

A PRACTICAL GUIDE TO SAN FRANCISCO'S GREEN BUILDING ORDINANCE

San Francisco's new Green Building Requirements Ordinance ("Ordinance") went into effect on November 3, 2008.¹ It affects most new construction projects, as well as some first-time commercial interior buildouts and some major alterations to existing buildings. For many projects that fall within the scope of the Ordinance, by the time the Ordinance is fully implemented in 2012, the decision to achieve LEED certification or a LEED rating will no longer be discretionary—it will be mandatory. Here is what you need to know as a property owner, manager, developer or tenant.

The Ordinance divides projects into the following categories: Large Commercial, Mid-Size Commercial, High-Rise Residential, Mid-Size Residential, Small Residential, New Large Commercial Interiors and Major Alterations to Existing Buildings.² The most stringent requirements apply to commercial projects over 25,000 square feet (Large Commercial Buildings).

Exemptions from the Ordinance are limited -- only buildings owned or leased by the City and County of San Francisco and subject to Article 7 of the San Francisco Environment Code, and new construction and existing building renovations where the primary use would be laboratory use, are automatically exempted. In addition, the Ordinance provides for an exemption process, at the discretion of the Director of the Department of Building Inspection ("DBI"), based on infeasibility, hardship or impairment to the integrity of an historic structure. The Ordinance also includes provisions to discourage demolition of existing buildings and provides incentives for retention of historic resources.³

¹ The legislation's stated intention is to further the City's Climate Action Plan goal to reduce San Francisco's greenhouse gas emissions to 20% below 1990 levels by 2012. Under the Ordinance, many projects in the City will be required to reach an unprecedented level of "green building" certification under the U.S. Green Building Council's LEED®/Leadership in Energy and Environmental Design system (for commercial and high rise residential projects), Build It Green's GreenPoint Rated system (for residential development), or an equivalent system (as approved by the Director of DBI). The Ordinance is codified as San Francisco Building Code Chapter 13C.

² For purposes of the Ordinance, "commercial" refers to buildings or portions thereof of Group B and M occupancies, and "residential" refers to buildings of Group R occupancy.

³ Also, buildings that are qualified to use the California Historical Building Code may, upon approval by DBI, apply the provisions of that code instead of the Ordinance.

The Ordinance has been discussed for some time at public hearings and in the press, and the basic provisions are familiar to many in the real estate industry. However, there are many novel aspects of the Ordinance. For example:

- Many property owners will likely be surprised to learn about the substantial requirements that are triggered by renovation work.
- While most property owners and developers are familiar with the LEED rating system, the Ordinance also utilizes the Build It Green "GreenPoint Rated" program, which is a third-party certification program focusing on smaller residential buildings.
- Many may be surprised by the scope of the Ordinance. It applies to a wide range of construction and operation activities such as recycling and composting, stormwater management, water efficient landscaping, water use reduction, construction debris management, "commissioning" (discussed below), and renewable energy (including a requirement to provide on-site renewable energy or purchase green energy credits).
- As always, "the devil is in the details," and DBI is just beginning the process of implementing the Ordinance and issuing interpretations to address the inevitable areas of confusion.

This article summarizes the Ordinance's basic requirements and provides links to useful resources for more detailed information.

WHEN DOES THE ORDINANCE APPLY AND WHAT MUST AN APPLICANT SUBMIT?

The requirements are determined based on the date that a building or site permit application is submitted to DBI. Project sponsors must establish compliance at various points in the DBI approval process.

Initial submittals for all projects must include a "Green Building Submittal" form that indicates, among other things, whether the sponsor will verify compliance with the Ordinance by third-party certification under the LEED or GreenPoint Rated systems. If the project will not be third-party certified under LEED or GreenPoint, the form must include a certification from a qualified "Green Building Compliance Professional" that the project will meet the requirements of the Ordinance.⁴ Site permit applications that do not contain a complete set of construction details must explain the specific green building requirements that the project proposes to meet, and indicate which later submittal will provide compliance details for each required performance measure or credit.⁵

⁴ A "Green Building Compliance Professional" is a licensed or registered architect with specialized understanding and experience in green building standards and technologies.

⁵ While not specified in the Ordinance, according to DBI's Administrative Bulletin implementing the Ordinance (http://www.sfgov.org/site/uploadedfiles/dbi/downloads/AB_093.pdf) ("Bulletin

WHAT ARE THE CATEGORIES AND REQUIREMENTS BY TYPE OF PROJECT?

The performance standards and timeline for each category of project are summarized below. Requirements are cumulative. For example, when a building permit application is submitted for a New Large Commercial Building on or after January 1, 2009, then the building must be LEED Silver or the equivalent and meet the other requirements that are listed as applicable as of November 3, 2008. Additional requirements apply where a building was demolished on the project site within the previous five years.

The benchmark LEED or GreenPoint Rated performance standards⁶ are, as applicable: LEED for Commercial Interiors (June 2005), LEED for Core and Shell (July 2006), LEED for New Construction (July 2007), and GreenPoint Rated (March 2007). Where GreenPoint Rated certification or GreenPoints are required, the project must meet all LEED for New Construction prerequisites.⁷ In addition to any applicable overall LEED and/or GreenPoint certification/rating requirement (e.g., LEED Certified, LEED Silver, LEED Gold), the Ordinance requires many projects to achieve specific LEED credits. Project sponsors may be permitted to meet these performance requirements through an equivalent, non-LEED method, if approved by DBI. These performance standards include "commissioning," water efficient landscaping, water use reduction, diversion of construction debris, renewable energy, storm water management, use of low-emitting materials and use of salvaged/recycled materials.

▪ **New Large Commercial Buildings**

Under the Ordinance, a Large Commercial Building is a commercial building or addition that is 25,000 gross square feet or more in size, or that is a high-rise building as defined by the Building Code (e.g., over 75 feet in height).

✓ **November 3, 2008**

- LEED Rating/Certification: Building must achieve LEED Certified rating or the equivalent.
- Water Efficient Landscaping: Building must achieve at least 50% reduction in use of potable water for landscaping or a DBI-approved equivalent, based on LEED WE1.1.
- Water Use Reduction: Building must achieve at least a 20% reduction of potable water use, based on LEED WE3.1.

AB-093"), for mixed use buildings containing any combination of covered residential and commercial occupancy, the project sponsor may select a single occupancy classification to determine which standards apply to the entire building.

⁶ See the definitions and references at the end of this article for more detailed information about these standards.

⁷ Later versions may be used as long as the credits or points achieved are at least as stringent as the benchmark standards.

- Stormwater Management: Project must comply with SFPUC Best Management Practices and Stormwater Design Guidelines and, as applicable, LEED SS6.1 and SS6.2.
- Construction Debris Management: Project must divert at least 75% of construction debris, based on LEED MR2.2.
- Energy: Fundamental Commissioning required, based on LEED EAp1.

✓ **January 1, 2009**

- LEED Rating/Certification: LEED Silver, or the equivalent.

✓ **January 1, 2010**

- Commissioning: Enhanced Commissioning required, based on LEED EA3.

✓ **January 1, 2011**

- Water Use Reduction: Building must achieve at least 30% reduction in potable water use, based on LEED WE3.2.

✓ **January 1, 2012**

- LEED Rating/Certification: LEED Gold, or the equivalent.
- Energy: Building must have renewable on-site energy or purchase renewable energy credits, based on LEED EA2 or EA6.

▪ **New Mid-Size Commercial Buildings**

A Mid-Size Commercial Building is a commercial building that is between 5,000 and 25,000 gross square feet, and is not a high-rise building.

✓ **November 3, 2008**

- LEED Rating/Certification: No certification required; must submit LEED checklist, or the equivalent.
- Stormwater Management: Project must comply with SFPUC Stormwater Design Guidelines and Best Management Practices and, as applicable, LEED SS6.1 and SS6.2.

✓ **January 1, 2009**

- Commissioning: Fundamental Commissioning required, based on LEED EAp1.

- Water Efficient Landscaping: Minimum 50% reduction in use of potable water for landscaping, based on LEED WE1.1.
- Water Use Reduction: Minimum 20% reduction in potable water use, based on LEED WE3.1.
- Construction Debris Management: Project must divert at least 75% of construction debris, based on LEED MR 2.2.

✓ **January 1, 2011**

- Commissioning: Enhanced Commissioning required, based on LEED EA3.
- Water Use Reduction: Minimum 30% reduction in potable water use, based on LEED WE3.2.

✓ **January 1, 2012**

- Renewable Energy: Building must use renewable on-site energy or purchase renewable energy, based on LEED EA2 or EA6.

▪ **New Large Commercial Interiors and Major Alterations to Existing Commercial and Residential Buildings**

"New Large Commercial Interiors" are defined as first-time tenant improvements where areas of such construction are 25,000 gross square feet or more in commercial occupancy areas of existing buildings. "Major Alterations" are alterations to existing buildings where interior finishes are removed and significant upgrades are made to structural and mechanical, electrical, and/or plumbing systems, where areas of such construction are 25,000 gross square feet or more in commercial or residential occupancy areas of existing buildings. (DBI defines a "significant structural upgrade" as a structural alteration taking place in thirty percent or more of the area of proposed construction.) The timeline and requirements for these two types of projects are substantively the same and are summarized together.

✓ **November 3, 2008**

- LEED Rating/Certification: Project must be LEED Certified, or the equivalent.
- Low-emitting materials: As applicable, project must use low-emitting materials, based on LEED IEQ4.1, IEQ4.2, and IEQ4.3.

✓ **January 1, 2009**

- LEED Rating/Certification: LEED Silver or equivalent.

✓ **January 1, 2012**

- LEED Rating/Certification: LEED Gold or equivalent.

▪ **New High-Rise Residential Buildings**

"High-Rise Residential Buildings" are residential buildings that meet the Building Code's definition of a high-rise building (e.g., buildings greater than 75 feet in height to the highest occupied floor and that have at least five dwelling units).

✓ **November 3, 2008**

- LEED or GreenPoint Rating/Certification: Building must either be LEED Certified, GreenPoint Rated with a minimum of 50 GreenPoints, or the equivalent.
- Water efficient landscaping: Minimum 50% reduction in use of potable water for landscaping, based on LEED WE1.1.
- Water use reduction: Minimum 20% reduction in potable water use, based on LEED WE3.1.
- Stormwater management: Project must comply with SFPUC Stormwater Design Guidelines, and, as applicable, LEED SS6.1 and SS6.2.

✓ **January 1, 2010**

- LEED or GreenPoint Rating/Certification: LEED Silver certification, GreenPoint Rated with a minimum of 75 GreenPoints, or the equivalent.

✓ **January 1, 2011**

- Water use reduction: Minimum 30% reduction in potable water use, based on LEED WE3.2.

▪ **New Mid-Size Residential Buildings**

"Mid-Size Residential Buildings" are defined as residential buildings that have five or more dwelling units and are not high-rise buildings. LEED ratings do not apply to this type of project.

✓ **November 3, 2008**

- GreenPoint Rating/Certification: No specific GreenPoints level required; must submit GreenPoint multi-family construction checklist, or the equivalent.

- Stormwater management: Project must comply with SFPUC Stormwater Design Guidelines, and, as applicable, LEED SS6.1 and SS6.2.

✓ **January 1, 2009**

- GreenPoint Rating/Certification: Submit GreenPoint multi-family construction checklist; minimum 25 GreenPoints required.

✓ **January 1, 2010**

- GreenPoint Rating/Certification: Project must be GreenPoint Rated with at least 50 GreenPoints.

✓ **January 1, 2010**

- GreenPoint Rating/Certification: Project must be GreenPoint Rated with at least 75 GreenPoints.

▪ **New Small Residential Buildings**

"Small Residential Buildings" have four or fewer units and are not high-rise buildings. The LEED rating/certification system does not apply to this type of project.

✓ **November 3, 2008**

- GreenPoint Rating/Certification: No specific GreenPoint level required; must submit GreenPoint new home construction checklist or an equivalent.
- Stormwater management: Project must comply with SFPUC Stormwater Design Guidelines, if applicable.

✓ **January 1, 2009**

- GreenPoint Rating/Certification: Submit GreenPoint new home construction checklist; minimum 25 GreenPoints required.

✓ **January 1, 2010**

- GreenPoint Rating/Certification: Project must be GreenPoint Rated with a minimum of 50 GreenPoints.

✓ **January 1, 2012**

- GreenPoint Rating/Certification: Project must be GreenPoint Rated with a minimum of 75 GreenPoints.

WHAT ARE THE REQUIREMENTS FOR DEMOLITION OF AN EXISTING BUILDING?

Additional requirements apply to projects proposed within five years after the demolition of a building on the project site, when the demolition occurred after the effective date of the Ordinance. The additional requirements vary depending on the type of project proposed, and also on whether the demolished building was an historic resource under the California Environmental Quality Act.

- **All Project Types Other Than Mid-Size Commercial Buildings**

Following are the basic requirements applicable to all cases of demolition, except Mid-Size Commercial Buildings. The heaviest demolition penalty applies to projects where the demolished building was determined to be an historic resource. In such cases, where the proposed project is required to attain a LEED certification or the equivalent, the project must attain additional LEED points equal to 10% of the total number of points available in the required LEED system. Where the proposed project would be GreenPoint Rated, 25 additional GreenPoints must be achieved. For projects using alternative green building rating systems per approval of the Director of DBI, the Director will determine increased requirements on a case-by-case basis.

In cases where the demolished building was not an historic resource, the penalty for demolition varies depending on the density of the proposed project compared with the density of the demolished building. Additional requirements decrease as the occupant loads of the commercial portion of the new structure (calculated per Building Code Section 1004) and/or the number of dwellings in the new structure increase in comparison with the demolished building. For shorthand purposes, we refer to those increases as increases in density. Again, increased requirements for projects using equivalent rating systems will be approved by the DBI Director on a case-by-case basis.

Where the new density is less than three times greater than the demolished building:

- Where LEED rating/certification is attained: The required number of LEED points is increased by 10% of the total number of LEED points that would otherwise be required.
- GreenPoint Rated projects: Project must achieve an additional 20 GreenPoints over the otherwise applicable requirement.

Where the new density is three to four times greater than that of the demolished building:

- Where LEED rating/certification is attained: The required number of LEED points is increased by 8% of the total number of LEED points that would otherwise be required.

- GreenPoint Rated projects: Project must achieve an additional 17 GreenPoints over the otherwise applicable requirement.

Where the proposed project's density is at least four times greater than the demolished building:

- Where LEED certification is attained: The required number of LEED points is increased by 6% of the total number of LEED points that would otherwise be required.
- GreenPoint Rated projects: Project must achieve an additional 15 GreenPoints over the otherwise applicable requirement.

▪ **Demolition Penalties for Mid-Size Commercial Buildings**

The demolition penalty applicable to Mid-Size Commercial Buildings differs from the demolition penalty applicable to other types of projects, as summarized below.

Demolished building was not an historic resource.

- **Effective January 1, 2009:** Achieve Fundamental Building Commissioning (LEED EA1); reduce potable water use in landscaping by 50% (LEED WE1.1); reduce potable water use by 30% (LEED WE3.2); divert 75% of construction debris (LEED MR2.2).
- **January 1, 2010:** Achieve Enhanced Commissioning (LEED EA3).
- **January 1, 2011:** Generate at least 2.5% of electricity through on-site renewable energy (per LEED EA2), or purchase renewable energy credits for 35% of electricity needs for 2 years (per LEED EA6).
- **January 1, 2012:** Obtain one additional point under LEED MR3, MR4, MR5, MR6, or MR7.

Demolished building was an historic resource.

- **Effective January 1, 2009:** In addition to requirements applicable where the demolished building was not an historic resource (see above), project must obtain one additional point under LEED MR3, MR4, MR5, MR6, or MR7.
- **As of January 1, 2012:** In addition to requirements applicable where the demolished building was not an historic resource (see above), project must obtain two additional points under LEED MR3, MR4, MR5, MR6, or MR7.

WHAT OTHER REQUIREMENTS APPLY TO HISTORIC STRUCTURES?

For alterations to buildings determined to be historic resources, projects may obtain credit toward satisfying Ordinance requirements by retaining and reusing or restoring certain character-defining features, such as specified windows, exterior doors, and other features. The number of points that will be granted as credits varies depending on the type of feature that is retained.

For buildings that are qualified to use the California Historical Building Code, project sponsors may qualify to apply the alternate provisions of that code in lieu of the Ordinance, upon approval by DBI.

HOW IS THE ORDINANCE ENFORCED?

Verification of compliance with the Ordinance requires the sponsor to submit to DBI final LEED or GreenPoint Rated certification, or to submit a specified statement of compliance signed by the Green Building Compliance Professional of Record. DBI may issue a Temporary Certificate of Occupancy pending final compliance certification, but Final Certificate of Completion and Occupancy will not be issued until the verification requirement(s) are reviewed and accepted by DBI. DBI may use all of the enforcement and abatement remedies in the San Francisco Building Code to ensure compliance with the Ordinance.

DEFINITIONS:

- **Commissioning of Building Systems:** "Commissioning" is a process to verify that a building meets its sustainability-related design intent and requirements. Where the Ordinance requires Fundamental Commissioning, the specified LEED standard is Energy and Atmosphere Prerequisite 1 ("EAp1"), which addresses functioning of HVAC, refrigeration, domestic hot water, any renewable energy, and lighting systems and controls. Where Enhanced Commissioning is required, the specified LEED standard is Energy and Atmosphere Credit 3 ("EA3"), which requires certain additional commissioning process activities in addition to the requirements of EAp1.
- **Water Efficient Landscaping:** Where the Ordinance requires a percentage reduction in use of potable water for landscaping, the specified LEED standard is Water Efficiency Credit 1.1 ("WE1.1"), which bases the required reduction in water usage on a LEED-specified midsummer baseline case.
- **Water Use Reduction:** Where the Ordinance requires a percentage reduction in potable water use, the specified LEED standards are LEED Water Efficiency credit 3.1 ("WE3.1") where a 20% reduction is required, and Water Efficiency Credit 3.2 ("WE3.2") where a 30% reduction is required. As with Water Efficient Landscaping, the percentage reduction is from a midsummer baseline case that is calculated per LEED requirements.
- **Diversion of Construction Debris:** "Diversion" refers to reuse or recycling of construction waste instead of landfill or similar disposal. Where diversion is

required, the specified LEED standard is Materials and Resources Credit 2.2 ("MR2.2").

- Renewable Energy: Where the Ordinance requires use of renewable on-site energy or purchase of renewable energy credits, the specified standards are LEED Energy and Atmosphere Credit 2 ("EA2") for on-site renewable energy, and Energy and Atmosphere Credit 6 ("EA6") for renewable energy purchase.
- Stormwater Management: New construction projects that fall within the scope of the Ordinance must meet or exceed the applicable LEED standards under Stormwater Design Credit 6.1 ("SS6.1") for stormwater quantity control and Stormwater Design Credit 6.2 ("SS6.2") for stormwater quality control. Compliance with these standards is required in addition to compliance with the SFPUC Best Management Practices and Stormwater Design Guidelines.
- Use of Low-Emitting Materials: For new commercial interiors and major alterations, the Ordinance requires use of, where applicable, low-emitting adhesives, sealants, paints, coatings, and carpets. "Low-emitting materials" have limited emissions of volatile organic compounds. Where relevant, the specified standards are LEED Indoor Environmental Quality Credits 4.1 ("IEQ4.1"), 4.2 ("IEQ4.2"), 4.3 ("IEQ4.3"), and 4.4 ("IEQ4.4").
- Use of salvaged, recycled content, regionally produced, renewable, and certified wood materials: For some projects involving demolition of an existing building, the Ordinance requires achievement of one or more additional credits under the following LEED Materials and Resources Credits or the equivalent: MR3 for use of salvaged materials ("MR3"), MR4 for use of materials with recycled content ("MR4"), MR5 for use of local and regionally harvested and manufactured materials ("MR5"), MR6 for use of annually and rapidly renewable materials ("MR6"), and/or MR7 for use of certified wood ("MR7").

REFERENCES:

DBI Administrative Bulletin AB-093:

http://www.sfgov.org/site/uploadedfiles/dbi/downloads/AB_093.pdf

Green Building Ordinance: <http://sfgov.org/site/uploadedfiles/bdsupvrs/ordinances08/o0180-08.pdf>

Build It Green: <http://www.builditgreen.org>

U.S. Green Building Council: <http://www.usgbc.org>

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