



# Green Building News

## City Council Approves New Green Building Requirements

October 2009



**On October 19, 2009 the Palo Alto City Council passed revisions to the 2008 Green Building Ordinance and Energy Efficiency Ordinance.**

*"The Council's action provides another important step toward the City's goal to be environmentally responsible and reduce greenhouse gas emissions. Palo Alto aims to be a leader through the introduction of new energy efficiency measures for existing buildings that will help the City and the community better understand its energy consumption and how it can be reduced. The changes also enhance the building community's implementation of the ordinances by providing flexibility for verification options, and specify green building criteria that more directly relate to a project's energy system impacts."*

*Curtis Williams, Planning & Community Environment Department Director*

Major Change Summary	Effective Date
1. Nonresidential new construction applicants must choose the energy performance path under LEED, and achieve performance 15% beyond the California Energy Code, Title 24 Part 6.	January 1, 2010
2. Nonresidential renovations over 500 sf and over \$100,000 in valuation are required to receive an Energy STAR Portfolio Manager, Building Energy Performance Rating prior to building permit issuance. <a href="http://www.energystar.gov/index.cfm?c=evaluate_performance.bus_portfoliomanager#rate">http://www.energystar.gov/index.cfm?c=evaluate_performance.bus_portfoliomanager#rate</a>	January 1, 2010
3. Residential renovations over 250 sf and over \$100,000 in valuation are required to receive an Home Energy Rating System (HERS II) rating prior to building permit issuance. <a href="http://www.energy.ca.gov/HERS/index.html">http://www.energy.ca.gov/HERS/index.html</a>	January 1, 2011
4. Applicant with mandatory green building requirements has the option to achieve verification by the City of Palo Alto <u>OR</u> the respective rating system (LEED, BIG GPR),	January 1, 2010
5. Large commercial renovations have mandatory green building requirements based on the scope of the project, rather than valuation.	January 1, 2010
6. Residential additions and rebuilds greater than 1,250 sf have the option to achieve 50 point under the Build It Green, Green Point Rated System <u>OR</u> achieve performance 15% beyond the California Energy Code, Title 24 Part 6 and get a HERS II rating.	January 1, 2011

\* This table should only be used as a summary. The attached tables show the changes as approved in more detail and as enforceable.

Palo Alto Green Building

Website: [http://www.cityofpaloalto.org/depts/pln/green\\_building/default.asp](http://www.cityofpaloalto.org/depts/pln/green_building/default.asp)

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Note: Applicants are advised to use this table only in conjunction with the entirety of requirements in Chapter 18.44 (Green Building Regulations)

**Table A. City of Palo Alto Green Building Standards for Compliance for Private Nonresidential Construction and Renovation**

Type of Project	Rating System, Code or Program	Minimum Threshold Required	Requirement to Exceed CA Title 24 Part 6 (15%)*	Verification**
1. New construction $\geq$ 5,000 sf (including additions to existing buildings)	USGBC LEED	LEED Silver	YES	GBCI or CPA
2. New Construction $\geq$ 500 sf and $<$ 5,000 sf (including additions to existing buildings)	USGBC LEED	LEED Prerequisites + 5 points (round up) required for every 500 sf	YES	GBCI or CPA
3. Tenant improvements, renovations, or alterations $\geq$ 5,000 sf that include replacement or alteration of at least two of the following: HVAC system, building envelope, hot water system, or lighting system.	USGBC LEED	LEED Certified	NO	GBCI or CPA
4. Tenant improvements, renovations or alterations $\geq$ 500 sf and $\geq$ \$100,000 in valuation that don't fall under Project Type 3, above.	USGBC LEED AND Energy STAR Portfolio Manager	LEED Checklist  Building Energy Performance Rating	NO	CPA

\* The requirement to exceed CA Title 24 Part 6 by 15% is also referenced for these project types in the applicable green building rating system, and the City's Energy Efficiency Ordinance.

\*\* For project types 1) and 2), if CPA is chosen for verification, performance 15% beyond California Energy Code, Title 24, Part 6 is an acceptable compliance equivalent to the LEED energy prerequisite. The project will not be required to do additional modeling beyond state requirements.

**Special Considerations & Definitions**

<b>Mixed Use Developments</b>	Mixed use projects must comply with the applicable project type requirements based on the scope of the project. Table applicability is to be determined by the Planning Director; generally the provisions of Table A will apply to the commercial portion of the development, and the provisions of Table B will apply to the residential portions of the development.
<b>Historic Structures</b>	Exemptions may be available for historic structures, pursuant to 18.44.070 Palo Alto Municipal Code.
<b>Multi Year Cumulative Construction</b>	Cumulative new construction or renovations over any 2-year period s shall be considered as a single project, subject to the highest level of green building requirements for that project, unless exempted by the Planning Director as impractical for compliance.
<b>Unusual Projects</b>	Projects with an unusual scope of work or with unique circumstances may apply for an exemption to the green building requirements to be determined by the Planning Director, pursuant to Palo Alto Municipal Code Section 18.44.070.
<b>USGBC LEED</b>	USGBC LEED stands for the U.S. Green Building Council Leadership in Energy and Environmental Design. Projects must comply with the applicable and current LEED® rating system. An alternative, equivalent rating system or program may be substituted as approved by the Planning Director, after recommendation by the applicant or Architectural Review Board (if ARB review is required).
<b>GBCI</b>	The Green Building Certification Institute provides 3 <sup>rd</sup> party verification services for the LEED rating system.
<b>CPA</b>	City of Palo Alto staff with expertise in green building will provide in-house review similar in structure and stringency to that of the GBCI.
<b>Energy STAR Portfolio Manager</b>	Energy STAR Portfolio Manager (Portfolio Manager) shall mean the program managed by the U.S. Environmental Protection Agency that offers an energy management tool that allows an applicant to track and assess energy and water consumption of a building project. Tracked projects receive an energy performance rating on a scale of 1–100 relative to similar buildings nationwide. The applicant is not required to achieve a set rating.
<b>Building Envelope</b>	The building envelope is the ensemble of exterior and demising partitions of a building that enclose conditioned space. (Defined by California Energy Code Title 24, Part 6)
<b>Prerequisites</b>	Prerequisites are green building strategies required by the LEED rating system before points may be claimed for any project type. They are mandatory measures, not option.

**Note:** Applicants are advised to use this table only in conjunction with the entirety of requirements in Chapter 18.44 (Green Building Regulations)

**Table B. City of Palo Alto Green Building Standards for Compliance for Private Residential Construction and Renovation**

Type of Project	Rating System, Code or Program	Minimum Threshold Required	Requirement to Exceed CA Title 24 Part 6 (15%)*	Verification
<b>Multi-Family Residential</b>				
1. New construction of 3 or more attached units	BIG GPR Multifamily ≥ 30 units complete the LEED-ND (Neighborhood Development) checklist	70 points	YES	GreenPoint Rated and/or CPA
2. Renovations or alterations ≥ 50% of the existing unit sf and that include replacement or alteration of at least two of the following: HVAC system, building envelope, hot water system, or lighting system	BIG GPR Multifamily	50 points	Follow the BIG GPR minimum energy requirements.	GreenPoint Rated and/or CPA
3. Renovations, additions, and/or rebuilds to individual units ≥ 250 sf and valuation ≥ \$100,000 in a single unit	BIG GPR HERS II	Checklist HERS Rating (requirement effective January 2011)	NO	CPA
<b>Single-Family and Two-Family Residential</b>				
4. New construction of ≥ 1,250 sf	BIG GPR Single-Family	70 points + 1 point per additional 70 sf over 2,550 (150 points maximum)	YES	GreenPoint Rated and/or CPA
5. Existing home additions or rebuilds ≥ 1,250 sf	Chose one of the following two options: Option 1: BIG GPR Single Family or Existing Home  OR Option 2: CA Energy Code T-24 Part 6 and HERS II	50 points  The whole house must demonstrate that the TDV Energy of the building is at least 15% less than the TDV energy of the standard building based on the prototypical house of its vintage and receive a HERS II rating. (requirement effective January 2011)	YES Use of the “Existing Alterations Performance Approach” as outlined under CA Title 24 Part 6 is acceptable.	GreenPoint Rated and/or CPA  HERS II Rater and CPA
6. Existing home renovations, rebuilds and/or additions totaling ≥ 250 sf and < 1,250 sf and ≥ \$100,000 valuation	BIG GPR Existing Home AND  HERS II	Checklist  HERS II Rating (requirement effective January 2011)	NO	CPA  HERS II Rater and CPA

\* The requirement to exceed CA Title 24 Part 6 by 15% is referenced for these project types in the applicable green building rating system, and the City's Energy Efficiency Ordinance.

## Special Considerations

### Mixed Use Developments

Mixed use projects must comply with the applicable project type requirements based on the scope of the project. Table applicability is to be determined by the Planning Director; generally the provisions of Table A will apply to the commercial portion of the development, and the provisions of Table B will apply to the residential portions.

### Historic Structures

Exemptions may be available for historic structures, pursuant to 18.44.070 of the Palo Alto Municipal Code. The Compliance Official may allow the use of alternative checklists for historic buildings or for buildings that retain or re-use substantial portions of the existing structure, and may reduce the minimum threshold (points) required as outlined in Section 18.44.050.

### Multi Year Cumulative Construction

Cumulative new construction or renovations over any 2-year period shall be considered as a single project and subject to the highest level of green building requirements for that project, unless exempted by the Planning Director as impractical for compliance.

### Unusual Projects

Projects with an unusual scope of work or with unique circumstances may apply for an exemption to the green building requirements to be determined by the Planning Director, pursuant to Palo Alto Municipal Code Section 18.44.070.

## Definitions

### BIG GPR

BIG GPR stands for the Build It Green, Green Point Rated system. Projects must comply with the applicable, and current, GPR rating system, including, but not limited to Single Family, Multi Family and Existing Home. An alternative, equivalent rating system or program may be substituted as approved by the Planning Director, after recommendation by the applicant or Architectural Review Board (if ARB review is required).

### CPA

City of Palo Alto staff with expertise in green building will provide in house review similar in structure and at least as stringent to that of Build It Green.

### HERS II Rating

HERS shall mean the California Home Energy Rating System, a statewide program for residential dwellings administered by the California Energy Commission and defined in the 2008 California Building Energy Efficiency Standards. HERS Phase I provides field verification and diagnostic testing to show compliance with Title 24, Part 6, of the 2008 California Building Energy Efficiency Standards. HERS Phase II includes whole-house home energy efficiency ratings for existing and newly constructed homes. The applicant is not required to achieve a set rating.

### Rebuild

Rebuild shall mean home improvements, or minor additions to an existing structure that do not maintain 75% of the existing roof and exterior walls.

### TDV

Time-Dependent Valuation (TDV) accounts for the value of electricity differences depending on time-of-use (hourly, daily, seasonal), and the value of natural gas differences depending on season. TDV is based on the cost for utilities to provide the energy at different times. Refer to the City of Palo Alto Energy Efficiency Ordinance or the California Energy Efficiency Code Title 24, Part 6 for more a more detailed description.

### Building Envelope

The building envelope is the ensemble of exterior and demising partitions of a building that enclose conditioned space. (Defined by California Energy Code Title 24, Part 6).

### Renovations

Renovations are any work to an existing building needing a permit as defined by the California Building Code.