

building a green los angeles

FRAMEWORK FOR THE CITY'S GREEN BUILDING PROGRAM

why build green?

In May 2007 Mayor Antonio Villaraigosa issued a Climate Action Plan (Plan) to reduce greenhouse gas emissions 35% below 1990 levels by 2030. Greenhouse gas emissions, which include carbon dioxide (CO₂), are now globally recognized as the leading contributor to the dangers of global warming.

The Plan, initiated by the City Council motion and the Mayor's direction to department heads, identifies how the City will achieve the new goals. Specifically referenced is the importance of reducing the environmental impact of buildings.

Buildings consume up to two-thirds of the City's electricity. In addition, they use a significant fraction of water and other natural resources, as well as contribute 12% of landfill waste. The electrical demand of buildings constitutes over 32% of the city's annual carbon dioxide emissions of 52 million metric tonnes. Given that the City permits thousands of new construction and remodel building projects per year, improvements to building layout, design and material selection, combined with the installation of more efficient fixtures, appliances, and heating and cooling systems could contribute to significant savings of electricity, gas, and water consumption and a reduction in the quantity of solid waste leading to our landfills.

The Program addresses five key areas:

- > **SITE-LOCATION** – SITE PLANNING, LANDSCAPING, STORMWATER MANAGEMENT, CONSTRUCTION & DEMOLITION RECYCLING
- > **WATER EFFICIENCY** – EFFICIENT FIXTURES, WASTEWATER REUSE, EFFICIENT IRRIGATION
- > **ENERGY & ATMOSPHERE** – ENERGY EFFICIENCY, CLEAN/RENEWABLE ENERGY
- > **MATERIALS & RESOURCES** – MATERIALS REUSE, EFFICIENT BUILDING SYSTEMS, USE OF RECYCLED & RAPIDLY RENEWABLE MATERIALS
- > **INDOOR ENVIRONMENTAL QUALITY** – IMPROVED INDOOR AIR QUALITY, INCREASED NATURAL DAYLIGHTING & IMPROVED THERMAL COMFORT/CONTROL



what is the green building program?

SUMMARY

The Program establishes three main components: the Green Building Team, the Standard of Sustainability, and the Standard of Sustainable Excellence. The Program was approved by the City Council and signed by the Mayor on Earth Day, April 22, 2008.

GREEN BUILDING TEAM

The City recognizes that green building is an emerging and evolving field and therefore relatively unfamiliar to many in the building design and construction industries. Therefore, the Program establishes the Green Building Team to hold public meetings and address technical issues, to review and suggest modifications to the Los Angeles Municipal Code, to oversee the Standards of Sustainability and Sustainable Excellence, and to establish and maintain city staff education and an educational public outreach program. In addition, the Team will provide an annual Green Building Report Card.

STANDARD OF SUSTAINABILITY (MANDATORY FOR LARGE PROJECTS)

Threshold: The Standard of Sustainability establishes a requirement for non-residential projects at or above 50,000sf of floor area, high-rise residential (above six stories) projects at or above 50,000sf of floor area, or low-rise residential (six stories or less) of 50 or more dwelling units within buildings of at least 50,000sf of floor area to meet the intent of the Leadership in Energy and Environmental Design® (LEED®) Certified level. The Standard also applies to existing buildings that meet the minimum thresholds described above when redevelopment construction costs exceed a valuation of 50% of the existing building's replacement cost.

Requirement: The project must include a LEED® Accredited Professional (LEED® AP) on the project team, and demonstrate that the project has met the intent of the US Green Building Council's (USGBC) LEED® Certified level. Formal certification by the USGBC is not required. The Standard for non-residential/high-rise residential projects will be effective on November 1, 2008. The Standard will apply to low-rise residential projects on May 1, 2009.

STANDARD OF SUSTAINABLE EXCELLENCE (VOLUNTARY FOR PROJECTS OF ANY SIZE - LARGE AND SMALL)

Threshold: The Standard of Sustainable Excellence establishes an incentive program for projects that register with the USGBC's LEED® program, contract with a LEED® AP, and can demonstrate how the project will achieve LEED® certification at a Silver or higher level.

Incentives: The ordinance will establish expedited service within the Department of City Planning and the Bureau of Engineering. Other incentives already in place, including those from the Department of Water and Power and the Department of Building and Safety, remain unchanged.



green building team

The Green Building Team will be chaired by the Mayor's Office and include representation from the Office of the Chief Legislative Analyst, Council President, and chairs of the Planning and Land Use Management Committee and Energy and Environment Committee, as well as the departments of Building and Safety, City Planning, Community Redevelopment Agency, Environmental Affairs, Fire, Housing, Public Works, and Water and Power. The Team shall also include members from a variety of other municipal agencies and utilities as issues warrant.

The Team shall hold monthly public meetings to discuss issues and challenges pertinent to green building as well as specific project innovations. This could include suggested new or revised codes, new technologies or materials, or departmental conflicts. The Team will hold its public meetings on the first Wednesday of each month. The meetings will be held at 3pm in City Hall East, Room 350.

TECHNICAL ISSUES

The Team shall serve as a clearinghouse of city expertise on issues related to green building. The Team shall provide staff with clarifications to technical issues related to green building construction.

LOS ANGELES MUNICIPAL CODE

The Team shall review and suggest modifications on an on-going basis to remove obstacles to green building. These code changes will require a separate outreach and approval process.

STANDARD OF SUSTAINABILITY

Every two years the Team shall recommend any necessary adjustments to the Program's thresholds.

STANDARD OF SUSTAINABLE EXCELLENCE

The Team shall review annually the package of incentives and their effectiveness in encouraging projects to pursue Sustainable Excellence.

STAFF EDUCATION

The Team shall develop education protocol to be utilized by all of the departments represented on the Team.

PUBLIC OUTREACH

The Team shall develop and maintain a public outreach program for, but not limited to, architects, engineers, developers, land use attorneys, contractors, builders, employers, and City residents.

ANNUAL REPORT CARD

The Team shall produce an annual report card that will recognize exemplary projects and innovations as well as reference overall Program achievements, concerns and impediments. The first Report Card will be issued by April 22, 2009.

standard of sustainability

(MANDATORY FOR LARGE PROJECTS)

Threshold: The Standard of Sustainability establishes a requirement for non-residential projects at or above 50,000sf of floor area, high-rise residential (above six stories) projects at or above 50,000sf of floor area, or low-rise residential (six stories or less) of 50 or more dwelling units within buildings of at least 50,000sf of floor area to meet the intent of the Leadership in Energy and Environmental Design® (LEED®) Certified level. The Standard also applies to existing buildings that meet the minimum thresholds described above when redevelopment construction costs exceed a valuation of 50% of the existing building's replacement cost.

Requirement: Must include a LEED® Accredited Professional (LEED® AP) on the project team and demonstrate that the project has met the intent of the US Green Building Council's (USGBC) LEED® Certified level. Formal certification by the USGBC is not required. The Standard for non-residential/high-rise residential projects will be effective on November 1, 2008. The Standard will apply to low-rise residential projects on May 1, 2009.

LEED® RATING SYSTEMS

LEED® Rating Systems include New Construction (NC), Existing Buildings (EB), Commercial Interiors (CI), Core and Shell (CS) and Homes (H). LEED® programs currently in pilot are Retail, Healthcare, Neighborhood Development and Homes for Multifamily. Applicants that pursue LEED® certification and/or are subject to the Standard of Sustainability may select the LEED® Rating System best suited to their project, including the ones still in pilot phase. Applicants should review the various systems to determine which is most advantageous, as some projects may fit into a variety of systems. For example, a building undergoing an extensive remodel or an adaptive reuse could pursue either LEED® EB or NC.

LEED® POINTS

While each LEED® Rating System is similarly structured and has the identical certification levels [Certified, Silver, Gold and Platinum], the number of points required to achieve each of the levels varies. The minimum number of points required for the LEED® NC Certified level is 26, whereas for LEED® CI it is 21 and for CS it is 23. While LEED® is designed to provide each project a high degree of flexibility in selecting how they achieve their points, each project must achieve all of the prerequisites that pertain to the selected Rating System.

LEED® RATING SYSTEM CHECKLIST

LEED® Rating System Checklists are organized in a similar manner. Each varies slightly due to the alternative construction types and/or building stage at which they apply. For example, a LEED® NC Checklist considers the site selection flexibility that is inherent in building a new building. Alternatively, the LEED® CI Checklist reflects the existing site and building conditions and characteristics that a tenant may confront. Typically, the Checklists include point options within the broad categories of sustainable sites, water efficiency, energy and atmosphere, materials and resource, indoor environmental quality, and innovation. The various LEED® Checklists can be obtained at: www.usgbc.org

LEED® RATING SYSTEM UPDATES

As green building technologies and innovations rapidly evolve, USGBC periodically updates its various Rating Systems. The new versions are announced up to one year in advance, providing time for the project team to incorporate the new thresholds should a project expect that it will be subject to the updated version. A project pursuing the Standard of Sustainability shall be evaluated for LEED® intent based upon either the LEED® version in effect when either the project submits for a building permit or, in the case a project that registers with USGBC, the version in effect on the date that the project registered with USGBC.

LEED® ACCREDITED PROFESSIONALS

It is required that a LEED® Accredited Professional (LEED® AP) be part of the project team. Information about local consultants can be obtained from the USGBC website at: www.usgbc.org.

TIMETABLE AND EXEMPTIONS

The Standard of Sustainability for non-residential/high-rise residential projects will be in effect on November 1, 2008 and on May 1, 2009 for low-rise residential projects. Any development project whose plans were accepted by the Department of Building and Safety (DBS) for plan check and/or had filed and had deemed complete an entitlement application with the Department of City Planning (DCP) (with the exception of CEQA review) prior to the effective date of this Standard shall be exempt.

PLANNING APPLICATION

A preliminary LEED® Checklist and declaration signed by the LEED® AP shall be included with the Application. The Checklist shall identify which LEED® credits the project expects to pursue and demonstrate that the project shall, at a minimum, comply with the intent of LEED® at a Certified level. The Planner assigned to the project shall compare the LEED® Checklist with the project's conceptual plans for consistency and completeness.

CITY PLANNING CLEARANCE

DBS shall refer an applicant to DCP for clearance prior to issuing the building permit for projects that meet the threshold criteria for the Standard of Sustainability. In order to receive the clearance, a project shall submit the LEED® Checklist, a complete set of plans and a declaration signed by the LEED® AP asserting that the project has met the intent of LEED® at a Certified level.

AUDIT

A third-party audit will be conducted for every seventh project that is submitted for clearance. The audit will include a review of the project's LEED® Checklist, construction drawings, and specifications to confirm the project has met the intent of LEED®. The initial audit will be completed within 36 hours of the project's submittal. At this time the project applicant will either be issued a list of corrections or issued the clearance. Should the project receive a list of corrections, the applicant will need to return the corrected project documentation in order to further pursue and ultimately obtain the clearance.

FEE

It is anticipated that there will be a fee of \$268 for projects that require LEED clearance for the Standard of Sustainability.

ALTERNATIVE CLEARANCE OPTION

At the time of clearance request, projects that can demonstrate that they have received confirmation from USGBC that each of the project's Design Review credits have been designated as "Anticipated" shall automatically receive the DCP clearance. Projects that successfully pursue this option shall be exempt from the audit and fee described above.

standard of sustainability clearance procedure

Submit Plans to the
Department of Building
& Safety (DBS)



Plan review by DBS

Permit Issuance by DBS
DBS will require clearance
from DCP prior to issuing
the building permit



Department of City Planning (DCP) Clearance Requirements:

1. LEED® Checklist
2. Signed Declaration
3. Stamped and signed drawings
4. \$268 Fee **OR** Satisfactory
Completion of Design Review by
USGBC

* May be subject to audit. Please see section "Audit."



standard of sustainable excellence

(VOLUNTARY FOR PROJECTS OF ANY SIZE - LARGE AND SMALL)

Threshold: The Standard of Sustainable Excellence establishes an incentive program for projects that register with the United States Green Building Council's (USGBC) Leadership in Energy and Environmental Design® (LEED®) program, contract with a LEED® Accredited Professional (LEED® AP), and demonstrate how the project will achieve LEED® certification at a Silver level or higher.

Incentives: The ordinance will establish expedited service within the Department of City Planning and the Bureau of Engineering. Other incentives already in place, including those from Department of Water and Power and Department of Building and Safety remain unchanged.

LEED® RATING SYSTEMS

LEED® Rating Systems include New Construction (NC), Existing Buildings (EB), Commercial Interiors (CI), Core and Shell (CS) and Homes (H). LEED® Rating Systems currently in pilot are Retail, Healthcare, Neighborhood Development and Homes for Multifamily. Applicants that pursue LEED® certification may select at their own discretion the LEED® Rating System, including those still in pilot phase, best suited to their project. Applicants should review the various systems to determine which is most advantageous, as some projects may fit into a variety of systems. For example, a building undergoing an extensive remodel or an adaptive reuse could pursue either LEED® EB or NC.

LEED® POINTS

While each LEED® Rating System is similarly structured and has the identical certification levels [Certified, Silver, Gold and Platinum], the number of points required to achieve each of the levels varies. The minimum number of points required for the LEED® NC Certified level is 26, whereas for LEED® CI it is 21 and for CS it is 23. While LEED® is designed to provide each project a high degree of flexibility in selecting how they achieve their points, each project must achieve all of the prerequisites that pertain to the selected Rating System.

LEED® RATING SYSTEM CHECKLIST

LEED® Rating System Checklists are organized in a similar manner. Each varies slightly due to the alternative construction types and/or building stage to which they apply. For example, a LEED® NC Checklist considers the site selection flexibility that is inherent in building a new building. Alternatively, the LEED® CI Checklist reflects the existing site and building conditions and characteristics that a tenant may confront. Typically, the Checklists include point options within the broad categories of sustainable site, water efficiency, energy and atmosphere, materials and resource, indoor environmental quality, and innovation. The various LEED® Checklists can be obtained at: www.usgbc.org.

LEED® RATING SYSTEM UPDATES

As green building technologies and innovations rapidly evolve, USGBC periodically updates its various Rating Systems. The new versions are announced up to one year in advance, providing time for the design team to incorporate the new thresholds should a project expect that it will be subject to the updated version. A project pursuing the Standard of Sustainable Excellence shall be evaluated upon the LEED® version in effect on the date that the project registered with USGBC.

LEED® ACCREDITED PROFESSIONALS

It is required that a LEED® AP be part of the project team. Information about local consultants can be obtained from the USGBC website at: www.usgbc.org.

TIMETABLE

The Standard of Sustainable Excellence will be in effect upon adoption of the Program.

PLANNING APPLICATION

Evidence that the project has registered with the USGBC, a preliminary LEED® Checklist, and a declaration signed by the LEED® AP shall be included with the Application. The Checklist shall identify which LEED® credits the project intends to pursue which demonstrate that the project shall, at a minimum, comply with the intent of LEED® at a Silver Certified level. The Planner assigned to the project shall compare the LEED® Checklist with the project's conceptual plans for consistency and completeness. Project's deemed complete with respect to the intent to pursue a Standard of Sustainable Excellence shall be eligible to obtain the DCP's Expedited Services.

CITY PLANNING CLEARANCE

The Department of Building and Safety (DBS) shall refer an applicant to DCP for clearance prior to issuing the building permit for projects that are pursuing the Standard of Sustainable Excellence. In order to receive the clearance, a project shall submit the LEED® Checklist, a complete set of plans and a declaration signed by the LEED® AP asserting that the project has met the intent of LEED® at a Silver level or higher.

AUDIT

A third-party audit will be conducted for every seventh project that is submitted for clearance. The audit will include a review of the project's LEED® Checklist, construction drawings, and specifications to confirm that the project has met the intent of the criteria for LEED® Silver certification or higher. The initial audit will be completed within 36 hours of the project's submittal. At this time the project applicant would be issued a list of corrections or issued the clearance. Should the project receive a list of corrections, the applicant will need to return the corrected project documentation in order to further pursue and ultimately obtain the clearance.

FEE

It is anticipated that there will be a fee of \$268 for projects that require LEED clearance for the Standard of Sustainable Excellence.

ALTERNATIVE CLEARANCE OPTION

At the time of clearance request, projects that can demonstrate that they have received confirmation from USGBC that each of the project's Design Review credits have been designated as "Anticipated" shall automatically receive the DCP clearance. Projects that successfully pursue this option shall be exempt from the audit and fee described above.

standard of sustainable excellence clearance procedure

Submit Plans to the
Department of Building
& Safety (DBS)



Plan review by DBS



Permit Issuance by DBS
DBS will require clearance
from DCP prior to issuing
the building permit



Department of City Planning (DCP) Clearance Requirements:

1. LEED® Checklist
2. Signed Declaration
3. Stamped and signed drawings
4. \$268 Fee **OR** Satisfactory Completion of Design Review by USGBC

* May be subject to audit. Please see section "Audit."

RESOURCES

CITY OF LOS ANGELES DEPARTMENTS

Bureau of Engineering's Sustainable Design Implementation Program
<http://eng.lacity.org/projects/sdip>

Bureau of Sanitation
www.lacity.org/SAN

Community Redevelopment Agency
www.crala.net

Department of Building & Safety
www.ladbs.org

Department of City Planning
<http://cityplanning.lacity.org>

Department of Housing
www.lacity.org/lahd

Department of Neighborhood Empowerment
www.lacityneighborhoods.com

Department of Public Works
www.lacity.org/DPW

Department of Transportation
www.lacity.org/LADOT

Los Angeles Department of Water & Power
www.ladwp.com

Environmental Affairs Department
www.lacity.org/EAD

Urban Forestry Division
www.lacity.org/BOSS/UrbanForestryDivision/index.htm

UTILITY REBATE PROGRAMS

Los Angeles Department of Water & Power
www.ladwp.com

Metropolitan Water District
www.mwdh20.com

Southern California Gas Company
www.socalgas.com/energy_efficiency

GREEN BUILDING BASICS

Eco-Home Network
www.ecohome.org

Environmental Building News
www.buildinggreen.com

Environmental Design & Construction Magazine
www.edcmag.com

Global Green USA
Green Building Resource Center
www.globalgreen.org/gbrc/index.htm

Green Home Guide
www.greenhomeguide.com

Greener Buildings
www.greenerbuildings.com

Healthy Building Network
www.healthybuilding.net

Home Energy Saver
www.homeenergysaver.lbl.gov

LACOMAX
www.ladpw.org/epd/lacomax

Natural Resources Defense Council
www.nrdc.org/cities

Rocky Mountain Institute
www.rmi.org

US Department of Energy
Energy Efficiency & Renewable Energy
www.eere.energy.gov/buildings

TOOLS FOR BUILDING GREEN

BEES (Building for Environmental & Economic Sustainability)
www.bfrel.nist.gov/oae/software/bees.html

California Integrated Waste Management Board
Sustainable Building Tool Kit
www.ciwmb.ca.gov/GreenBuilding/

Construction Waste Calculator
www.wastematch.org/reuse/calculator.htm

Southface Energy Institute
www.southface.org



RESOURCES (cont.)

Low Impact Living
www.lowimpactliving.com
Sustainable Works
www.sustainableworks.org

Whole Building Design Guide
www.wbdg.org

MATERIALS & PRODUCTS

Environmental Home Center
www.environmentalhomecenter.com

GreenSpec Directory
Building Green's Product Directory
www.buildinggreen.com

Oikos-Green Building Products & News
www.oikos.com

GREEN BUILDING PROGRAMS

Build It Green
www.builditgreen.org

California Green Builder Program
www.cagreenbuilder.org

Collaborative for High-
Performance Schools (CHPS)
www.chps.net

Energy Star
www.energystar.gov

Green Communities Initiative
www.enterprisefoundation.org/resources/green

Leadership in Energy &
Environmental Design (LEED)
www.usgbc.org/LEED

INDUSTRY ORGANIZATIONS

American Institute of Architects
www.aia.org

American Planning Association
www.planning.org

The American Society of Landscape Architects
www.asla.org

California Building Industry Association
www.cbia.org

THIRD PARTY CERTIFIED MATERIALS & PRODUCTS

California Integrated Waste
Management Board Recycled-Content
www.ciwmb.ca.gov/rcp

Carpet & Rug Institute
www.carpet-rug.com

Forest Stewardship Council
www.fscus.org

GreenGuard
www.greenguard.org

Green Seal
www.greenseal.org

Scientific Certification Systems
www.scscertified.com

US Environmentally Preferable Products Database
www.epa.gov/oppintintr/epp

LANDSCAPING & HABITAT

California Native Plant Society
www.cnps.org

Hollywood Beautification Team
www.hbteam.org

Korean Youth Community Center
www.kycccla.org

Los Angeles Conservation Corps
www.lacorps.org

Los Angeles County Landscaping Guidelines
http://ladpw.org/wmd/watershed/la/larmp_construction_gdlns.cfm

North East Trees
www.northeasttrees.org

TreePeople
www.treepeople.org

Theodore Payne Foundation
www.theodorepayne.org