2. Return the pre-permitting documentation to the applicant marked "incomplete" with an indication of additional information of project modifications that may be required in approval.

A building permit, including a grading permit, shall not be issued until the submittal documentation has been approved.

C. Re-Submission. If the pre-permitting documentation is returned to the applicant, the applicant may re-submit the pre-permitting documentation with such additional information as may be required.

10-3-4607: Compliance.

A. LEED Certified Professional. The Applicant shall retain a LEED certified professional to assist with, submit and verify compliance with the green building project checklist and other approved pre-permitting documentation required by Section 10-3-4605. The LEED certified professional shall submit the evidence of compliance with the approved documentation to the Green Building Official during design and construction.

B. Verification. Building Division staff shall verify that the green building measures and provisions indicated in the pre-permitting documentation are being implemented through inspections during the construction of the project [or through view of purchase receipts or photographic documentation]. If, as a result of any inspection, the Green Building Compliance Official or Building Division staff determine that the covered project does not comply with the pre-permitting documentation, a stop-work order may be issued. At the discretion of the Green Building Compliance Official such a stop-work order may apply to the portion of the project impacted by noncompliance or to the entire project. The stop-work order shall remain in effect until the Green Building Compliance Official determines that the project will be brought into compliance.

C. Substitution of Credits. During the verification process for the project, flexibility may be exercised by the Green Building Compliance Official to substitute the approved credits with other credits in the Green Building Project Checklist. Substitution shall occur only at the request of the applicant by submittal and approval of a revised plan by the Green Building Compliance Official.

D. Commissioning Authority. The Applicant shall retain a third party agent commonly known as a "Commissioning Authority" to ensure that the systems are designed, installed, functionally tested, and capable of being operated and maintained to perform in conformity with the approved documentation for Covered Project.

10-3-4608: Final Determination of Compliance.

A. Prior to any final building approval and/or issuance of a final certificate of occupancy, the Green Building Compliance Official shall review the documentation submitted by the applicant, and determine whether the applicant has achieved the required compliance with the required compliance threshold. If the Green Building Compliance Official determines the applicant has met the requirements, the Green Building Compliance Official shall make a final determination that the Covered Project is ready, in a final inspection, provided the Covered Project has received approval of all inspections required by the Green Building Compliance Official.

B. The Commissioning Authority shall submit a report of building operation in accordance with the approved documentation to the Green Building Official for verification of compliance with the compliance threshold and to ensure that the systems are designed, installed, functionally tested, and capable of being operated and maintained to perform in conformity with the approved documentation for Covered Project.

C. If the Green Building Compliance Official determines that the Covered Project has not achieved the required green building rating as set forth in the Green Building Project Checklist, the Green Building Compliance Official shall find one of the following:

1. Good Faith Effort to Comply. A determination on a case-by-case basis whether the applicant has made a good faith effort to comply with this Article. Granting of a good faith effort to comply for one item does not preclude the need for the applicant to comply with the other items on the Green Building Project Checklist. When an applicant submits a request in writing to the Green Building Compliance Official for approval of a good faith effort to comply, the Green Building Compliance Official shall determine that the applicant has made a good faith effort to comply with this Article when any of the following findings can be made:

a. The cost for providing green building compliance is disproportionate to the overall cost of the project. That is, the cost in compliance documentation is more than 25 percent of the total construction; or

b. The green building materials and technologies on the Green Building Project Checklist are no longer available or not yet commercially available. In making this determination, the Green Building Compliance Official shall consider the availability of markets for materials to be recycled, the availability of green building materials and technologies, and the documented efforts of the applicant to comply with this Article.

2. Noncompliance. If the Green Building Compliance Official determines that the applicant has not made a good faith effort to comply with this Article, then the final building approval and/or occupancy permit may be withheld. The Green Building Compliance officer may require additional reasonable green building measures as authorized by this Section to be employed in the operation of the Covered Project to mitigate the applicant's failure to comply with this Article. Once the applicant has performed such additional measures,

the Green Building Compliance Official shall approve the Covered Project for final building approval and/or issuance of an occupancy permit.

3. Mitigation. If the Green Building Compliance Official determines that the applicant has not complied with this Article, the Green Building Compliance Official may require further reasonable green building measures to be employed in the operation and maintenance of the covered project to mitigate the applicant's failure to comply fully with this Article. Such mitigation measure may include, but are not limited to, landscaping the covered project to decrease water and energy consumption, use of energy efficient fixtures, including the use of energy efficient light bulbs, an education of the building occupants and owners regarding on-going energy and resource saving techniques.

C. LEED Certification: For covered projects that have voluntarily registered with the U.S. Green Building Council with the intent to certify the building at the "Certified" level or above, the Green Building Compliance Official may reduce the scope of the City's compliance review. Depending on the timing of certification, the documents required may be reduced or eliminated.

10-3-4609: Hardship or Infeasibility Exemption.

A. Exemption. If an Applicant for a Covered Project believes that circumstances exist that make it a hardship or infeasible to meet the requirements of this Article, he or she may apply for an exemption as set forth below. In applying for an exemption, the burden is on the applicant to show hardship or infeasibility.

B. Application. If an Applicant for a Covered Project believes that such circumstances exist, the applicant may apply for an exemption at the time that the applicant submits the pre-permitting documentation required under Section 10-3-4605. The Applicant shall indicate in the pre-permitting documentation the maximum number of credits he or she believes is practical or feasible for the covered project ad the circumstances that he or she believes make it a hardship or infeasible to comply fully with this Article. Such circumstances many include, but are not limited to, availability of markets for materials to be recycled, availability of green building materials and technologies, and compatibility of green building requirements with existing building standards.

C. Meeting with Green Building Compliance Official. The Green Building Compliance Official shall review the information supplied by the applicant, may requires additional information from the applicant and may meet with the applicant to discuss the request.

D. Granting of Exemption. If the Green Building determines that it is a hardship or infeasible for the applicant to meet fully the requirements of this Article based on the information provided, the Green Building Compliance Official shall determine the maximum feasible number of credits reasonably achievable for the covered project and shall indicate this number on the pre-permitting documentation submitted by the applicant. The Green Building Compliance Official shall return a copy of the pre-permitting documentation with the applicant marked "Approved with Exemption" and shall notify the Building Division that the pre-permitting documentation has been approved. If an exemption is granted, the applicant shall be required to comply with this Article in all other respect and shall be required to achieve in accordance with this Article, the number of points determined to be achievable by the Green Building Compliance Official.

E. Denial of Exemption. If the Green Building Compliance Official determines that it is possible for the applicant to meet the requirements of this Article, the official shall notify the applicant in writing. The Applicant shall resubmit the pre-permitting documentation in full compliance with this Article and if the resubmitted documentation does not comply this Article, the Green Building Compliance Official shall deny the pre-permitting documentation in accordance with Section 10-3-4606.

10-3-4610: Appeal

Any aggrieved Applicant or person may appeal the determination of the Green Building Compliance Official regarding: (i) the granting or denial of an exemption pursuant to Section 10-3-4609; (ii) compliance with this Article pursuant to Section 10-3-4604; or the type or scope of mitigation measures required for noncompliance pursuant to Section 10-3-4608.

10-3-4611: Review of Beverly Hills Green Building Rating System.

A. The Planning and Community Development Department and/or the Beverly Hills Planning Commission may review the Green Building Project Checklist from time to time to ensure the requirements are practical, feasible and are updated to be compliant with green building materials and technologies as such become available in the marketplace.

B. Prior to the adoption of any resolution amending the Green Building Project Checklist, the Planning Commission shall review such amendments and provide a recommendation to the City Council.

C. Notwithstanding, nothing in this Section prevents the City Council from amending the Green Building Project Checklist without a recommendation from the Planning Commission.

10-3-4612: Recordation of Covenant.

The property owner shall record and sign a covenant in a form satisfactory to the city attorney that requires the green building systems implemented as set forth in the Green Building Project Checklist to be maintained for the life of the Building or any portion thereof. The covenant shall require that the owner include provisions for such maintenance either by the owner or third party in any lease, agreement, covenants, conditions and restrictions, or similar document. For example, if low-emissions carpet was installed pursuant to the Green Building Project Checklist, the replacement carpet shall also be of a type that complies with the Green Building Project Checklist.

10-3-4613: Enforcement

A. Violation of any provision of this Article due to the applicant's failure to build the covered project in accordance with the covered project plans, including the pre-permitting documentation and the conditions of approval in the applicable permit, shall be punishable as provided for in Chapter 3 of Title 1.

B. Where the Applicant has violated any provision of this Article due to the Applicant's failure to build the covered project in accordance with the project's plans, including the pre-permitting documentation and the conditions of approval in the applicable permit, the Green Building Compliance official may require mitigation as set forth in Section 10-3-4608.

C. Enforcement pursuant to this section shall be undertaken by the City through it Director of Community Development or the City Attorney or City Prosecutor.

D. These remedies are cumulative, and the choice of one by the City shall not preclude pursing others whether or not listed herein.

Section 2. The City Clerk shall cause this Ordinance to be published at least once in a newspaper of general circulation published and circulated in the City within fifteen (15) days

after its passage, in accordance with Section 36933 of the Government Code; shall certify to the adoption of this Ordinance and shall cause this Ordinance and his certification, together with proof of publication, to be entered in the Book of Ordinances of the Council of this City.

Section 3. This Ordinance shall go into effect and be in full force and effect at 12:01 a.m. on the thirty-first (31st) day after its passage.

Adopted:

_____

BARRY BRUCKER

Mayor of the City of Beverly Hills

ATTEST:

_____ (SEAL)

BYRON POPE

City Clerk

Approved as to form:

_____

LAURENCE S. WIENER

City Attorney

Approved as to content:

_____

RODERICK J. WOOD

City Manager

_____

VICENT BERTONI, AICP
Director of Planning and Community Development

EXHIBIT B

~~CITY OF BEVERLY HILLS~~

GREEN BUILDING/SUSTAINABILITY CHECKLIST

Attachment 1

City of Beverly Hills
Green Building/Sustainability Checklist
New Commercial, Multi-Family, Mixed-Use Development, And Major Renovation

Project Name:	
Project Address:	

Compliance Level	Buildings > 25,000 sq. ft. = Silver (33-38 pts) or Certified (26-32 pts) of Vacant Lot + Photovoltaic
	Buildings > 10,000 to 24,999 sq. ft. = Certified (26-32 pts)+ Photovoltaic
	Buildings < 10,000 sq. ft. = T24 + 15% + Photovoltaic

Yes		No			
Y		N	**Sustainable Sites**		14 Points
Y			Prereq 1	**Construction Activity Pollution Prevention**	Required
	M***		Credit 1	**Site Selection**	1
			Credit 2	**Development Density & Community Connectivity**	1
			Credit 3	**Brownfield Redevelopment**	1
			Credit 4.1	**Alternative Transportation,** Public Transportation Access	1
			Credit 4.2	**Alternative Transportation,** Bicycle Storage & Changing Rooms	1
			Credit 4.3	**Alternative Transportation,** Low-Emitting & Fuel-Efficient Vehicles	1
			Credit 4.4	**Alternative Transportation,** Parking Capacity	1
			Credit 5.1	**Site Development,** Protect or Restore Habitat	1
			Credit 5.2	**Site Development,** Maximize Open Space	1
			Credit 6.1	**Stormwater Design,** Quantity Control	1
			Credit 6.2	**Stormwater Design,** Quality Control	1
			Credit 7.1	**Heat Island Effect,** Non-Roof	1
			Credit 7.2	**Heat Island Effect,** Roof	1
			Credit 8	**Light Pollution Reduction**	1

Yes		No			
Y		N	**Water Efficiency**		5 Points
			Credit 1.1	**Water Efficient Landscaping,** Reduce by 50%	1
			Credit 1.2	**Water Efficient Landscaping,** No Potable Use or No Irrigation	1
	M***		Credit 2	**Innovative Wastewater Technologies**	1
			Credit 3.1	**Water Use Reduction,** 20% Reduction	1
			Credit 3.2	**Water Use Reduction,** 30% Reduction	1

Yes		No			
Y		N	**Energy & Atmosphere**		17 Points
Y			Prereq 1	**Fundamental Commissioning of the Building Energy Systems**	Required
Y			Prereq 2	**Minimum Energy Performance**	Required
Y			Prereq 3	**Fundamental Refrigerant Management**	Required

*Note for EAc1: All LEED for New Construction projects registered after June 26th, 2007 are required to achieve at least two (2) points under EAc1.

			Credit 1	Optimize Energy Performance	1 to 10
			M***	10.5% New Buildings or 3.5% Existing Building Renovations	1
			M***	14% New Buildings or 7% Existing Building Renovations	2
				17.5% New Buildings or 10.5% Existing Building Renovations	3
				21% New Buildings or 14% Existing Building Renovations	4
				24.5% New Buildings or 17.5% Existing Building Renovations	5
				28% New Buildings or 21% Existing Building Renovations	6
				31.5% New Buildings or 24.5% Existing Building Renovations	7
				35% New Buildings or 28% Existing Building Renovations	8
				38.5% New Buildings or 31.5% Existing Building Renovations	9
				42% New Buildings or 35% Existing Building Renovations	10

Attachment 1

			Credit 2	**On-Site Renewable Energy**	1 to 3
		M***		2.5% Renewable Energy	1
				7.5% Renewable Energy	2
				12.5% Renewable Energy	3
			Credit 3	**Enhanced Commissioning**	1
			Credit 4	**Enhanced Refrigerant Management**	1
			Credit 5	**Measurement & Verification**	1
			Credit 6	**Green Power**	1

Yes		No			
Y		N	**Materials & Resources**		13 Points
Y			Prereq 1	**Storage & Collection of Recyclables**	Required
			Credit 1.1	**Building Reuse**, Maintain 75% of Existing Walls, Floors & Roof	1
			Credit 1.2	**Building Reuse**, Maintain 95% of Existing Walls, Floors & Roof	1
			Credit 1.3	**Building Reuse**, Maintain 50% of Interior Non-Structural Elements	1
			Credit 2.1	**Construction Waste Management**, Divert 50% from Disposal	1
			Credit 2.2	**Construction Waste Management**, Divert 75% from Disposal	1
	M***		Credit 3.1	**Materials Reuse**, 5%	1
			Credit 3.2	**Materials Reuse**,10%	1
	M***		Credit 4.1	**Recycled Content**, 10% (post-consumer + ½ pre-consumer)	1
			Credit 4.2	**Recycled Content**, 20% (post-consumer + ½ pre-consumer)	1
	M***		Credit 5.1	**Regional Materials**, 10% Extracted, Processed & Manufactured Regionally	1
			Credit 5.2	**Regional Materials**, 20% Extracted, Processed & Manufactured Regionally	1
	M***		Credit 6	**Rapidly Renewable Materials**	1
			Credit 7	**Certified Wood**	1

Yes		No			
Y		N	**Indoor Environmental Quality**		15 Points
Y			Prereq 1	**Minimum IAQ Performance**	Required
Y			Prereq 2	**Environmental Tobacco Smoke (ETS) Control**	Required
			Credit 1	**Outdoor Air Delivery Monitoring**	1
			Credit 2	**Increased Ventilation**	1
			Credit 3.1	**Construction IAQ Management Plan**, During Construction	1
			Credit 3.2	**Construction IAQ Management Plan**, Before Occupancy	1
	M***		Credit 4.1	**Low-Emitting Materials**, Adhesives & Sealants	1
	M***		Credit 4.2	**Low-Emitting Materials**, Paints & Coatings	1
	M***		Credit 4.3	**Low-Emitting Materials**, Carpet Systems	1
	M***		Credit 4.4	**Low-Emitting Materials**, Composite Wood & Agrifiber Products	1
			Credit 5	**Indoor Chemical & Pollutant Source Control**	1
			Credit 6.1	**Controllability of Systems**, Lighting	1
			Credit 6.2	**Controllability of Systems**, Thermal Comfort	1
			Credit 7.1	**Thermal Comfort**, Design	1
			Credit 7.2	**Thermal Comfort**, Verification	1
			Credit 8.1	**Daylight & Views**, Daylight 75% of Spaces	1
			Credit 8.2	**Daylight & Views**, Views for 90% of Spaces	1

Yes		No			
Y		N	**Innovation & Design Process**		5 Points
			Credit 1.1	**Innovation in Design**: Provide Specific Title	1
			Credit 1.2	**Innovation in Design**: Provide Specific Title	1
			Credit 1.3	**Innovation in Design**: Provide Specific Title	1
			Credit 1.4	**Innovation in Design**: Provide Specific Title	1
			Credit 2	**LEED® Accredited Professional**	1

Yes		No			
Y		N	**Project Totals (pre-certification estimates)**		69 Points

* **Certified:** 26-32 points, **Silver:** 33-38 points, **Gold:** 39-51 points, **Platinum:** 52-69 points

** Refers to LEED Source Book for New Construction for Intent and Requirement of each category

*** Mandatory measure by the City of Beverly Hills Green Building Standards

Energy Star Appliances — Optional

ATTACHMENT B
PC STAFF REPORT (APRIL 24)

STAFF REPORT

CITY OF BEVERLY HILLS

For the Planning Commission
Meeting of April 24, 2008

TO: Planning Commission

FROM: Peter Noonan, AICP, Associate Planner
Azita Motamen, AIA, Plan Review Architect

THROUGH: Jonathan Lait, AICP, City Planner

SUBJECT: Proposed Green Building Program for Commercial, Mixed-use and Multi-family Development.

RECOMMENDATION

Receive staff presentation on the proposed green building program and provide direction.

EXECUTIVE SUMMARY

This is a study session item on the City's upcoming green building program. Staff will return with a resolution and detailed language on the proposed text amendment on May 8, 2008 for the Commission's recommendation to Council.

The green building program proposed for the City of Beverly Hills is a mandatory, performance-based, point-scaled program to ensure compliance with the previously articulated goal of protecting the environment and includes key sustainability goals expressing by the City Council last year.

City Council Green Building Goals

- Encourage water, energy and resource conservation
- Reduce waste generated by construction projects
- Increase energy efficiency in buildings
- Promote health of residents, workers, and visitors
- Reduce greenhouse gas generated by building use
- Reduce the City of Beverly Hill's carbon footprint

based on the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) system. Projects subject to this Program would be evaluated and certified for compliance by the Building and Safety Division.

BACKGROUND

The green building program has been before the City Council, Planning and Public Works Commissions as study session discussions. The direction provided from the Council was to bring forward a green building ordinance that would apply to all commercial, mixed-use and multi-family development.

Planning Commission

This item was separately reviewed by the Planning and Public Works Commissions on May 10, 2007. That presentation included a discussion of both the purpose and scope of the ordinance and the basic outline of the resulting green building program.

Presenters at the Planning Commission study session included representatives from the City's Building and Safety Division Santa Monica's Environmental Programs Division. Green building programs were discussed with special application to the City of Beverly Hills.

City Council

The City Council discussed the idea of a green building program on August 7, 2007. At that meeting, the Council provided direction to bring an ordinance forward that requires green building standards for all commercial and multi-family projects. Moreover, the Council directed that a points-based system be used that reflected the nationally accepted LEED standards but that did not require LEED certification. Instead the City would review projects and self-certify. There was an expressed desire to develop a program that could become a standard for other communities. Additionally, at a follow up session on January 2008, the Council had expressed the desire that all projects incorporate photovoltaic systems.

DISCUSSION

"Green" construction is the practice of designing, constructing, operating, maintaining, and removing buildings in ways that conserves natural resources and reduces impacts on air quality and climate change. Green construction practices are implemented through the use of building standards, which are often referred to as "*green building standards*" that encourage energy use and conservation, and indirectly reduce air pollution and improve air quality.

Green Building Programs Reviewed

A number of existing green building programs, at the State and local level were reviewed in the process of developing the City's green building program. These programs have been compared in the chart in attachment 2. All of the programs surveyed were for commercial and multi-family development and almost all of the programs were mandatory.

Regulatory Approaches Reviewed

There is more than one approach available for measuring green building design. Three approaches were reviewed in developing the proposed green building program. Although all three address green building standards, each one does this in a slightly different way.

LEED Rating System (Leadership in Energy and Environmental Design)

The U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) system is nation-wide and is the leading green building rating system. LEED is the industry standard for commercial, mixed-use and multi-family construction and promotes energy, water and materials conservation; environmentally preferred products and practices; improvements in employee health, comfort and productivity; and reductions in facility operation costs and environmental impacts.

In order to achieve a specific rating level, a project needs to incorporate a specific number of items off a checklist. Developers are allowed to choose options that will work best for the project provided that the necessary number of points is attained. The checklist is based on tiered levels of compliance - Platinum (highest), Gold, Silver, and Certified. Building designers have the option of progressively choosing items from different categories to obtain the points to meet necessary levels.

To assist the development community in meeting the requirements of LEED, the U.S. Green Building Council provides training in LEED and there are numerous LEED accredited professionals in the greater Los Angeles area.

The disadvantages of LEED are its costs, approximately ten to two hundred thousand dollars (depending on the size and type of construction) to have a building be LEED certified, and its certification process significantly trails behind the City's own inspection process causing delays in the issuance of a final occupancy permit. The advantages of LEED are that the building would be certified and comply with the nation's leading green building program.

Build It Green

Build It Green is a non-profit membership organization based in California that promotes healthy, energy- and resource-efficient building practices. The Build It Green program is prescriptive-based, and uses a point rating system similar to the LEED rating system, but with less technical criteria. The Build It Green point rating system however, addresses the construction and renovation of single-family and multi-family homes, but not commercial development. Build It Green provides a certification process and project certification is required by independent Built-it-Green raters similar to the LEED system.

The costs associated with this program are more reasonable and certification tracks better with the City's inspection process. However, its limited applicability at this time to single family developments is not readily transferable to more complex commercial and mixed use developments; projects the City Council is seeking to address with a green building program.

Energy Star

The Federal Environmental Protection Agency (EPA) administers the Energy Star program. The Energy Star Program is applicable to both commercial and residential construction. Using the Energy Star approach, an optimal energy use target is identified and the building is designed to meet or exceed that target. "Designed to Earn the Energy Star" is a certification process administered by the EPA. Buildings eligible for "Designed to Earn the Energy Star" use less energy than conventional buildings.

Costs associated with this program and reasonable and the inspection process is straightforward. However, the Energy Star approach only focuses on energy conservation and does not have the benefit of providing a broader spectrum of green building practices; an important direction-setting goal established by the City Council.

PROPOSED GREEN BUILDING PROGRAM

An alternative to the three programs studied is to establish the City's own green building program; a program that allows the City to self-certify projects.

The proposed green building program is consistent with Council direction in that it is a point system based on LEED standards, but certified by the City. The point system models the LEED tiered levels of compliance - Platinum (highest), Gold, Silver, and Certified.

There was a desire on both the Commission's part and the Council's that the program go beyond the minimal requirements. The proposed program does go beyond LEED with two important requirements:

1. Solar panels on all new construction and major renovations
2. Exceed Title 24 (State Energy Code) by 15%

Administration of the program would be done by trained City staff. Developers would be required to retain the services of a certified green building professional to assure compliance with the program and proper integration of green building standards.

The program would apply to all commercial, mixed-use or multi-family development and renovation projects that qualify based on established thresholds. Participation in the green building program is based on the gross amount of square footage of new construction and does not include any existing portion of a building that is not being remodeled. All new construction would be required to exceed title 24 requirements by at least 15-percent and to include active solar energy systems (photovoltaics).

Below is a summary of the proposed green building program:

Green Building Program

Building Size (Square Feet)	Green Building Standard Required	Comply with Title 24 + 15%	Photovoltaics (solar panels)	Points Required
≥ 25,000 sq ft	Silver	Yes	Required	33 – 38
	Certified if land is vacant	Yes	Required	26 – 32
10,000 to 24,999 sq ft	Certified	Yes	Required	26 – 32
< 10,000 sq ft	Certification Not Required	Yes	Required	No points required. Uses Title 24 requirements.

Rating System

The rating system proposed is divided into six categories (attachment 1). A project receives points based on meeting the requirements of the options provided in each category. There is no minimum amount of points that are required from each category, however, it is anticipated that projects will incorporate criteria from all categories in the checklist.

Green Building/ Sustainability Checklist Criteria

- Sustainable Sites
- Water Efficiency
- Energy and Atmosphere
- Materials and Resources
- Indoor Environmental Quality
- Innovation and Design Process

Examples of green design and green building practices included in the list are: locating near public transit, providing bicycle storage and changing stations, using low water landscaping, optimizing energy performance and reusing portions of an existing building and construction materials.

Project Review Process

The green building program will be integrated into existing City review and approval processes. Initial contact with the program will occur through informational hand-outs on the website or at the permit counter. Additionally city staff will be available to answer questions over the phone and in person.

Initial Review/ Permitting / Entitlements

Staff will provide information on the green building program during preliminary informational visits and at the pre-conceptual plan review stage, which is the initial step

in project review. At this time, applicants with qualifying projects will be provided a list of all of the required documentation and materials. The developer will retain the services of a LEED accredited professional who will be responsible for ensuring that all required paperwork is submitted to the City's Building Official and that all green design and technology is constructed to specification. City staff from different departments will be involved in the review process with the Building Division having the lead role. For projects requiring Planning Commission review, staff can report on how each applicant intends to satisfy the requirements of the future ordinance.

Building Final Inspection

Prior to approval and issuance of a building permit, a project will need to incorporate a certain number of points from the green building standards checklist. What features are incorporated from the list will be determined by the applicant, provided that the required number of points are attained. The applicant is also required to provide third party verification that all standards are constructed to specification.

Good Faith Effort to Comply

If for some reason, a project fails to attain the points necessary, a determination will be made by the City as to whether there has been a "good faith effort to comply". In making this determination, the Building official shall consider the cost required for compliance and the availability of materials and supplies. If it is determined that the cost of compliance are disproportionate to the cost of the project or that the green building materials and technologies are no longer available then the City will honor the good faith effort. If the City determines that a good faith effort has not been made then the final building approval shall be withheld and additional measures may be required in substitution.

PUBLIC NOTICE AND COMMENTS

Notice of a public hearing on this matter was published in both the Beverly Hills Weekly on April 18, 2008 and in the Beverly Hills Courier on April 21, 2008. As of the date of this staff report, no public comments have been received.

ENVIRONMENTAL REVIEW

The Project has been environmentally reviewed pursuant to the California Environmental Quality Act ("CEQA"), (Public Resource Sections 21000, et seq.), the State CEQA Guidelines (California Code of Regulations, Title 14, Sections 15000 et seq.), and the City's Local CEQA guidelines ("Guidelines"). It has been determined that this project is not subject to CEQA pursuant to Section 15061(b)(3) of the Guidelines because CEQA only applies to projects which have the potential for causing a significant effect on the environment. This ordinance would establish requirements intended to reduce energy consumption and construction waste along with other measures, and therefore, it would not pose a significant effect on the environment. Additionally, two categorical exempts would apply to a project of this nature. Section 15307 categorically exempts actions taken by local ordinances that assure maintenance, restoration or enhancement of a natural resource. Section 15308

categorically exempts actions taken by local ordinance that assures maintenance, restoration, enhancement, or protection of the environment

Peter Noonan, AICP
Associate Planner

Azita Motamen, AIA,
Plan Review Architect

Attachments:

1. Green Building Program Point-rating System
2. Staff Report to Planning Commission and meeting minutes on May 10, 2007
3. Staff Report to City Council on August 7, 2007

Santa Monica Green Building Program

Conserve today, preserve tomorrow

Contents

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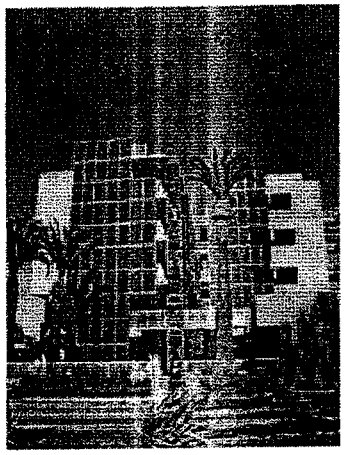
Santa Monica Green Building Program

The City of Santa Monica has a commitment to protecting the environment, improving quality of life, and promoting sustainability. In order to fulfill this commitment, the City has adopted a set of requirements and recommendations to encourage the development of "green" buildings without forcing excessive costs or other burdens upon developers, building owners or occupants. The City has also developed Green Building Guidelines to explain possible ways of achieving green building goals.



This site contains information both on what you must do and what you might consider doing in order to achieve Santa Monica's standards of excellence in green building design and construction.

For information on green techniques in general, and strategies for both Required and Suggested practices, see the Green Building Design and Construction Guidelines link. The Introduction to the Guidelines contains background information on Santa Monica's Green Building Program, as well as explanations of the green building design process.

For information on city requirements for all building projects in Santa Monica, see the Green Building Program Requirements.

For information about other City of Santa Monica Environmental Programs go to www.smepd.org.

Santa Monica Green Building Program

Conserve today, preserve tomorrow

Contents

Search GO!

Help Advanced

Green Building
Requirements
Guidelines
▶Introduction
Acknowledgements
What is a Green Building?
Why Green Design?
The Green Design Process
Green Design Strategies
Performance Ordinances
Using these Guidelines
Required Practices
Suggested Practices
Siting and Form
Landscape
Transportation
Envelope and Space Planning
Materials
Water Systems
Electrical Systems
HVAC Systems
Control Systems
Construction Management
Commissioning
Appendices
Case Studies
Additional Resources
Site Map

Introduction

In September 1994 Santa Monica's City Council adopted the Santa Monica Sustainable City Program. This program was developed by the city's Task Force on the Environment as a way to create the basis for a more sustainable way of life -- one that safeguards and enhances local resources, prevents harm to the natural environment and human health, and strengthens the community and local economy -- for the sake of current and future generations.

Conventional design and construction methods produce buildings that can negatively impact the environment as well as occupant health and productivity. These buildings are expensive to operate and contribute to excessive resource consumption, waste generation, and pollution. To help reduce these impacts and meet the goals of the Sustainable City Program, the Task Force recommended that the City adopt a set of guidelines to facilitate the development of "green" buildings in Santa Monica without forcing excessive costs or other burdens upon developers, building owners or occupants.

The Green Building Design and Construction Guidelines were developed over a three-year period by City staff and Sheltair Scientific Ltd., a sustainable design consultant team, with extensive input from the local design, construction and development community. The Guidelines include required and recommended practices that are intended to reduce life-cycle environmental impacts associated with the construction and operation of both commercial and municipal developments and major remodel projects in Santa Monica. They provide specific "green" design and construction strategies in the following topic areas: Building Site and Form, Landscaping, Transportation, Building Envelope and Space Planning, Building Materials, Water Systems, Electrical Systems, HVAC Systems, Control Systems, Construction Management, and Commissioning.

The Guidelines were developed for, and specifically apply to, the following building types:

- Institutional and Commercial Offices
- Light Industrial Buildings
- Commercial Retail Buildings
- Multi-Family Residences
- Hotels and Motels

They are not intended to address development of single-family residential dwellings and duplexes, high rise buildings, or occupancies with special process demands (heavy industrial operations, car washes, service garages, etc.), however many of the recommended practices presented in the Guidelines are relevant to these building types as well.

Santa Monica Green Building Program

Conserve today, preserve tomorrow

Contents

Search

Go!

Help Advanced

Green Building
Requirements
Guidelines
Introduction
Acknowledgements
What is a Green Building?
▶Why Green Design?
Green Design Process
Green Design Strategies
Performance Ordinances
Using these Guidelines
Required Practices
Suggested Practices
Siting and Form
Landscape
Transportation
Envelope and Space Planning
Materials
Water Systems
Electrical Systems
HVAC Systems
Control Systems
Construction Management
Commissioning
Appendices
Case Studies
Additional Resources
Site Map

Why Green Building Design

North Americans currently lead a material way of life that is unsustainable in ecological and resource terms over the next century – and buildings are major causes of this. The "ecological footprint" — the productive land area required for resource extraction and to assimilate pollution generated — of the average American exceeds three city blocks per person. For comparison, the average European requires two-thirds of this land area; the average Third World citizen one-twelfth. If all of the earth's population lived a Californian lifestyle, the equivalent of three planets would be required to maintain them.

Buildings are major contributors to this consumption and waste:

- Buildings consume ~40% of total annual U.S. energy use. Production of this energy emits ~100 million tons of carbon dioxide, the primary greenhouse gas driving climate change.
- Most existing air-conditioned buildings use chlorofluorocarbon refrigerants, which have been implicated in destruction of the ozone layer.
- American homes each use between 10,000 and 40,000 gallons of water per year.
- Construction of the average home creates ~2.5 tons of waste; demolition produces ~20 tons, of which most goes to landfills.

Buildings have impacts on health as well as the environment. It is estimated that half of all commercial buildings suffer from air quality problems, resulting in poorer health of workers and other occupants.

Santa Monica Green Building Program

Conserve today, preserve tomorrow

Contents

Search GO

Help Advanced

Green Building
Requirements
Guidelines
Introduction
Acknowledgements
What is a Green Building?
Why Green Design?
Green Design Process
Green Design Strategies
▶Performance Ordinances
Using these Guidelines
Required Practices
Suggested Practices
Siting and Form
Landscape
Transportation
Envelope and Space Planning
Materials
Water Systems
Electrical Systems
HVAC Systems
Control Systems
Construction Management
Commissioning
Appendices
Case Studies
Additional Resources
Site Map

Performance Ordinances in Santa Monica

Two Santa Monica Municipal Code ordinances aim at higher environmental and resource performance of buildings than state or federal requirements. These performance-based ordinances require building projects to meet or exceed a performance target, but allow complete flexibility in the methods used. These targets have been set to reduce resource or environmental impacts, using cost-effective and well-proven design and construction strategies. Santa Monica's two building performance ordinances focus on reducing energy consumption and runoff of untreated storm water.

This web site sets out many Recommended Practices that offer different ways to satisfy and surpass these performance requirements. These Recommended Practices provide of techniques to respond to the unique opportunities and constraints of a specific project. While the SMMC performance ordinances do not require the use of any particular method, they require documents demonstrating that the design meets minimum performance targets.

Building Energy Conservation Ordinance

The City of Santa Monica requires lower annual energy consumption than California's 2001 Title 24 regulation. Santa Monica Municipal Code requires more stringent annual non-renewable energy budgets, summarized in the following table.

Building Occupancy	Annual Source Energy Conservation Target (relative to 2001 Title 24 energy budget)
Multi-family residences	10%
Hotels and motels	15%
Office	15%
Light industrial	15%
Retail	10%

These annual energy conservation targets are based on detailed computer energy simulations of archetypal buildings that comply with Santa Monica's zoning and building ordinances, and the 2001 Title 24 regulation. Computer model inputs and targets for Santa Monica were independently reviewed for accuracy and cost-effectiveness by respected architects, quantity surveyors and energy engineers familiar with construction practices in the City.

Santa Monica's building energy performance ordinance is based on California's Title 24 regulation, which is still applicable in the City. However, Santa Monica's ordinance requires use of computer simulations following Title 24's Performance Approach to demonstrate that non-residential buildings meet the energy conservation target.

Design teams of non-residential buildings are required to submit two reports to the City on energy performance of their designs:

A report summarizing preliminary computer energy analysis performed during conceptual design, as part of the development permit application; and

A report summarizing the final computer simulation demonstrating that the final design complies with the above targets, as part of the building permit application.

For residential buildings with more than two dwelling units, two methods can be used to demonstrate compliance with Santa Monica's Building Energy Conservation Ordinance:

computer energy simulations following the same requirements listed above for non-residential buildings; or documentation submitted for the building permit following Title 24's Prescriptive Standards, and incorporating the following list of energy-conserving construction features:

- All windows and glass patio doors equipped with double-glazed, low-emissivity glazing, with center- of-glass U-value not more than 0.260 Btu/(hr.sq.ft. deg.F.), and Solar Heat Gain Coefficient not more than 0.375.
- The average efficacy of all fixed lighting fixtures installed within dwelling units not less than 40 lumens watt (typically T8 and compact fluorescent lamps).
- Space heating appliances with Annual Fuel Utilization Efficiency (AFUE) not less than 92%.
- Space cooling appliances (if installed) with Seasonal Energy Efficiency Ratio not less than 12.

These multi-family residential building energy conservation measures have been demonstrated to result in 10-15% reduction in annual source energy use.

Click here to download the Santa Monica Energy Code Compliance Application (SMECCA)

Stormwater Management Performance Ordinance

The City of Santa Monica's Urban Runoff Reduction ordinance (SMMC 7.10.060) requires that new development and substantial remodels prepare and submit an Urban Runoff Mitigation Plan. The Ordinance and the Runoff Plan are designed to reduce the amount of polluted runoff that reaches our storm drain system and Santa Monica Bay. The Ordinance requires a 20% reduction in urban runoff from all new developments and substantial remodels within the City. The Ordinance also specifies guidelines for existing properties and sites under construction to reduce the level of contaminants carried by urban runoff into the Bay.

The most critical aspect of complying with the Ordinance is incorporating urban runoff reduction into the design of the project. The Urban Runoff Reduction Ordinance is a performance-based ordinance in that it requires a certain level of compliance, yet does not specifically prescribe specific methods that must be used to comply. These Guidelines help designers comply with the ordinance by high-lighting some of the more cost-effective measures that have been used in the City of Santa Monica.

When submitting a project for first planning approval, every applicant is required to submit an Urban Runoff Mitigation Plan to the City's Engineering Division. The Plan must show that the projected urban runoff from the project will be reduced by at least 20%. To accomplish a 20% reduction in runoff the project should maximize the amount of permeable area and minimize the amount of runoff flowing toward impermeable areas. The Site & Form section of this document provides more detail.

Santa Monica Green Building Program

Conserve today, preserve tomorrow

Contents

Search GO!

Help Advanced

Green Building
Requirements
Guidelines
Introduction
Acknowledgements
What is a Green Building?
Why Green Design?
Green Design Process
Green Design Strategies
Performance Ordinances
Using these Guidelines
▶Required Practices
Suggested Practices
Siting and Form
Landscape
Transportation
Envelope and Space Planning
Materials
Water Systems
Electrical Systems
HVAC Systems
Control Systems
Construction Management
Commissioning
Appendices
Case Studies
Additional Resources
Site Map

Required Practices

Siting & Form | Landscape | Transportation
Envelope & Space Planning | Materials | Water Systems
Construction Management

Required Practices	Environment	Ease of Use	Benefits	Capital Cost
Siting & Form				
SFa - (SMMC 7.10.050) Submit an Urban Runoff Mitigation Plan to the Engineering Division	✔✔✔	✔✔✔	✔✔✔	$$
Landscape	**Environment**	**Ease of Use**	**Benefits**	**Capital Cost**
LAa - (SMMC 7.10.050) Minimize stormwater runoff to impermeable areas	✔✔✔	✔✔✔	✔	$
LAb - (SMMC 7.16.020) Specify & Install Water-Efficient Irrigation Systems	✔✔✔	✔✔✔	✔✔✔	$
LAc - (SMMC 7.16.020) Restrict the Use of Water Features & Fountains	✔	✔	✔	$
Transportation	**Environment**	**Ease of Use**	**Benefits**	**Capital Cost**
TRa - (SMMC 5.20.080(c)(2).) Install Clarifiers or Oil/Water Separators on Drains from Service Bays & Parking Areas	✔✔✔	✔✔✔	✔	$
TRb - (SMMC 9.04.10.08.050) Provide Secure & Accessible Bicycle Storage for Visitors & Occupants	✔✔✔	✔✔✔	✔✔✔	$
TRc - (SMMC 9.04.10.08.050) Provide Facilities for Shared Vehicle Transportation	✔✔✔	✔✔✔	✔✔✔	$
Envelope	**Environment**	**Ease of Use**	**Benefits**	**Capital Cost**
ENa - (SMMC 9.04.10.02 150-151) Provide Space for Recycled Material Storage & Handling Systems	✔✔✔	✔✔✔	✔✔✔	$

Materials				
MAa - (SMMC 7.60) Require Recycling of Demolition & Construction Waste in Construction Contracts	✔✔✔	✔✔✔	✔	$
MAb - (SMMC 8.108.050) Specify Recycled Products per EPA purchasing guidelines	✔✔✔	✔✔✔	✔✔✔	$
Water Systems	**Environment**	**Ease of Use**	**Benefits**	**Capital Cost**
WSa - (SMMC 7.18.070) Specify & Install Water-Conserving Plumbing Fixtures & Fittings	✔	✔	✔	$
WSb - (SMMC 8.108.060) Reduce Hot Water Heat Loss with Insulation & Heat Traps	✔✔✔	✔✔✔	✔	$$
WSc - (SMMC 8.108.060) Heat Swimming Pools & Preheat Process Hot Water with Unglazed Solar Collectors	✔✔✔	✔✔✔	✔✔✔	$
WSd - (SMMC 5.20.080(c)(1)) Eliminate Lint from Sanitary Sewers in Professional Cleaning Facilities	✔✔✔	✔✔✔	✔	$
WSe - (SMMC 5.20.080(c)(1) & (c)(4)) Eliminate Grease from Sanitary Sewers in Food Preparation & Meat Retailing Facilities	✔✔✔	✔✔✔	✔	$
WSf - (SMMC 5.20.080(c)(5)) Eliminate Silver from Sanitary Sewers in Photo-Finishing Facilities	✔✔✔	✔✔✔	✔	$
Construction Management	**Environment**	**Ease of Use**	**Benefits**	**Capital Cost**
CMa - (SMMC 7.60) Prepare a Demolition & Site Protection Plan	✔✔✔	✔✔✔	✔✔✔	$
CMb - (SMMC 7.60) Salvage Reusable Materials & Separate Recyclables from Demolition (Recommended as part of Demolition and Site Protection Plan. Not Required)	✔✔✔	✔✔✔	✔✔✔	$
CMc - (SMMC 7.60) Inventory, Mark & Protect Topsoil, Trees & Vegetation to be Retained (Recommended as part of Demolition and Site Protection Plan. Not Required)	✔✔✔	✔✔✔	✔✔✔	$
CMd - (SMMC 7.10.060) Prepare a Stormwater Control Program for the Construction Site	✔✔✔	✔✔✔	✔✔✔	$

CMe - (SMMC 7.60) Recycle Construction Waste, & Designate a Site Waste-Management Person	✔✔✔	✔✔✔	✔✔✔	$
CMf - (SMMC 5.08.150(b), 7.10.040) Provide Safe Storage, Worker Training & Spill Cleanup Procedures for Hazardous Materials.	✔✔✔	✔✔✔	✔✔✔	$
Energy Requirements	**Environment**	**Ease of Use**	**Benefits**	Capital Cost
SMMC 8.108 Improved energy performance above California Title 24 requirements.	✔✔✔	✔✔✔	✔✔✔	$

Legend:

Environment :how well a Practice addresses environmental., health and resource-conservation issues.

Low ✔

Moderate ✔✔

High ✔✔✔

(Slightly beneficial; Beneficial; Best practice)

Ease of Use: how easily a given Practice can be implemented in design and construction.

Low ✔

Moderate ✔✔

High ✔✔✔

(Easy; Moderate; Difficult)

Benefits: benefits of a Practice besides reduced environmental, health or resource impacts, e.g. social and livability benefits of pedestrian amenities.

Low ✔

Moderate ✔✔

High ✔✔✔

(Slightly beneficial; Beneficial; Best practice)

Capital Cost: the effect of a Practice on total construction cost, relative to current Southern California practice.

Low ✔

Moderate ✔✔

High ✔✔✔

(Low-cost; Moderate cost; High cost)

Santa Monica Green Building Program

Conserve today, preserve tomorrow

Contents

Search

Help Advanced

Green Building
Requirements
Guidelines
Introduction
Acknowledgements
What is a Green Building?
Why Green Design?
Green Design Process
Green Design Strategies
Performance Ordinances
Using these Guidelines
Required Practices
▶Suggested Practices
Siting and Form
Landscape
Transportation
Envelope and Space
Planning
Materials
Water Systems
Electrical Systems
HVAC Systems
Control Systems
Construction Management
Commissioning
Appendices
Case Studies
Additional Resources
Site Map

Suggested Practices

Siting & Form | Landscape | Transportation
Envelope & Space Planning | Materials | Water Systems
Electrical Systems | HVAC Systems | Control Systems
Construction Management | Commissioning

Suggested Practices	Environment	Ease of Use	Benefits	Capital Cost
Siting & Form				
SF1 - Use Narrow Floor Plates for Access to Daylight, Views & Natural Cooling	✔✔✔	✔✔✔	✔✔✔	$$
SF2 - Locate & Orient the Building to Control Solar Cooling Loads	✔✔✔	✔	✔✔✔	$
SF3 - Locate & Orient the Building for Passive Solar Heat in Winter	✔✔✔	✔	✔✔✔	$
SF4 - Shape Orient the Building for Exposure to Prevailing Winds	✔✔✔	✔	✔✔✔	$$
SF5 - Shape the Building to Induce Buoyancy Airflow Into & Out of Interior Spaces	✔✔✔	✔	✔✔✔	$$
SF6 - Shape the Building for Solar Energy Collection	✔✔✔	✔	✔✔	$$
Landscape				
LA1 - Locate Landscaping & Landscape Structures to Shade Buildings	✔✔	✔✔✔	✔✔✔	$
LA2 - Use Landscape Design to Modify Wind Patterns & Enhance Building Ventilation	✔✔	✔✔✔	✔✔	$
LA3 - Apply Environmental Landscape Design Principals	✔✔✔	✔✔✔	✔✔	$
LA4 - Incorporate Areas for Urban Agriculture & Rooftop/Balcony Gardens	✔✔✔	✔✔	✔✔	$$
LA5 - Provide Shelter & Habitat for Urban Wildlife Through Landscape Design	✔✔✔	✔✔✔	✔✔	$
LA6 - Provide On-Site				

Composting Facilities	✔✔	✔✔	✔✔✔	$
LA7 - Use Recycled Landscape Products & Materials	✔✔	✔✔✔	✔✔✔	$
Transportation				
TR1 - Match the Area & Type of Paved Surfaces to their use.	✔✔✔	✔✔	✔✔	$
TR2 - Create a Safe & Comfortable Environment for Pedestrians	✔✔	✔✔	✔✔✔	$
TR3 - Provide Changing Rooms, Lockers & Showers for Cyclists & Joggers	✔✔	✔✔	✔✔	$
TR4 - Place Automobile Parking Fully or Partially Underground	✔	✔✔	✔✔✔	$$
TR5 - Share Parking Between Occupancies in Mixed-Use Projects	✔	✔	✔✔	$
TR6 - Provide Convenient Parking & Charging Facilities for Electric Vehicles	✔	✔✔	✔	$
Envelope				
EN1 - Design Windows to Maximize Daylighting & Views	✔✔✔	✔✔	✔✔✔	$$
EN2 - Shade Windows During Cooling Periods	✔✔✔	✔✔	✔✔	$$
EN3 - Use Roof Monitors for Daylighting Upper Floors	✔✔✔	✔✔	✔✔✔	$$
EN4 - Design Windows to Maximize Natural Ventilation	✔✔	✔✔	✔✔	$$$
EN5 - Shape & Plan the Interior to Enhance Daylight & Natural Airflow Distribution	✔✔	✔✔	✔✔✔	$$
EN6 - Incorporate Thermal Mass Into Building Structure	✔✔	✔✔	✔✔✔	$
EN7 - Select Light Colors for Exterior Finishes	✔✔	✔✔✔	✔✔	$
Materials				
MA1 - Restore & Incorporate Portions or Entire Existing Buildings in New Designs	✔✔✔	✔	✔✔	$$
MA2 - Specify Reuse of Salvaged Building & Landscape Materials	✔✔✔	✔	✔✔	$
MA3 - Design with Panel, Precut & Engineered Construction Products to Minimize Waste	✔✔	✔✔✔	✔	$
MA4 - Specify Durable				

Exterior & Interior Finishes	✔✔✔	✔✔	✔	$$$
MA5 - Design Interior Building Components for Future Disassembly, Reuse & Recycling	✔✔	✔✔	✔✔✔	$$
MA6 - Specify Wood from Sustainably Managed Sources	✔✔✔	✔✔	✔✔✔	$
MA7 - Use Low-Emission Finishes & Interior Materials to Reduce Indoor & Environmental Pollution	✔✔✔	✔✔	✔✔	$$
Water Systems				
WS1 - Specify & Install Water- & Energy-Conserving Appliances	✔✔	✔✔	✔✔✔	$$$
WS2 - Reuse Graywater for Outdoor Landscaping Irrigation	✔✔✔	✔	✔	$$
WS3 - Collect Rainwater for Outdoor Landscaping Irrigation.	✔✔✔	✔✔✔	✔	$
WS4 - Select High-Efficiency Service Hot Water Heaters & Boilers	✔✔	✔✔✔	✔	$$
WS5 - Install Heat-Recovery Systems on Wastewater Plumbing	✔✔	✔✔	✔✔	$
WS6 - Use Solar Collectors for Service Hot Water Heating	✔✔✔	✔✔	✔✔	$$
Electrical Systems				
ES1 - Select Electrical Equipment for Reduced Energy Demand & Consumption	✔✔✔	✔✔✔	✔✔	$$$
ES2 - Select Lighting Equipment for Reduced Energy Demand & Consumption	✔✔✔	✔✔	✔✔✔	$
ES3 - Integrate Daylighting & Electric Lighting in Task Oriented Spaces for Productivity & Comfort	✔✔	✔✔	✔✔✔	$$
ES4 - Integrate Daylighting & Electric Lighting in Task-Oriented Spaces for Productivity & Comfort	✔✔✔	✔✔	✔✔	$
ES5 - Maximize Impact in Sales Area with Efficient Lighting Strategies	✔✔✔	✔✔	✔✔✔	$
ES6 - Integrate Daylighting & Electric Light in High-Bay, Manufacturing & Color-Critical Areas	✔✔✔	✔✔✔	✔✔	$$
ES7 - Incorporate Photovoltaic Electricity Systems into the Building Fabric	✔✔✔	✔	✔✔	$$$
ES8 - Provide for Future Electric Vehicle Charging Stations	✔✔	✔✔✔	✔	$

HVAC Systems				
HS1 - Eliminate Mechanical System Sources of Indoor Air Pollution	✔✔✔	✔✔✔	✔✔✔	$$
HS2 - Isolate & Exhaust Indoor Point Sources of Air Pollution	✔✔✔	✔✔✔	✔✔✔	$$
HS3 - Separate Outdoor Intakes from Air Pollutant Sources	✔✔✔	✔✔	✔✔✔	$
HS4 - Provide for Additional Outdoor Air Supply Quantities in the Future	✔✔	✔✔✔	✔✔	$
HS5 - Filter or Treat Ventilation Air Supplies	✔	✔✔	✔	$
HS6 - Provide Effective Ventilation Air Distribution	✔	✔✔	✔✔	$$
HS7 - Reduce or Eliminate the Use of CFCs & HCFCs in Cooling Equipment	✔✔✔	✔✔	✔✔	$
HS8 - Select High-Efficiency Heating & Cooling Equipment to Reduce Energy Consumption & Demand	✔✔✔	✔✔✔	✔✔✔	$$
Control Systems				
CS1 - Use Digital Electronic Control of Lighting & HVAC Systems for Energy & Demand Savings	✔✔✔	✔✔	✔✔	$$
CS2 - Incorporate Daylighting Controls in Architecturally Daylit spaces	✔✔✔	✔✔	✔✔	$$
CS3 - Incorporate Occupancy Controls in Zones with Intermittent Use	✔✔✔	✔✔✔	✔	$$
CS4 - Use Variable-Speed Motor Controllers for Fans & Pumps with Modulating Flows	✔✔	✔✔✔	✔✔✔	$$
CS5 - Cool Building Mass at Night for Energy & Demand Savings	✔✔✔	✔✔✔	✔✔	$
Construction Management				
CM1 - Crush Waste Concrete & Masonry for Reuse	✔✔✔	✔✔✔	✔	$
CM2 - Use Material-Conserving Construction Practices	✔	✔✔✔	✔✔	$
CM3 - Select Safe Materials for Use On-Site	✔✔	✔✔	✔✔	$$
CM4 - Use Integrated Pest Management (IPM) to	✔✔✔	✔	✔✔✔	$$

Minimize Pesticide Use in Construction				
CM5 - Use Energy-Efficient Site Lighting & Controls & Low-Pollution Equipment	✔	✔✔✔	✔✔	$$
CM6 - Isolate Construction in Occupied Buildings to Protect Occupants	✔✔✔	✔✔	✔✔	$
CM7 - Schedule Potential Air-Polluting Operations to Reduce Occupant & Worker Exposure	✔✔	✔✔	✔✔✔	$$
CM8 - Flush with Full Outdoor Air for Seven Days Prior to Occupancy to Protect Occupants	✔✔	✔✔	✔	$$
CM9 - Thoroughly Clean Interiors, Building Cavities & HVAC Systems Prior to Furniture Installation & Occupancy	✔	✔✔✔	✔✔✔	$
Commissioning				
CO1 - Prepare & Follow a Formal Commissioning Plan	✔✔✔	✔✔✔	✔✔✔	$$
CO2 - Pretest & Functionally Test All Equipment to be Commissioned & Correct Deficiencies	✔✔	✔✔✔	✔	$
CO3 - Provide Operation & Maintenance Training for Staff	✔✔✔	✔✔	✔✔✔	$$
CO4 - Provide a Complete Final Commissioning Report to the Owner & Building Management	✔✔	✔✔	✔✔	$

The U.S. Mayors Climate Protection Agreement

(As endorsed by the 73rd Annual U.S. Conference of Mayors meeting, Chicago, 2005)

A. We urge the federal government and state governments to enact policies and programs to meet or beat the target of reducing global warming pollution levels to 7 percent below 1990 levels by 2012, including efforts to: reduce the United States' dependence on fossil fuels and accelerate the development of clean, economical energy resources and fuel-efficient technologies such as conservation, methane recovery for energy generation, waste to energy, wind and solar energy, fuel cells, efficient motor vehicles, and biofuels;

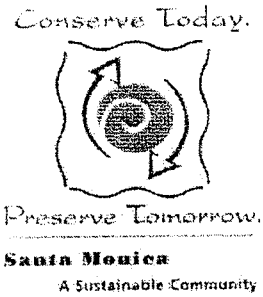
B. We urge the U.S. Congress to pass bipartisan greenhouse gas reduction legislation that 1) includes clear timetables and emissions limits and 2) a flexible, market-based system of tradable allowances among emitting industries; and

C. We will strive to meet or exceed Kyoto Protocol targets for reducing global warming pollution by taking actions in our own operations and communities such as:

1. Inventory global warming emissions in City operations and in the community, set reduction targets and create an action plan.
2. Adopt and enforce land-use policies that reduce sprawl, preserve open space, and create compact, walkable urban communities;
3. Promote transportation options such as bicycle trails, commute trip reduction programs, incentives for car pooling and public transit;
4. Increase the use of clean, alternative energy by, for example, investing in "green tags", advocating for the development of renewable energy resources, recovering landfill methane for energy production, and supporting the use of waste to energy technology;
5. Make energy efficiency a priority through building code improvements, retrofitting city facilities with energy efficient lighting and urging employees to conserve energy and save money;
6. Purchase only Energy Star equipment and appliances for City use;
7. Practice and promote sustainable building practices using the U.S. Green Building Council's LEED program or a similar system;
8. Increase the average fuel efficiency of municipal fleet vehicles; reduce the number of vehicles; launch an employee education program including anti-idling messages; convert diesel vehicles to bio-diesel;
9. Evaluate opportunities to increase pump efficiency in water and wastewater systems; recover wastewater treatment methane for energy production;
10. Increase recycling rates in City operations and in the community;
11. Maintain healthy urban forests; promote tree planting to increase shading and to absorb CO2; and
12. Help educate the public, schools, other jurisdictions, professional associations, business and industry about reducing global warming pollution.

SANTA MONICA SUSTAINABLE CITY PLAN

Adopted September 20, 1994
Update Adopted February 11, 2003
Revised October 24, 2006



Introduction

We live in a time in which increased population growth, high levels of consumption and the desire to feed growing economies have created escalating demands on our resources - natural, human and social - on a local, regional, and global scale. These demands negatively impact the natural environment, our communities and the quality of our lives. In the face of these challenges, people worldwide have developed a growing concern for the environment and a desire to live sustainably.

In 1994 the Santa Monica City Council took steps to address these pressures locally by adopting the Santa Monica Sustainable City Program. The Sustainable City Program was initially proposed in 1992 by the City's Task Force on the Environment to ensure that Santa Monica can continue to meet its current needs – environmental, economic and social - without compromising the ability of future generations to do the same. It is designed to help us as a community begin to think, plan and act more sustainably – to help us address the root causes of problems rather than the symptoms of those problems, and to provide criteria for evaluating the long-term rather than the short-term impacts of our decisions – in short, to help us think about the future when we are making decisions about the present.

The program includes goals and strategies, for the City government and all sectors of the community, to conserve and enhance our local resources, safeguard human health and the environment, maintain a healthy and diverse economy, and improve the livability and quality of life for all community members in Santa Monica. To check our progress toward meeting these goals, numerical indicators were developed and specific targets were set for the city to achieve by the year 2000 in four goal areas – 1) Resource Conservation, 2) Transportation, 3) Pollution Prevention and Public Health Protection, and 4) Community and Economic Development.

Following eleven years of implementation the Santa Monica Sustainable City Program has achieved much success. Many of the initial targets have been met or exceeded and Santa Monica is now recognized as worldwide role model for sustainability. However, we are not "there" yet. While we have made progress in the right direction, Santa Monica's economy and the activities of its residents, businesses, institutions and visitors continue to negatively impact human health and the environment. And our community does not yet provide for the basic needs of all its members. Many challenges remain before Santa Monica can truly call itself a Sustainable City.

Sustainable City Update Process

In reviewing the progress made since the 1994 adoption of the program, the Task Force on the Environment recognized the need to update and expand the Sustainable City goals and indicators to provide a more complete picture of community sustainability, and to develop new indicator targets for 2010. The Task Force felt that a comprehensive update would allow Santa Monica to build on its initial success and to better address the challenges to sustainability that remain.

The update process began in July 2001 with the formation of the Sustainable City Working Group - a large group of community stakeholders that included elected and appointed officials, City staff, and representatives of neighborhood organizations, schools, the business community and other community groups. The Working Group met numerous times over the course of 15 months to discuss the myriad issues related to the sustainability of the community. They evaluated the long-term sustainability of Santa Monica using a framework comprised of three forms of community capital that need to be managed with care in order to ensure that the community does not deteriorate. These include natural capital – the natural environment and natural resources of the community; human and social capital – the connectedness among people in the community and the education, skills and health of the population; and financial and built capital – manufactured goods, buildings, infrastructure, information resources, credit and debt.

The group proposed significant changes to the initial Sustainable City goals and indicators, and assisted with the creation of new indicator targets. Early drafts of the proposed update were revised based on a large amount of public input received during the summer of 2002.

The result of this process is this updated Santa Monica Sustainable City Plan, which represents the community's vision of Santa Monica as a sustainable city. The change in name from Sustainable City Program to Sustainable City Plan was made to better reflect the long-term comprehensive nature of Santa Monica's vision and the community's efforts to become a sustainable city.

Sustainable City Plan Structure

The Santa Monica Sustainable City Plan is founded on nine **Guiding Principles** that provide the basis from which effective and sustainable decisions can be made. These Guiding Principles have been revised and updated from the versions initially adopted in 1994.

The Plan has also been expanded to include eight **Goal Areas**:

- Resource Conservation
- Environmental and Public Health
- Transportation
- Economic Development
- Open Space and Land Use
- Housing
- Community Education and Civic Participation
- Human Dignity

Within each Goal Area are specific **Goals** which comprise the core of the community vision and represent what Santa Monica must achieve in order become a sustainable city.

For each goal specific **Indicators** have been developed to measure progress toward meeting the goals. Indicators are tools that help to determine the condition of a system, or the impact of a program, policy or action. When tracked over time indicators tell us if we are moving toward sustainability and provide us with useful information to assist with decision-making. Two types of indicators are tracked as part of the Sustainable City Plan. **System level indicators** measure the state, condition or pressures on a community-wide basis for each respective goal area. **Program level indicators** measure the performance or effectiveness of specific programs, policies or actions taken by the City government or other stakeholders in the community.

Many of the goals and indicators measure more than one area of sustainability. A **Goal / Indicator Matrix** has been included to demonstrate the linkages between these areas. The amount of overlap shown by the matrix demonstrates the interconnectedness of our community and the far ranging impact of our decisions across environmental, economic and social boundaries.

Specific **Targets** have been created for many of the indicators. The targets represent aggressive yet achievable milestones for the community. Unless otherwise noted, the targets are for the year 2010 using 2000 as a baseline. For some indicators no specific numerical targets have been assigned. This was done where development of a numerical target was determined to be not feasible or where limits on data type and availability made it difficult to set a numerical target. In many of these cases a trend direction was substituted for a numerical target.

Terms throughout this document that may be unfamiliar to the general reader are defined in a **Glossary**. Words or phrases defined in the glossary are shown in *italics* the first time they appear in the document.

Leadership, Guidance and Implementation of the Sustainable City Plan

The City's Task Force on the Environment assumed the initial leadership role on behalf of the community for the Sustainable City Program. With the update and expansion of the Sustainable City Plan into new and more diverse goal areas, the Task Force on the Environment recommended the creation of a Sustainable City Task Force (SCTF) that

includes broad representation from community stakeholders with expertise in all of the SCP goal areas The Sustainable City Task Force was created in 2003 to provide leadership and guidance for implementation of the SCP.

At the City staff level, an interdepartmental Sustainability Advisory Team (SAT) was created to coordinate existing City activities so they are consistent with the Sustainable City goals and facilitate the future implementation of innovative programs and policies to achieve the goals. Members of this group serve as Sustainable City liaisons to their respective departments.

Between them, the SCTF and the SAT are responsible for developing a comprehensive implementation plan for meeting Sustainable City goals and targets, and for coordinating implementation, both interdepartmentally and between the City and community stakeholder groups.

Reporting

Following the City Council adoption of the Sustainable City Plan, the SCTF , SAT and city staff will present Council with a baseline indicators report and a Sustainable City Implementation Plan. The indicators report will be updated and presented to Council annually. The report is intended to provide useful information to City Council, City staff and community members on progress being made toward meeting goals and targets of the Plan, and will provide a basis for decision-making about policies and actions that influence the City's ability to meet the goals and targets.

Santa Monica Sustainable City Plan
GUIDING PRINCIPLES

1. **The Concept of Sustainability Guides City Policy**
   Santa Monica is committed to meeting its existing needs without compromising the ability of future generations to meet their own needs. The long-term impacts of policy choices will be considered to ensure a sustainable legacy.

2. **Protection, Preservation, and Restoration of the Natural Environment is a High Priority of the City**
   Santa Monica is committed to protecting, preserving and restoring the natural environment. City decision-making will be guided by a mandate to maximize environmental benefits and reduce or eliminate negative environmental impacts. The City will lead by example and encourage other community stakeholders to make a similar commitment to the environment.

3. **Environmental Quality, Economic Health and Social Equity are Mutually Dependent**
   Sustainability requires that our collective decisions as a city allow our economy and community members to continue to thrive without destroying the natural environment upon which we all depend. A healthy environment is integral to the city's long-term economic and societal interests. In achieving a healthy environment, we must ensure that inequitable burdens are not placed on any one geographic or socioeconomic sector of the population and that the benefits of a sustainable community are accessible to all members of the community.

4. **All Decisions Have Implications to the Long-term Sustainability of Santa Monica**
   The City will ensure that each of its policy decisions and programs are interconnected through the common bond of sustainability as expressed in these guiding principles. The policy and decision-making processes of the City will reflect our sustainability objectives. The City will lead by example and encourage other community stakeholders to use sustainability principles to guide their decisions and actions.

5. **Community Awareness, Responsibility, Participation and Education are Key Elements of a Sustainable Community**
   All community members, including individual citizens, community-based groups, businesses, schools and other institutions must be aware of their impacts on the environmental, economic and social health of Santa Monica, must take responsibility for reducing or eliminating those impacts, and must take an active part in community efforts to address sustainability concerns. The City will therefore be a leader in the creation and sponsorship of education opportunities to support community awareness, responsibility and participation in cooperation with schools, colleges and other organizations in the community.

6. **Santa Monica Recognizes Its Linkage with the Regional, National, and Global Community**
   Local environmental, economic and social issues cannot be separated from their broader context. This relationship between local issues and regional, national and global issues will be recognized and acted upon in the City's programs and policies. The City's programs and policies should therefore be developed as models that can be emulated by other communities. The City will also act as a strong advocate for the development and implementation of model programs and innovative approaches by regional, state and federal government that embody the goals of sustainability.

7. **Those Sustainability Issues Most Important to the Community Will be Addressed First, and the Most Cost-Effective Programs and Policies Will be Selected**
   The financial and human resources which are available to the City are limited. The City and the community will reevaluate its priorities and its programs and policies annually to ensure that the best possible investments in the future are being made. The evaluation of a program's cost-effectiveness will be based on a complete analysis of the associated costs and benefits, including environmental and social costs and benefits.

8. **The City is Committed to Procurement Decisions which Minimize Negative Environmental and Social Impacts**
   The procurement of products and services by the City and Santa Monica residents, businesses and institutions results in environmental, social and economic impacts both in this country and in other areas of the world. The City will develop and abide by an environmentally and socially responsible procurement policy that emphasizes long-term values and will become a model for other public as well as private organizations. The City will advocate for and assist other local agencies, businesses and residents in adopting sustainable purchasing practices.

9. **Cross-sector Partnerships Are Necessary to Achieve Sustainable Goals**
   Threats to the long-term sustainability of Santa Monica are multi-sector in their causes and require multi-sector solutions. Partnerships among the City government, businesses, residents and all community stakeholders are necessary to achieve a sustainable community.

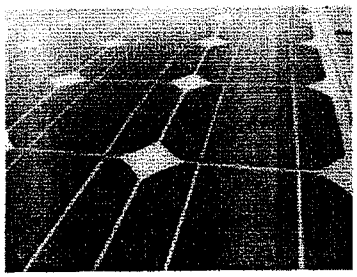
10. **The Precautionary Principle Provides a Complimentary Framework to Help Guide City Decision-Makers in the Pursuit of Sustainability**
    The Precautionary Principle requires a thorough exploration and careful analysis of a wide range of alternatives, and a full cost accounting beyond short-term and monetary transaction costs. Based on the best available science, the Precautionary Principle requires the selection of alternatives that present the least potential threat to human health and the City's natural systems. Where threats of serious or irreversible damage to people or nature exist, lack of full scientific certainty about cause and effect shall not be viewed as sufficient reason for the City to not adopt mitigating measures to prevent the degradation of the environment or protect the health of its citizens. Public participation and an open and transparent decision making process are critical to finding and selecting alternatives.

Solar Santa Monica

THE PROGRAM

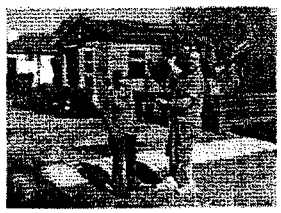
Solar Santa Monica – the next step

Santa Monica is committed to becoming a "sustainable city." A number of active programs already help raise awareness and maintain public support for a cleaner, more environmentally responsible lifestyle.



Solar Santa Monica represents the next logical step in this community-wide effort. It includes ways to *save* energy by making homes and businesses more efficient – and it includes ways to *produce* energy by installing solar panels on individual buildings and on community sites throughout the City. Its goal is take a big step toward being energy self-sustaining by 2020.

Easy for you to participate



Solar Santa Monica approaches energy use in a new way. With the help of a full-time team of energy professionals, Solar Santa Monica has designed a process that will make energy decisions easier for residents. At the same time, Solar Santa Monica is determined to be sure all energy decisions make sense and that installations are of the highest quality.

Getting the most bang for your buck

The process begins with an examination of each home or business to find ways to reduce energy requirements. We assess appliances, the building envelope, electronics, heating and air conditioning, lighting, water and safety. After taking full advantage of energy efficiency potential we consider adding solar.

Bundling lower-cost efficiency upgrades with higher-cost solar significantly improves overall rate of return on the investment.

Simple choices, no surprises

To help simplify decision making, Solar Santa Monica has developed sample "packages" that combine efficiency and solar upgrades to show what a typical resident might expect in the way of equipment and costs.

Solar Santa Monica Package Providers have agreed to provide these typical residential upgrades at a fixed price. Working with standardized components means contractors can plan ahead, buy in bulk, train their people for maximum effectiveness – and pass on related savings.

Commercial buildings also take advantage of program savings and professional assistance. But with the exception of fixed per kW solar prices, each commercial project will be considered a custom installation.

NEWS

Town Hall

Town Hall – An enthusiastic crowd gathered at the Main Library on November 1 to celebrate Solar Santa Monica's first year.

Mayor Richard Bloom called residents and installers from the local community up onto the stage to recognize them for taking concrete action.

Santa Monica's accomplishments were put into a larger context by Terry Tamminen, Governor Schwarzenegger's chief energy policy advisor. "I talk about Solar Santa Monica everywhere I go," he said.

continued...

Banner Year

Solar Santa Monica Partners

The City of Santa Monica has selected a special environmental consulting firm, EcoMotion, to help the Energy and Green Building Programs office manage the day-to-day affairs of the program. These two groups make up the Solar Santa Monica team.

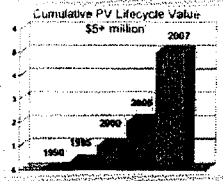
Solar Santa Monica has selected Preferred Providers (contractors who do actually do the work), is serving as a liaison with the City to streamline permitting, offers discounts through local appliance and hardware stores, and is working with local financing organizations to develop financing just for the program. We are involving the entire community in this effort!

Attention Participants. As our interest list continues to grow, we must request that residents have the historical data on their energy use available BEFORE the On-Site Energy Assessment. If you do not have copies of 12 months of your bills, you can get them on-line by clicking here for instructions for your Edison bills, and clicking here for Gas Co bills.

At the Town Hall, EcoMotion President Ted Flanigan highlighted 2007 Solar Santa Monica accomplishments.

As the chart shows, this year has seen a doubling of solar capacity for the City.

At a simple rate of 15 cents/kWh, the City's installed solar has a lifecycle value of over $5,250,000.



Over 335 kW were installed this year, with the City itself leading the way.

continued...

City of Santa Monica

Solar Santa Monica

SOLAR SANTA MONICA RESIDENTIAL PACKAGES

Solar Santa Monica has developed four sample packages to show how typical efficiency upgrades work together with solar, for apartments and homes.

The On-Site Energy Assessor is familiar with each item, and the Package Providers have agreed to provide these items at a fixed price so as to simplify all decision making.

Our 50 demonstration sites will – to the extent possible – include these typical efficiency and solar upgrades.

The sample packages are:

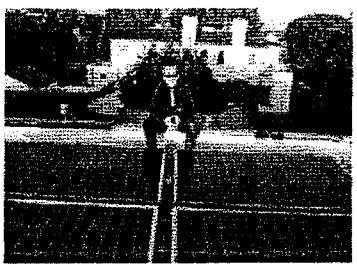
- Solar + Efficiency Standard - most popular
- Super Solar - most comprehensive
- Single Family - a minimum standard
- Basic Apartment - every upgrade makes a difference

At the walk-through, the home will be examined for savings potential in nine areas:

1. Appliances
2. Building Envelope
3. Electronics
4. HVAC (Heating, Ventilation, Air Conditioning)
5. Lighting
6. Water Heating
7. Water Savings
8. Safety
9. Solar

The assessment for roof-top solar potential includes the orientation of the roof, available roof space, type of roof, current electrical usage (for PV – Photovoltaic – panels) or current water usage (for solar thermal – hot water – collectors).

In the case of an apartment or a condo, where a rooftop installation is impossible or impractical, the solar option consists of the purchase of shares of a community solar trust. The trust will invest in solar installations at neighborhood locations – in a park, on a parking lot, etc. – so that everyone is involved in providing "clean energy" for the City.



Building the program around standardized components has a number of advantages. It reduces choices and thus makes decisions easier for **residents**. It means **contractors** can plan ahead, buy in bulk, train their people for maximum effectiveness and pass on related savings. Standardized components make it easier for the **City** to manage and approve the upgrade process. Finally, having standardized components encourage **lenders** to finance the

SOLAR SANTA MONICA: SOLAR STANDARD PACKAGE

Sample Solar + Efficiency Standard Package
Gross cost: $22,800
Discounted cost: $14,900
Typical savings over 5 years (current rates): $7,230
Simple rate of return on investment: 9.8%

Solar savings alone over 30 years: $52,800
(assumes 5300 kWh/year saved at $.15/kWh, with 5% annual increase in utility costs)

This package is the cornerstone of the Solar Santa Monica program. It starts with a thorough assessment of the home for efficiency improvements, and then considers solar. Gross costs include the purchase of equipment plus the cost of expert installation. Discounted costs are calculated by subtracting state, city and utility rebates plus a $2,000 Federal income tax credit.*

This representative sample uses a 2 kW solar electric installation. At the walkthrough, the Solar Santa Monica advisor and the resident will decide the best size for that particular home.

Solar Santa Monica: Solar Standard Package

Class	Measures	Quantity
Walkthrough		
	Energey usage assessment	1
Appliances		
	21 cubic foot Estar refrigerator (assume $800 allowance)*	1
Building Envelope		
	Window Tune Up	2
	Door Weather Strip	2
	Door Sweep	2
	Switch and Outlet Insulation	12
Electronics		
	Smart Strip power strip	1
HVAC		
	Table Fan	1
	Clean/replace A/C Filters	1
	Re-program thermostat	1
Lighting		
	7 watt CFL	8
	15 watt CFL	4
	23 watt CFL	6
	Par 40 23 watt reflector lamp	4
	55 watt torchiere	1
	Energy Star circline fixture 40w	1
	Energy Star circline fixture 20w	1
	EStar motion security light 40w	1
	Energy Star exterior lights 18w	1
	LED nightlights	2
Solar		
	2 kW AC photovoltaic system	1

Water Heating	Insulate hot water pipes	1
Water Saving Measures	Low-flow showerhead	2
	Low-flow faucet aerator	2
Safety and Referrals	Safety Check	1
	Referral Sheets	1

*Incentives or tax credits apply. Please consult with your own tax advisor to understand tax implications and confirm your eligibility for tax credits.

Home | Sign Up | Partners | Contact Us | Solar Basics | Site Map

City of Santa Monica

Staffing Requirements (Option 3)

Staff requirements have been determined by looking at the previous FY 06'-07 in which Culver City issued 2,312 Building Safety permits, 801 Fire Prevention permits, and 435 Engineering permits for a total 3,548 permits.

During this year, the proposed Point Based System would have applied to a minimum of 283 permits:

- 3 commercial permits
- 124 commercial alteration permits
- 2 garage permits
- 3 multifamily permits
- 3 multifamily alteration permits
- 5 single family dwelling permits
- 143 single family dwelling alteration permits.

All of these permits were for either new ground-up construction or additions and renovations, and are typically reviewed by the four primary Culver City permitting Divisions: Building Safety, Planning, Engineering, and Fire Prevention. Currently, each Division conducts two reviews with one initial plan check (in which plan check corrections are made) and one final check to verify the correctness of the resubmitted plans. This process corresponds to approximately 2,264 staff plan checks and on-site1, 936 inspections.

Additionally, the Point Based System would partially apply to some aspects of other permits, such as roofing requirements (161 roofing permits), plumbing requirements (488 plumbing permits) and energy efficiency requirements (343 mechanical permits and 581 electrical permits) for a total of 1,230 permits issued in Culver City in FY 06'-07'.

Staff estimates adding the plan check requirements of a Point Based System in Culver City would add an average of one staff hour per fully applicable permit and an average of 1/2 staff hour per partially applicable permit:

283 permits x 1 hour = 283 hours
+ 1,230 permits x 1/2 hour = 615 hours
Additional plan check staff hours = 898

Further, staff estimates that adding the inspection requirements of a Point Based System in Culver City would add an average of one staff hour per fully applicable permit and an average of 1/2 staff hour per partially applicable permit:

283 permits x 1 hour = 283 hours

+ 1,230 permits x 1/2 hour = 615 hours
Additional inspection staff hours = 898

The total additional estimated staff hours to implement a point based system in Culver City is equal to 1,796 staff hours. One full-time staff is equivalent is 2,080 hours per year. As a general rule of thumb, each full time staff position equals approximately 1,800 productive staff hours per year once vacation, sick leave and holidays are accounted for (see below). Therefore, Option 3 would require at least one additional staff member.

Plan Check/Inspection Staff Annual Hourly Breakdown

Division	Staff	Annual Staff Hours	Area of Responsibility
Building Safety	Plan Check Engineer	1,880 hours (1)	California Building Code
Building Safety	6 Inspectors	11,280 hours	California Building, Plumbing, Mechanical, and Electrical Codes
Planning	3 Planners	5,640 hours	Culver City Zoning Codes
Engineering	2 Engineers	3,760 hours	CCMC/Civil Engineering and Public Works standards
Engineering	1 Inspector	1,880 hours	CCMC/Civil Engineering and Public Works standards
Fire Prevention	2 Inspectors/plan checkers	3,760 hours	California Fie Codes.

Total annual staff hours 28,200 hours

(1) annual available staff hours = 52 weeks - 2 weeks holidays - 3 weeks vacation = 47 weeks x 40 hours/ week = 1,880 annual hours per staff member.

(2) 18,800 annual plan check staff hours / 3,548 annual permits = 5.2 average staff plan check hours/ permit.

(3) 9,400 annual inspection staff hours / 3,548 annual permits = 2.6 average staff inspection hours/ permit.

(4) As noted in the report, the 57 optional and 18 mandatory categories of the Points Based system would fully apply to a minimum of 283 permits, and would partially apply to an additional 1,230 permits.

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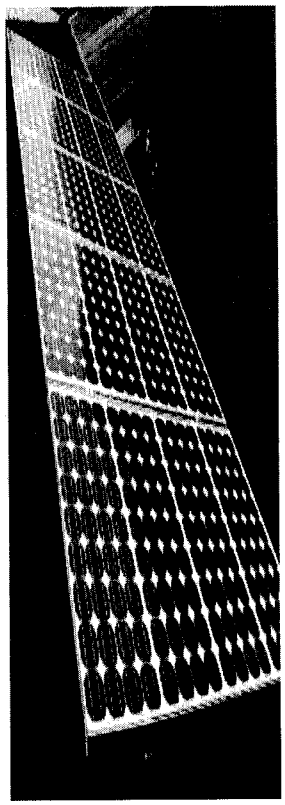
Culver CITY
BUILDING SAFETY DIVISION

Effective Spring 2008

Culver City Building Safety Division Mandatory Solar Photovoltaic Requirement

Culver CITY GOING GREEN

All new construction in Culver City of 10,000 s.f. or greater, additions of 10,000 s.f. or greater, and major renovations of 10,000 s.f. or greater are required to install 1 kw of solar photovoltaic power per 10,000 s.f. of applicable building area.



The requirement doesn't apply to one and two family structures, garages, or parking structures.

"Major" renovation of 10,000 s.f. or greater is defined as a renovation of over 50% of the value of the applicable portion of the existing building, as determined by the L.A. County tax assessor's value of the applicable portion of the building, or a certified appraisal of the applicable portion of the building.

Alternate: A project developer may choose to install the required amount of solar photovoltaic power on a different building or structure also located in Culver City, with the approval of Culver City staff.
A project developer may choose to pay an in-lieu fee to the City of Culver City in an amount equal to the installed cost of the required amount of photovoltaic power, with the approval of Culver staff. The in-lieu fee will be based on the current market installed cost of solar photovoltaic power at the time of the payment.

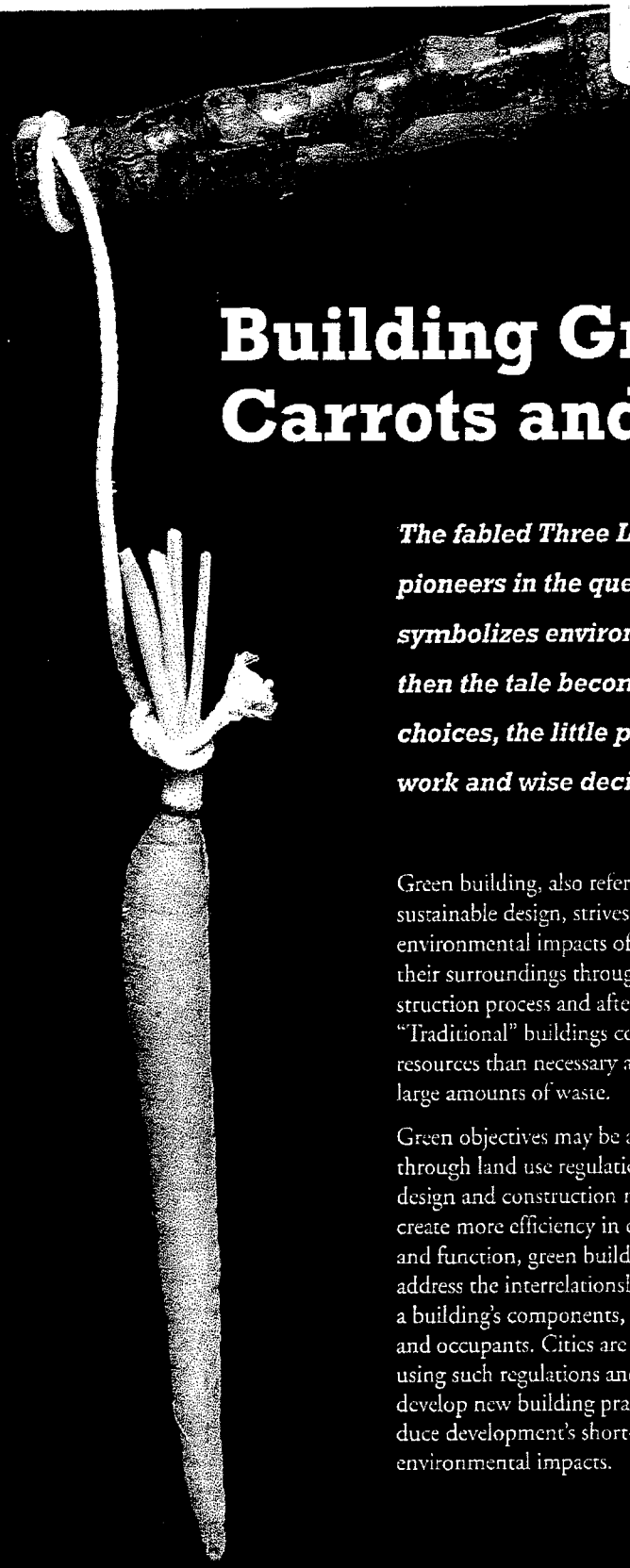
Solar photovoltaic power must be installed concurrently with the other electric work to be installed in the project. The solar photovoltaic power may be installed under its own electrical permit or may be installed as part of the overall electrical permit.

Solar photovoltaic systems may be either grid-intertie systems or may be stand alone systems.

Please also refer to the "Culver City Solar PV Inspection and Submittal guidelines"

Please consult the Culver City Building Safety Division Electrical Inspector for further information, and please note that all solar photovoltaic systems are also reviewed by the Culver City Fire Prevention Division for general firefighter roof access.

CRAIG JOHNSON, RA, CBO, BUILDING OFFICIAL
BUILDING SAFETY DIVISION TEL 310-253-5800 FAX 310-253-5824



Building Green With Carrots and Sticks

by Christi Hogin

The fabled Three Little Pigs were probably the earliest recorded pioneers in the quest for sustainable buildings. If the Big Bad Wolf symbolizes environmental forces and nonrenewable resources, then the tale becomes allegorical and apt. Through their building choices, the little pigs demonstrate that survival requires hard work and wise decisions.

Green building, also referred to as sustainable design, strives to reduce the environmental impacts of buildings on their surroundings throughout the construction process and after its completion. "Traditional" buildings consume more resources than necessary and generate large amounts of waste.

Green objectives may be achieved through land use regulation, building design and construction methods. To create more efficiency in construction and function, green building programs address the interrelationships between a building's components, surroundings and occupants. Cities are increasingly using such regulations and incentives to develop new building practices that reduce development's short- and long-term environmental impacts.

Regardless of the specific regulations your city may consider, certain legal issues arise from a city's desire to "go green" (or greener).

The First Legal Issue: Building the Program on The Right Legal Foundation

A city may impose mandatory green building regulations or develop incentive programs within these three general frameworks:

1. By making local amendments to the California Energy Code;
2. By making local amendments to the California Building Standards Code (CBSC); or
3. By enacting local zoning regulations.

continued on page 40

Looking for Footnotes?

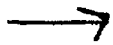
A fully footnoted version of this article is available online at www.westerncity.com/articles.

Christi Hogin is an attorney with the law firm of Jenkins & Hogin, LLP, which specializes in representing public agencies. She currently serves as city attorney for the cities of Lomita and Malibu and can be reached at <CHogin@localgovlaw.com>.

Building Green With Carrots and Sticks, continued from page 13

Each specific regulation requires independent analysis and likewise each option presents certain legal considerations.

Amending the California Energy Code. The Energy Efficiency Standards for Residential and Nonresidential Buildings are codified in the California Energy Code, which is part of the California Building Standards Code (CBSC). Cities must adopt the CBSC but may also make local amendments to it. A city may require more stringent energy efficiency standards on construction to help meet green objectives. As with all amendments to the CBSC, a city must find that the



proposed local amendments are reasonably necessary based on unique local climatic, geologic or topographic conditions. There are additional requirements for amending the California Energy Code.

To adopt more stringent energy code standards, a city must prepare a study showing how it determined that the local amendment would result in energy savings. The local amendments must be cost effective, and the city must document its basis for determining that the standards are cost effective. Both the California Building Standards Commission and the California Energy Commission (CEC) must approve local energy efficiency standards. Although considerable paperwork is involved in getting such amendments approved, the CEC actively encourages cities to adopt more stringent energy efficiency requirements. Cities can expect CEC approval of reasonably justified local amendments.

California Energy Code amendments are suitable for those provisions of a green program that directly address energy performance standards. For example, Marin County recently increased performance standards for less-efficient large homes. Santa Monica requires that all windows in new structures be double-glazed and meet a specific standard. Culver City requires new commercial and multifamily construction to install 1 kilowatt-hour of solar photovoltaic power per each new 10,000 square feet of construction. Culver City's code also provides that if the new project's geometry does not permit compliance with the requirement, the applicant may pay an equivalent amount into a city fund to pay for solar systems on city facilities or other local nonprofit entities. Thus, one way or the other, energy efficiency is increased and the demand for off-site electricity is reduced.

Amending the California Building Standards Code. The Legislature enacts uniform statewide building standards. The CBSC is a compilation of these building standards and is binding on the state and other public agencies.

Cities may amend the CBSC to require green building measures; for example, requiring certain types of building materials in new construction, if the amendments are reasonably necessary because of unique local climatic, geologic or topographic conditions. This raises an interesting issue for communities that want to impose higher standards in response to global climate change. The law requires that the more stringent standards must be necessitated by *local* conditions, so *global* climate change alone may be insufficient justification without a local contributing factor.

Amendments to the CBSC are suitable for those provisions of a green program that regulate types of building materials and methods. For example, local ordinances may require use of specified amounts of recycled building materials. Malibu adopted extensive amendments to the plumbing code to require tertiary treated water in connection with all new on-site wastewater treatment systems.

Enacting a Zoning Ordinance. Green land use regulations may be constructed on the strong foundation of a city's police powers to protect the public health, safety and welfare of its residents. A city's police power can support any land use regulation that is reasonably related to the public welfare. A city may enact green building regulations within its zoning ordinance as long as the regulations do not conflict with state law, are not impermissibly discriminatory and are neither arbitrary nor capricious.

Amendments to the zoning code are suitable for those provisions of a green program that offer development standard incentives for projects that incorporate green elements into their design and construction. For example, incentives could include additional height, density, reduced processing fees or expedited permit processing. Many ordinances also require an applicant to make choices that result in measurable reductions of impacts or reach a minimum level of LEED certification. The U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Green Building Rating System is a program widely recognized and used by cities as a way to measure the "greenness" of a project.

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amended its existing green requirements and required public buildings to achieve a LEED-certified rating. Phase Two established a mandatory green building point system for private development and incentives for high-achieving projects. West Hollywood's program is a good example of a comprehensive ordinance with both incentive-based (the carrot) and mandatory (the stick) components.

Certain aspects of incentive programs have proven controversial. Some people may question the wisdom of relaxing certain development standards in exchange for greener designs. Ultimately, these issues are policy questions that involve weighing competing interests. As a legal matter, as long as reasonable use can be made of a property without the incentive, voluntary incentives are a permissible way of encouraging compliance with more rigorous standards. ■

A Road Map to Going Green

1. Inventory the existing city policies and programs. Most cities are surprised to see how many green regulations are already in their codes.
2. Reach out to the stakeholders: residents, business owners, developers and environmentalists. People who participate in a program's formation are more committed to its success.
3. Determine the program focus: public, residential, commercial and/or industrial uses.
4. Enact a program. Decide whether it will be mandatory, voluntary or hybrid.
5. Create program marketing materials.
6. Train city staff, local architects, builders and realtors.
7. Launch a green municipal project to build community interest and set an example.

Local Governments Should Take Lead on Global Warming

By JARED BLUMENFELD and DEAN KUBANI

JUST as in politics, all greenhouse gas emissions are local. Cities now produce 75 percent of all the world's greenhouse gas emissions, so climate solutions that ignore municipalities do so at the planet's peril. Local governments are on the front lines in fighting the sources of global warming: from revising building codes, promoting energy efficiency, providing recycling and compost services, requiring renewable fuel and energy use, and managing transit systems.

Two years ago, California passed the landmark Global Warming Solutions Act (AB32) to reduce carbon emissions to 1990 levels by the year 2020. The task of determining how to achieve this goal was given to the California Air Resources Board. But turning AB32's words into action has been glacial. The state released its first of many draft plans in June. The final plan is scheduled for adoption in November with many regulations not taking effect until 2012.

More than 852 U.S. cities, including San Francisco and Santa Monica, have committed to reduce their greenhouse gas emissions to Kyoto Protocol levels (or beyond). While we have no national greenhouse gas reduction goal or national carbon emissions trading system, we're a global leader when it comes to grassroots efforts. To maintain this momentum, U.S. cities need authority, funding and accountability for meeting their greenhouse gas reduction targets.

Before we develop a new set of complex regulations to help us implement AB32, we could learn a lot by recycling a few ideas from our past.

In the 1980s, California was running out of space to put our trash. The state recycled only 11 percent of all waste and landfills were reaching capacity. In 1989, the state legislated that every city and county achieves a 50 percent recycling rate by 2000. The implementation was precedent setting.

All local governments are required to report annually to the state in great detail on the types and quantities of waste diverted from landfills through reduction, recycling and composting activities, as well as how they are going to meet the targets. Today, each of California's 536 local jurisdictions knows how much of their paper, scrap iron, lawn trimmings, bottles and cans, and even building materials, is being recycled. Any jurisdiction failing to reach the recycling target can be fined $10,000 a day.

Flexible approach

Rather than enacting a cookie-cutter regulation that would work for no one, the recycling law allowed each county to adopt an implementation strategy that would work for its communities. San Francisco has been able to work with its residents and businesses to recycle and compost 70 percent of the waste (it was at 35 percent in 1990). This same basic legal framework should be applied to the issue of climate change.

Under this local carbon dioxide reduction model, counties would be responsible for reducing carbon emissions from building energy, agriculture, manufacturing and, of course, waste management. Counties would work both locally and regionally to reduce vehicle miles traveled.

The state would continue to have jurisdiction over large emitters, such as oil refineries and energy utilities, and over developing a low-carbon fuels policy.

The state needs to begin by establishing county-level reporting requirements and procedures, and setting aggressive emission-reduction requirements.

Cities and counties will then need financial incentives to develop the critical infrastructure that reducing and measuring carbon emissions will require. Recent reports suggest that building dense transit-oriented urban areas can lead to a 40 percent reduction in carbon emissions. Local land-use and zoning policies have therefore become one of the single most important tools in combating climate change.

Finally, the state should look to its recycling program, and hold cities and counties accountable for meeting emission reduction targets, and reward those who achieve more.

Continuing California's legacy of local environmental action will serve us well in dealing with the global issue of climate change

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Jared Blumenfeld directs San Francisco's Department of Environment. Dean Kubani heads the Office of Sustainability and the Environment for Santa Monica.