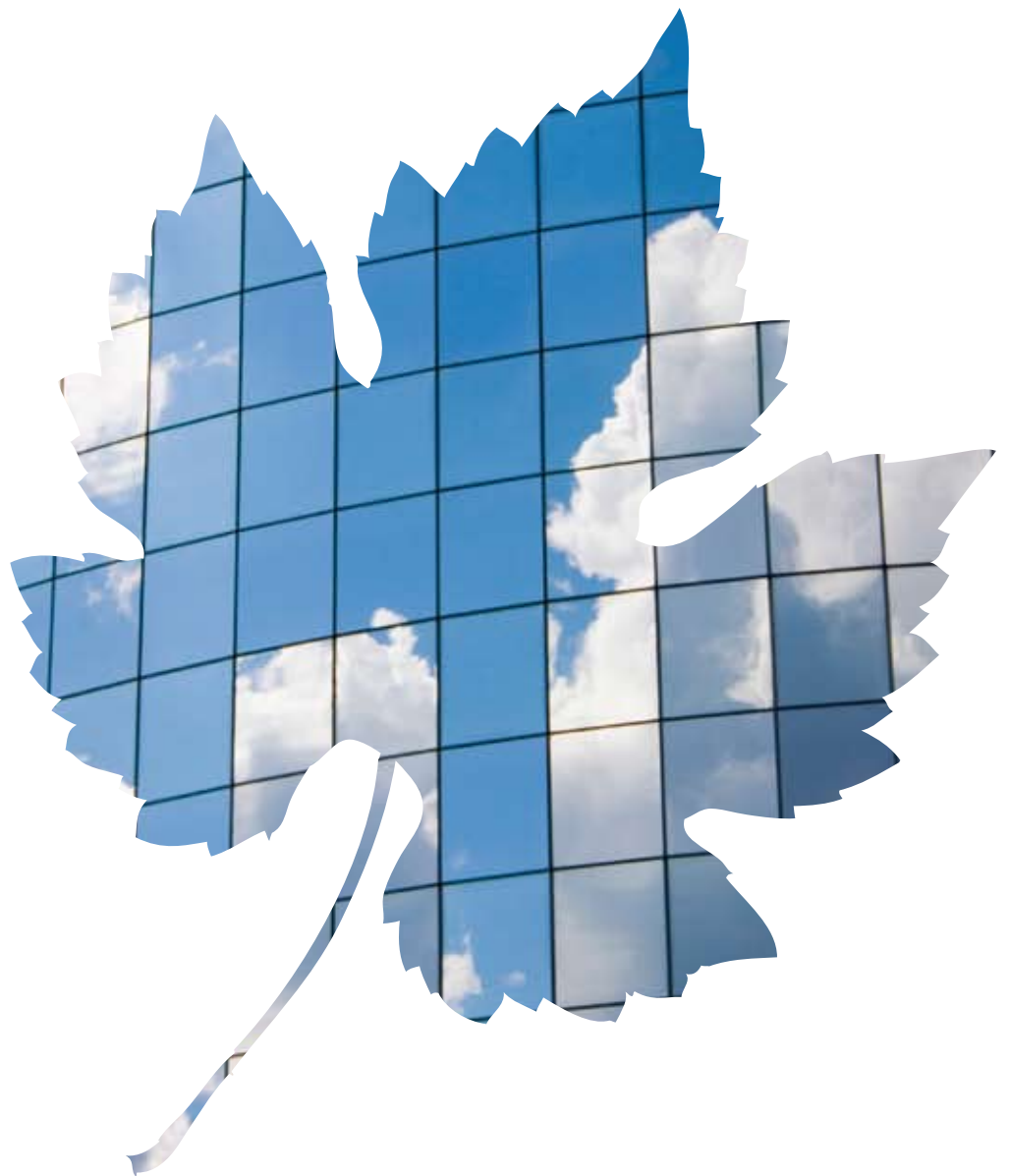




JONES LANG
LASALLE®

Real value in a changing world

Finding green office space



Introduction

Companies everywhere are embracing sustainability programs to reduce their environmental footprint, and real estate can have a big impact in reaching these goals. But when you are looking for office space, how can you determine whether or not a building is green? From pursuing an official green certification to incorporating green operating practices and updating building systems, materials and designs, the owners of existing buildings can make their building more sustainable in any number of ways.

This paper provides an overview of things to consider when you are looking to lease green office space.

Understanding green building standards

Three sustainability rating systems have emerged as standards in the building industry: ENERGY STAR, LEED® and Green Globes. These designations certify that a building has achieved a certain level of sustainability.

LEED (U.S. Green Building Council)

Since its inception in 1998, the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED®) program has established sustainability standards for evaluation of more than 14,000 projects in the U.S. and 40 other nations worldwide. LEED® evaluates everything from new buildings to commercial interiors using a comprehensive evaluation of six interrelated standards covering building site, design, materials, indoor environmental quality, use of resources and sustainable innovations. LEED® awards points for 69 different categories and, based on the final score, awards successful applicants with Certified, Silver, Gold or top-level Platinum ratings.

Occupants can be assured that a building awarded a LEED® certification has achieved a high level of all-around sustainability. Evaluations are made by teams of accredited, independent third-party industry professionals using nationally accepted measurement standards. Applicants prepare using materials including a 500-page technical review. Many building owners hire LEED®-experienced consultants to help prepare either new designs or existing properties for certification. www.usgbc.org

ENERGY STAR

ENERGY STAR was launched in 1992 by the U.S. Environmental Protection Agency and the Department of Energy to rate personal and business products. It has since expanded to cover new and existing commercial buildings. As its name suggests, the program focuses on energy and water consumption.

In the ENERGY STAR evaluation, building owners provide documented information on energy consumption in several areas including the building envelope, lighting, mechanical and controls systems. This information is then rated on a scale of 1-100 using a consistent, government-set standard for comparable facilities as the benchmark. The rating correlates to the building's percentile among national peers. In other words, a score of 50 means that half of similar U.S. buildings consume more energy, and half use less. A building scoring 75 or above can earn the ENERGY STAR label, and about 4,000 buildings now have that distinction and is a trusted "brand" for identifying sustainable buildings. www.energystar.gov

Green Globes

Green Globes was developed in 2004 by the environmental consulting firm ECD in conjunction with the non-profit organization GBI (Green Building Initiative) and BOMA Canada. It is an on-line environmental assessment and rating system for new and existing buildings. The on-line tool is in an easy-to-understand questionnaire format that allows non-experts to assess the sustainability of their buildings and determine ways to improve. As improvements are made, users can update information and track progress. Similar in scope to LEED®, the system rates buildings based on criteria such as energy efficiency, carbon emissions, water conservation, green cleaning products, renewable energy, indoor air quality, use of recycled materials, and other environmental impacts. Owners and managers with multiple properties can also use the Green Globes system to assess and compare the buildings in their portfolio. While LEED® certification may carry greater cachet in the market at this time, Green Globes has now been formally recognized as a credible environmental measurement standard by 14 states and is an easy and inexpensive alternative when LEED® certification is not feasible. www.thegbi.org

When a building achieves one or all of these certifications, it is easy to determine that the building is green. However, many landlords have not pursued these designations, but may be taking steps to make their building more sustainable. We have developed RFP questions and a scorecard to help you quickly and easily evaluate buildings as you look to lease office space.

Building operations and programs

Regardless of any specific agency rating, buildings can reach various levels of "greenness" by adopting internal operations and programs that promote sustainability. Here are some examples of what buildings can do to be more "green".

Alternative transportation

Environmentally responsible commuting is a good way to conserve energy and contribute to environmental sustainability. Buildings can support this effort through programs or policies that encourage tenant employee and visitors to use more efficient commuting, such as:

- Providing shuttle buses or vans to the nearest commuter rail or bus line
- Providing secure bicycle racks, changing facilities and showers for bike-riding commuters
- Providing preferred parking for alternative fuel vehicles or hybrids.
- Coordinating car pooling programs for tenants, include preferred parking for car-pooling vehicles.

Building commissioning

Building commissioning is the process by which a building assures that all systems are performing within specifications. A building may have very efficient systems but, if they are not working as intended, the efficiencies can be greatly diminished. Therefore, a landlord should commit to commission its systems every few (three) years.

A comprehensive commissioning plan includes testing mechanical/electrical/plumbing systems against an operating plan based on building requirements and system specifications. Testing results should be documented and repairs or upgrades implemented, followed by re-testing to verify success in meeting specifications.

Chemicals, noxious and hazardous materials

Landlords should make representations that their buildings will not violate any federal, state or local laws with respect to hazardous materials, including their purchase, storage, use and disposal and will adhere to USGBC guidelines.

The USGBC guideline for reduced mercury in light bulbs requires the mercury content of all mercury-containing light bulbs in the building to average below 100 picograms per lumen hour.

The USGBC also maintains guidelines with respect to products to be used within a building that can affect indoor air quality. These guidelines are very specific, as follows:

- Adhesives and sealants must have a Volatile Organic Compound (VOC) content rating below the limits of the South Coast Air Quality Management District (SCAQMD) Rule #1168, or sealants used as fillers that meet or exceed the requirements of the Bay Area Air Quality Management District Regulation 8, Rule 51
- Paints and coatings must not exceed the VOC and chemical component limits of Green Seals Standard GS-11.
- Carpet must meet the requirements of the CRI Green Label Plus Carpet Testing Program. Carpet cushion must meet the requirements of the CRI Green Label Testing Program.
- No products containing urea-formaldehyde should be used in the building.

Green cleaning

Buildings should establish “green cleaning specifications” for the tenants’ space and/or the common areas of the building.

Green cleaning can cover a number of variables:

- Cleaning products should comply with Green Seal Standard 37. Green Seal is a non-profit organization that identifies and promotes products that cause less toxic pollution and waste, while conserving resources.

- Training of cleaning personnel in the proper use of cleaning products.
- Mandatory walk-off mats at building entrances to reduce contaminants in the building.

Gross versus net lease

A net lease is recommended since it provides the most direct economic incentive to the tenant to employ energy-saving programs and other sustainability efforts. All cost savings realized flow directly to the tenant’s bottom line.

Heat island reduction

One of the ways office buildings have a negative impact on the environment is by creating heat island effect by absorbing and re-emitting solar radiation back into the atmosphere.

USGBC guidelines suggest five ways a building can reduce its heat island effect:

- Use landscaping to shade at least 30% of hard surfaces on the building site, such as roads, sidewalks, plazas and parking lots.
- Place at least 50% of parking capacity underground
- Use open-grid paving systems for at least 50% of parking lot areas.
- Use high-reflective roofing material with a minimum emissive rating of 0.9 in accordance with ASTM 408 on 75% of roof surfaces
- Install a green (i.e. vegetation) roof covering for a minimum of 50% of roof surfaces.

Indoor air quality

A building should try to comply with indoor air quality and thermal comfort standards for its HVAC systems that are well accepted within the building management industry:

- ASHRAE* 55-2004 (Thermal Conditions for Human Occupancy)
- ASHRAE 62.1-2804 (Ventilation for Acceptable Indoor Air Quality)

* American Society of Refrigerating and Air-Conditioning Engineers

Buildings should have policies to minimize or eliminate tobacco smoke. Guidelines recommended by the USGBC include:

- Prohibit smoking in the building
- Locate any exterior smoking areas at least 25 feet from building entries, air intakes or operable windows
- Provide indoor smoking areas that directly exhaust to the outside – 25 feet or more away from entryways or air intakes. Smoking areas should be enclosed with impermeable deck-to-deck partitions and maintain negative air pressure to prevent smoke from escaping to surrounding areas

Landlords should verify that there is no asbestos in their buildings. If there is asbestos, a building should be required to have in place an asbestos management plan that identifies applicable regulations and explains how the building is addressing any asbestos remaining in the building.

Landlords should also verify that there are no Polychlorinated Biphenyls (PCBs) in their building. If there are PCBs, the building should be required to have in place a BPCB management plan that identifies applicable regulations and explains how the building is addressing any PCBs remaining in the building.

A critical measure of indoor air quality is the level of Carbon Dioxide (CO₂) in the building. Buildings should follow USGBC guidelines to measure and control CO₂:

- Provide for CO₂ sensors to compare indoor levels to outdoor ambient levels of CO₂
- Test and calibrate CO₂ sensors at least once every five years to assure accuracy of no less than 75 ppm or 5% of readings
- Assure CO₂ sensor systems take readings every 30 minutes or less
- Configure CO₂ monitoring systems to generate an alarm if CO₂ in any zone rises more than 15% above the corresponding minimum outdoor air rate required by ASHRAE Standard 62.

One way to improve indoor air quality is by introducing outdoor air ventilation into the building. USGBC recommends outdoor air ventilation to all occupied spaces by at least 30% above the minimum required by ASHRAE Standard 62.1-2004.

Indoor air quality can be severely affected during construction in the building (common areas or tenant spaces) since construction can release noxious odors, particulate matter and toxic materials into the building's air circulating system. To minimize this problem, the USGBC recommends that the building have an Indoor Air Quality Management Plan for Construction, including the following requirements:

- During construction, the building should meet or exceed recommended Design Approaches of the Sheet Metal and Air Conditioning National Contractors Association (SMACNA) IAQ Guideline for Occupied Buildings Under Construction, 1995, Chapter 3.
- If air handlers will be used during construction, filtration media must have Minimum Efficiency Reporting Value (MERV) of 8.

To control exposure of building occupants to potentially hazardous particulate contaminants, the building should have filters of MERV 13 or greater in place for all outside air intakes and returns. There should be a regular schedule for maintenance and replacement of these filters.

Light pollution

One objective of the green movement is reducing light trespass which can negatively impact the nocturnal environment.

The USGBC guideline is that less than 5% of light emitted by a building's outdoor lighting should reach the night sky and that the maximum candela value of all interior lighting falls within the building and does not escape through windows or openings.

Ozone protection

The refrigerants used in building's HVAC systems might contain Chlorofluorocarbons (CFCs) or Hydro chlorofluorocarbons (HCFCs). These chemicals cause depletion of the ozone layer when released into the atmosphere. To reduce this potential, the USGBC has established the following guidelines for buildings to follow:

- Use non-CFC and non-HCFC refrigerants only
- If CFC or HCFC refrigerants are used in the building:
 - Reduce annual refrigerant leakage to 5% or less in compliance with EPA Clean Air Act, Title VI, Rule 608 governing refrigerant management and reporting
 - Reduce refrigerant leakage over the remaining life of the system to less than 30% of its refrigerant charge

Recycling programs

The key requirement for a tenant wanting to participate in a recycling effort is that the building offers a recycling infrastructure the tenant can use. This entails the following elements:

- Separate collection receptacles or areas for:
 - Paper
 - Glass
 - Aluminum
 - Plastics
 - Metals
 - Batteries
 - Fluorescent light bulbs
- Separate recycling waste pick-up by the building cleaning staff.
- Separate recycling waste disposal by the building's waste hauler.

Separate utility metering

Depending on the physical configuration of the building, landlords should provide separate utilities meters for each tenant's space. This can help tenants maximize the economic impact of any energy and/or sustainability improvements they can realize under their own control.

Water efficiency

The basic standard for water efficiency is the Energy Policy Act of 1992 which defines efficient flow rates for plumbing fixtures such as faucets, toilets and urinals. The USGBC guideline is that a building calculates a “baseline” potable water flow target for the entire building, assuming every fixture in the building complies with the Energy Policy Act of 1992, times 120%.

Buildings should meet or exceed this guideline within a specified period of time. There are a variety of measures a building can follow to comply:

- Institute a program to replace fixtures with compliant fixtures
- Limit the use of potable water for landscaping irrigation
- Capture and re-use rainwater or “gray water” as a replacement for potable water for such uses as irrigation or flushing toilets.

Jones Lang LaSalle offers comprehensive energy and sustainability services to help you develop and implement sustainability programs to meet your goals, reduce costs and add measurable value to organization.

Property services

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 - LEED® Gap assessments
 - Sustainability and energy assessments
- Energy or sustainability consulting
- Energy project management
- LEED® services for new construction, commercial interiors and existing buildings
 - LEED® certification management
 - LEED® construction and project management
- Retro-commissioning service

Portfolio services

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- Alternative energy–site studies
- Brownfield disposition and redevelopment
- Carbon emission reduction strategy
- Corporate reporting/governance
- Employee engagement
- Employee sustainability training
- Portfolio and occupancy strategies
- Site selection/location advisory
- Sustainability program management
- Sustainable workplace strategy

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