

City of Culver City, California
City Council Agenda Item Report

Meeting Date: March 9, 2009		Item Number: <u>A-2</u>	
AGENDA ITEM: Introduction of Ordinance Amending Chapter 15.02, Buildings, Structures and Equipment, of the Culver City Municipal Code, to Add a New Subchapter 15.02.1100, et seq. Entitled "Green Building Program and Requirements."			
Contact Person/Dept.: Craig Johnson Sol Blumenfeld		Phone Number: 310-253-5802	
Fiscal Impact: Yes ☒ No ☐		General Fund: Yes ☐ No ☒	
Public Hearing: ☒		Action Item: ☒ Attachments: ☒	
Public Notification: Master E-mail notification List (03/04/09), public stakeholders, public speakers at past green building City Council discussions. Advertisement in the <i>Culver City News</i> (2/19/09)			
Department Approval: Sol Blumenfeld (03/05/09)		City Attorney Approval: Carol Schwab (by H. Baker) (03/05/09)	
Chief Financial Officer Approval: Jeff Muir (by N. Kimball (03/05/09)		City Manager Approval: Jerry Fulwood (03/05/09)	
<u>RECOMENDATION:</u> Staff recommends the City Council introduce an Ordinance amending Chapter 15.02, Buildings, Structures and Equipment, of the Culver City Municipal Code, to add a new Subchapter 15.02.1100, et seq. entitled "Green Building Program and Requirements." <u>BACKGROUND:</u> In September 2008 staff presented three options for a green building standards program to the City Council (Attachment 2). The first option included a partial permit fee refund to projects that obtain Leadership in Energy and Environmental Design (LEED®) certification. It also included a "Green Zone" incentive program in conjunction with the Culver City Redevelopment Agency "Area Improvement Plan" area on West Washington Boulevard. The second option proposed a list of 22 mandatory green building requirements applicable to all new multi-family and commercial construction in Culver City. The third option included a mandatory Green Building Point System with increasing requirements based on the size of the project. During that meeting, the City Council directed staff to further review LEED® certification requirements for all projects of 50,000 square feet or higher, to refine the menu of mandatory items applicable to all new construction and allow for flexibility in developer compliance and expand the green building stakeholder meetings to include representatives from the Culver City Chamber of Commerce, Culver City			
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Unified School District and contractors. Additionally, the City Council requested that public education efforts be enhanced and that the next green building stakeholder meetings include Culver City Chamber of Commerce representatives as well as construction contractors.

In October 2008 staff met with the City Council Sustainable City Subcommittee to further refine this direction and in December 2008 staff met again with the green building stakeholders group. (Attachment 3) During the stakeholders meeting, staff presented the refined options and garnered feedback from the group. The comments focused on the following areas:

- Revaluation of mandatory point items as some “green “ projects may not be able to meet requirements based on building type (concrete, steel, wood, etc.) and remove items that may already be required by other existing ordinances.
- Consider holistic “parallel track” project review including a “green building review board” consisting of local experts that would consider projects that cannot meet the mandatory requirements based on design features.
- Consideration of waste removal as an eligible point element, and develop list of professional “scavengers/recyclers” that could remove unwanted debris.
- Investigate efficiency of transformers on older buildings and determine if increased efficiency could be integrated into the program.
- Research AB 811 regarding bond program to finance solar photovoltaic systems.
- Propose all of the green building options as one integrated program.

Staff also received correspondence from Sony and the Chamber of Commerce (Attachment 4) outlining their comments as well.

DISCUSSION:

As directed by Council and advised by the green building stakeholders groups, the Green Building Program would include the following three components:

A. Mandatory Menu for projects up to 49,999 square feet

This program would be applicable to all new buildings of 49,999 square feet or less of gross floor area and major renovations to existing buildings of 49,999 square feet of gross floor area, where such renovation is equal to at least 50% of

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the valuation of the existing space or structure, not including single family and two family residences.

Qualifying projects as described above must comply with 20 of 25 items as set forth in Section 15.02.1115.A of the proposed Ordinance, as follows.

1. Heating, ventilating and air conditioning (HVAC) units shall have a minimum seasonal energy efficiency rating (SEER) of 17;
2. Gas heating units shall be a minimum of 93% energy efficient;
3. All heating and cooling ducts shall be located within the space to be heated and cooled;
4. Roof and floor structures abutting an exterior space shall be a minimum value of R-38 (thermal resistance value); and all exterior walls shall be a minimum value of R-28;
5. Radiant barriers shall be installed under all new roof sheathing;
6. All new exterior glass shall be a minimum value of U.35 (measure of heat conducting properties) and a minimum value of .30 SHGC (solar heat gain coefficient);
7. Low slope roofs shall be a minimum value of 75% SRI (solar reflectance index);
8. Exterior shading shall be provided over all west, south and east facing exterior glass. Where exterior shading is infeasible, all new exterior glass shall be a minimum value of U.32 and a minimum value of .27 SHGC;
9. All new interior and exterior lighting shall be fluorescent, LED or other type of high efficiency lighting;
10. All new lighting installed in restroom or bathroom areas shall be fluorescent, LED or other type of high efficiency lighting and shall be motion sensor controlled. All new exhaust fans installed in restroom or bathroom areas shall be motion sensor controlled;
11. All new lighting installed in any corridor, entryway or other typically unoccupied space shall be fluorescent, LED or other type of high efficiency lighting and shall be motion sensor controlled. Minimum base level lighting shall be permitted;
12. All new lighting installed in a garage or parking structure shall be motion sensor controlled. Minimum base level lighting shall be permitted;
13. Water closets shall be dual flush models;
14. Urinals shall be waterless models;
15. Water heaters installed for the heating of water in residential units shall be tankless models;
16. Two two-inch electrical conduits shall be installed from the roof to the electrical panels for future solar photovoltaic installation for each unit in residential and commercial buildings. (Qualifying Projects that are subject to the

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provisions of CCMC Section 15.02.1005, may not use this item toward satisfying the requirements of this Section.);

17. A 20 square foot area to house recyclable material containers shall be provided. This requirement shall be in addition to any other CCMC requirements related to solid waste and recyclable material containers;

18. Multistory buildings shall provide separate trash chutes for recyclable and non-recyclable materials and waste. Such chutes shall discharge directly into separate recyclable and non-recyclable materials and waste containers. This requirement shall be in addition to any other CCMC requirements related to trash chutes;

19. One duplex weather proof (WP) ground fault circuit interrupter (GFCI) outlet shall be installed for every eight parking spaces to be utilized for future electric "plug-in" vehicles.

20. All doors leading from heated or cooled spaces to non-heated and non-cooled spaces shall be insulated doors and shall include weather-stripping and adequate closers.

21. Any new on-site, ground-level paving, which is open to the sky, shall be permeable.

22. All on-site landscaping shall be low-water, drought tolerant. All irrigation shall be bubbler systems.

23. All wood floor and roof structures shall be constructed with 90% engineered lumber.

24. A minimum of 50% of the overall building insulation shall be formaldehyde free and recycled content. A minimum aggregate of 60% of the wall, ceiling, and floor insulation shall be cellulose, cotton ball, or bio-based foam.

25. 1kw of solar photovoltaic power shall be installed. (Qualifying Projects that are subject to the provisions of CCMC Section 15.02.1005 may not use this item toward satisfying the requirements of this Section.).

2. Mandatory LEED® "Certified" Performance Level or higher for projects that exceed 50,000 square feet.

This program would be applicable to all new buildings of 50,000 square feet or more of gross floor area and major renovations to existing buildings of 50,000 square feet or more of gross floor area, where such renovation is equal to at least 50% of the valuation of the existing space or structure, not including single family and two-family residences.

The U. S. Green Building Council (USGBC) LEED® rating system for New Construction and Major Renovations Version 2.2 is the current LEED® rating system for such projects.

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There are six categories with a total of 69 possible points:

1. Sustainable Sites: 14 possible points.
2. Water Efficiency: 5 possible points.
3. Energy & Atmosphere: 17 possible points.
4. Materials & Resources: 13 possible points.
5. Indoor Environmental Quality: 15 possible points.
6. Innovation & Design Process: 5 possible points.

Performance thresholds are as follows:

- Certified = 26-32 points,
- Silver = 33-38
- Gold = 39-51
- Platinum = 52-69 possible points.

Qualifying projects as described above will be required to obtain a LEED® “Certified” Performance level or higher, though not necessarily LEED® Certification. Applicable projects will be encouraged to obtain full LEED® “Certified” status and be eligible to be listed on the USGBC LEED® website.

All qualifying projects must comply with the procedure set forth in Section 15.02.1115.B of the proposed Ordinance, as follows:

1. Prior to the issuance of a building permit, Applicant shall submit the following:
 - a. Evidence that a LEED®-AP is one of the members of the Project team.
 - b. Evidence that the Project has been registered with USGBC’s LEED® program.
 - c. A LEED® checklist, including points allocated to the “Innovation and Design” category, which demonstrates that the Project meets the selected LEED® Rating System at the “Certified” level or higher.
 - d. A signed declaration from the LEED®-AP member of the Project team, stating that the plans and plan details have been reviewed and the Project meets the intent of the criteria for certification of the selected LEED® Rating System at the “Certified” level or higher.
2. The Project shall comply with USGBC’s “3 point margin of error” for LEED® certification.

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3. Applicant shall submit to the Building Official copies of all correspondence between the Applicant and USGBC regarding the Project.

Further, LEED® Checklist and items in the construction drawings will be plan checked by City staff concurrently with all other routine City reviews. Errors in either the LEED® Checklist or items in the construction drawings will be noted as plan check corrections concurrently with all other City review comments. Once the project has been approved by all City plan reviewers including the LEED® review and the construction permit has issued, the project applicant has the responsibility of informing City staff of any changes to the LEED® items. City staff may issue field correction notices and/ or stop work orders for any discrepancies of the LEED® items, as is the same with all City requirements. All filings of the project LEED® AP with the USGBC LEED® Program are to be copied to City staff. Once the project construction is finished the project developer is encouraged to complete the LEED® approval with the USGBC LEED® Program. Projects obtaining LEED® Certification will be eligible for listing on the Culver City web page.

3. "Green Zone" Incentive Program

This program would allow for permit fee reductions for installation of any approved energy saving construction within the City's designated "green zones." It is proposed that these initial green zones be co-terminus with the two Area Improvement Plans already identified and include the portion along West Washington Blvd from Wade to Beethoven Avenues (Phase I) and Centinela Boulevard to Colonial Avenue (Phase II).

Staff proposes a 1 building permit fee waiver not to exceed \$5,000 for green building improvements in the Green Zone. An example is illustrated below:

Project Scope	Project Valuation	Total Permit Fees	Building Permit Fee	Total Amount of Incentive
Improve energy efficiency through upgraded insulation, exterior doors and windows.	\$40,000	\$2,200	\$650	\$650

Staff recommends the Green Zone program budget be capped at \$20,000 per year, distributed on a first come, first served basis. Staff recommends that the Green Zone program be in effect for five years for each zone designated in order to effectively allow business and property owners to participate. If all Green Zone funds are expended each year for each of the 5 program years the total 5 year cost to the Redevelopment Agency would be \$100,000. Should the

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City Council determine to implement this item, an appropriate item would be placed before the Agency for its consideration at a future meeting.

Other Green Building Program Components/Considerations

Urban Trees Requirements:

There are many documented benefits of urban trees, safer walking environments, less drainage structure, and many others. (Attachment 4)

Particularly important are the pollution reduction benefits. A single mature tree can absorb 48 pounds of carbon dioxide reduction per year, and can release into the atmosphere enough oxygen to support two human beings. In addition trees also remove other gaseous pollutants by absorbing them with normal air components through the stomates in the leaf surface. Trees absorb sulfur dioxide, ozone, nitrogen oxides, and other particulates from smoke produced by burning of carbon fuels. There is a 60% reduction in street level particulates on streets with street trees.

One sugar maple tree 12' trunk height, planted along a roadway, will remove in each growing season 60 mg cadmium, 140 mg chromium, 820 mg nickel, and 5,200 mg lead from the environment. Over a 50 year lifetime, one full size tree generates \$31,250 of oxygen, provides \$62,000 of air pollution control and recycles \$37,500 of water. Planting trees is one of the most effective means of removing excess carbon dioxide and other pollution from the atmosphere.

To this end, staff proposes for all qualifying projects a condition be imposed requiring that, when feasible:

1. All existing on-site trees with a trunk diameter of 2" or greater be preserved or replaced with trees of comparable size per the recommendations of the Parks Manager; and,
2. All existing street trees with a trunk diameter of 2" or greater be preserved or replaced with trees of comparable size per the recommendations of the City Engineer.

As with any of the provisions of the proposed Ordinance, no final inspection will be approved for a project, nor will a temporary or final certificate of occupancy be issued, until such time as these requirements have been satisfied, as determined by final inspection of the Building Safety Division.

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Education/Public Outreach

Once the green building program is finalized, staff will continue to provide educational materials to the community.

At this time, three additional green building handouts are available for distribution:

1. "Top 20 no or low cost Green Building Strategies"
2. "Recommended Sustainable Building Measures"
3. "Culver City Building Safety Division Mandatory Solar Photovoltaic Requirement".

Through our web page, Culver City also offers a number of informative links to include "Symantec Culver City Awarded Prestigious LEED® Gold Certification", "Green Building Tour, Saturday April 2nd, 2005", "Green Building in Southern California", "Culver City Solar PV Inspection and Submittal Guidelines", "Solar energy Presentation to the Culver City Planning Commission 6/8/05", and a link to the "Go Solar California" website.

Recently Building Safety has added a "Green Building Guidelines" handout and a "Tips for Saving water at Home" as well as a link on the Building Safety web page to a "United States Green Building Council (USGBC) LEED® webpage and details for the v2.2 for New Construction and Major Renovations Guideline." The webpage will also be updated with a list of the other sustainability laws that Culver City enforces.¹

Enforcement of the Proposed Culver City Green Building Program

As noted previously the proposed Culver City Green Building program measures are intended to be integrated into the existing Culver City discretionary review, construction permit application plan check, and field inspection procedures.

Project developers will be given comments on green building measures the same as any other City requirements throughout the development process.

Additionally staff will require all green building measures to be completed and operating prior to any final inspection, and prior to issuing any temporary or final certificate of occupancy.

Under State law, any local building code amendment must be reviewed and approved by the State. To allow for this required review and approval and sufficient notice of this change in the City's building regulations, staff proposed the Ordinance become effective upon approval by the State or on July 1, 2009, whichever is later.

FISCAL ANALYSIS:

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The Culver City Green Building Program may result in slightly lowering the Culver City Utility Users' Tax (UUT) revenue. Buildings with greater energy efficiency will pay less per square foot in energy costs than less efficient buildings. The current annual UUT revenues, excluding telecommunications and cable (i.e. electricity, gas and water) are approximately \$8.5 million, with more than \$6 million of that being electricity utility use. However, future economic costs to clean the environment may exceed the very small potential loss to the UUT. Over time, the impacts on UUT revenues will grow – potentially becoming significant.

The program may be integrated into the existing City plan check and construction permitting processes with no other additional costs to the City with the exception of staff training to conduct LEED® plan checks. Staff anticipates this amount to be a one time cost of approximately \$10,000.

If the City Council chooses to require full LEED® Certification as opposed to a LEED® *Certified* Performance Level for projects of over 50,000 square feet, staff estimates a qualified professional will be necessary to verify compliance at all stages of the development process, particularly at the end of the process. Staff estimates the annual cost of a qualified consultant may be approximately \$20,000; varying with the number of certified projects each year.

The Green Zone program, if fully utilized as proposed, will cost the Redevelopment Agency \$100,000 over 5 years.

To enforce the LEED® program requirements City staff will be encouraged to obtain additional training and obtain LEED® Accredited Professional (LEED®-AP) certification. To this end staff recommends allocating \$1,000 for staff training and \$1,500 for staff testing (\$2,500 per staff member) for 4 City staff members.

Should the City Council approve this recommendation, staff will include the above amounts in the Fiscal Year 2009/2010 budget request. Given the \$4,000,000 deficit currently projected for Fiscal Year 2009/2010, any General Fund monies allocated for this purpose would need to come from the General Fund Reserve or from a expenditure reduction in another General Fund program.

ATTACHMENTS:

1. Culver City Green Building Chronology.
2. City Council Green Building discussion Item 9-22-08 Staff Report.
3. Green Building Stakeholders Group
4. 4: Correspondence from Stakeholders
5. Urban Street Trees

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- 6. Proposed Ordinance
- 7. Notice of Public Hearing

MOTION:

That the City Council:

Introduce an ordinance amending Chapter 15.02, Buildings, Structures and Equipment, of the Culver City Municipal Code, to add a new Subchapter 15.02.1100, et seq. entitled "Green Building Program and Requirements."

¹ Current Culver City Environmental Enforcement Efforts

Culver City routinely enforces various state laws that have energy efficiency, green building, or water quality impacts.

The Building Safety Division enforces the 2007 California Building and Energy Codes, including but not limited to:

1. Basic building commissioning (i.e.; "tuning") of the building hvac and lighting systems.
2. Hvac demand ventilation control; sensor controlled variation of outside ventilation.
3. Primary roof insulation to be at the roof or hard ceiling (t-bar ceiling) level.
4. Hvac duct insulation, duct sealing in all unconditioned spaces.
5. All new commercial lighting to be high efficiency, all new residential kitchen, bath, laundry, and garage lighting to be high efficiency.
6. All new commercial exterior lighting to be high efficiency.
7. Skylights are required in new "big-box" buildings; controls shut off lighting when sufficient daylight is available.
8. Efficient space conditioning systems; efficiency rating, variable air volume, variable speed drives, efficient cooling towers.
9. Efficient lighting systems in unconditioned buildings.
10. Pipe insulation on hot water piping in new commercial buildings.
11. All new commercial and residential windows to be high efficiency, minimum solar heat gain.
12. Low flow shower heads and low flush toilets to reduce water use.
13. Waste interceptors and/ or grease traps at all required locations.

The Culver City Engineering Division and the Environmental Programs and Operations Division enforce the Los Angeles County Storm Water National Pollutant Discharge Elimination System (NPDES) requirements.

Regarding buildings, the NPDES requires a Local Storm Water Pollution Prevention Plan (LSWPPP) for runoff control during the construction phase and a Standard urban Storm water Mitigation Plan (SUSMP) for runoff control for the life of a new project.

An LSWPPP plan limits pollutants entering the storm drain system during construction through the use of silt fences, storm drain inlet protections, sediment

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traps, erosion control mats and other measures.

A SUSMP plan limits pollutants entering the storm drain system for the life of a project through the use of less impervious paving, larger green areas, catch basin filter systems, infiltration pits, and other measures.

State Approval of a Culver City Green Building Program:

All local amendments to the California Buildings Codes must gain approval of the California Building Standards Commission. If the Culver City Council approves a Green Building Program staff will make the proper filings with the California Building Standards Commission.