

City of West Hollywood Green Building Program Update

Stakeholder Working Group Meeting #4
December 11th, 2018



Today's Agenda

1. Meeting Objectives
2. Recap: What have we done and what we heard?
 - a. Existing Conditions Analysis
 - b. Summary of Working Group Meetings
 - c. Feedback from Planning Commission & City Council
3. Recommendations: Where are we going?
 - a. New ordinance format
 - b. New code recommendations
 - c. Related topic areas needing further study
 - d. Implementation & Administration
4. Next Steps

Meeting Objectives

1. Confirm overarching project goals are being achieved
2. Confirm proposed green building recommendations are in line with feedback received and industry best practices
3. Determine if any gaps still exist
4. Discuss related items needing further study

Existing Green Building Standards Comparison

Green Building Category	West Hollywood Green Building Code (2007)	CALGreen	LEED
Site Planning & Design	<ul style="list-style-type: none"> • Alternative Transportation • Transportation Demand Management • Construction Debris Control • Stormwater diversion / Storm drains • Parking lot landscaping for surface lots • Permeable surfaces 	<ul style="list-style-type: none"> • Short-term bicycle parking • Long-term bicycle parking • {Voluntary} Stormwater Design • EV Charging Readiness 	<ul style="list-style-type: none"> • SS Prereq: Construction Activity Pollution Prevention • LT Credit: Surrounding Density & Diverse Uses • LT Credit: Access to Quality Transit • LT Credit: Sensitive Land Protection
Energy Efficiency	<ul style="list-style-type: none"> • Future photovoltaic • ENERGY STAR appliances • Energy efficient outdoor lighting • Energy efficiency 	<ul style="list-style-type: none"> • Reference to CA Title 24, Pt 6: 2016 Building Energy Efficiency Standards • Solar readiness • [Voluntary] Outdoor Lighting Power Trade • Backlight-Uplight-Glare (BUG) standards 	<ul style="list-style-type: none"> • EA Credit: Renewable Energy Production • EA Credit Optimize Energy Efficiency • EA Credit: Advanced Energy Metering • EA Credit: Demand Energy Response • EA Credit: Green Power and Carbon Offsets • SS Credit: BUG Method
Water Efficiency	<ul style="list-style-type: none"> • Water conserving fixtures • Water conserving landscaping 	<ul style="list-style-type: none"> • MWELO • Grading & paving • Indoor submetering • [Voluntary Non-Res] Low-Impact Development 	<ul style="list-style-type: none"> • WE Prereq: Outdoor Water Use Reduction • WE Prereq & Credit: Indoor Water Use Reduction • WE Credit: Water Metering • SS Credit: Rainwater Management • Residential – Energy Star dishwashers and clothes washers
Materials Conservation	<ul style="list-style-type: none"> • Environmental protection, pollution, and solid waste / Recycling materials storage • Construction & Demolition Waste – 80% diversion 	<ul style="list-style-type: none"> • Solid waste and recyclable materials storage space required • Projects shall divert a minimum of 65%, or meet stricter local ordinance 	<ul style="list-style-type: none"> • MR Prereq: Storage and Collection of Recyclables • MR Credit: Construction & Demolition Waste Management
Environmental Quality	<ul style="list-style-type: none"> • Construction Indoor Air Quality (IAQ) Management Plan • Interior Paints & Wood Finishes 	<ul style="list-style-type: none"> • Ventilation • Low VOC materials • Indoor Pollutant Control 	<ul style="list-style-type: none"> • EQ Credit: Construction Indoor Air Quality Management Plan • EQ Credit: Construction Indoor Air Quality Management Plan • EQ Credit: Low Emitting Materials

Stakeholder Working Group Meetings



Meeting #1: Introduction
West Hollywood Green Building Code v. CALGreen & LEED

Meeting Themes:

- Water Management
- Solid Waste Management
- Open Space & Public Realm

TECHNICAL WITHOUT GETTING TOO TECHNICAL

Energy Usage Intensity is a performance metric to evaluate building energy performance, often expressed in annual energy usage per square feet.

$$EUI = \frac{\text{Annual Energy Usage [kBtu]}}{\text{Area [square feet]}}$$

Energy Design Rating (EDR) is alternative way to express energy performance of a home using a score of 100 to 0.

IECC 2006, CAL Code Compliance, Score 100 = NZE, Negative EDR = Overproducing solar sites

Meeting #2: Energy Modeling
The limits of solar and ZNE; areas for innovation

Meeting Themes:

- Energy
- Local Characteristics

Green Building Program Updated Framework Options

Approach	Code Change	Internal Checklist	3 rd Party Program
Green Building Standards	Zoning Code (Solar Access, Ventilation, Daylight) Building Code (Battery-ready, Microgrid, Green Roof, dual-plumbing, Energy performance, lighting efficiency, filters, water efficiency)	WeHo-specific checklist LEED GreenPoint Rate Enterprise Green Communities	LEED GreenPoint Rate Enterprise Green Communities
Applicability	All Buildings - New Construction and Major Remodels	All Buildings - New Construction and Major Remodels	All New Residential New Commercial and Major Remodels >25,000sqft
Administration	City Staff	City Staff and Consultant	3 rd Party (GBCI, UG, IGC)
Incentives	Code Flexibility Case-By-Case Consideration for Innovation Fee Waiver/Reduction	Code Flexibility Case-By-Case Consideration for Innovation Fee Waiver/Reduction	Code Flexibility Case-By-Case Consideration for Innovation Fee Waiver/Reduction Recognition
Estimated Cost	None	Registration \$50 Certification \$0.25/sqft Consultant \$10,000	Registration \$1200-5600 Certification \$0.50/sqft Consultant \$25,000+

Meeting #3: Draft Framework Options
Code change, Internal Checklist, 3rd Party Program

Meeting Themes:

- Administration & Implementation
- Program Metrics
- Education & Awareness

Energy, Water, & Solid Waste: Areas for Improvement & Innovation

- Energy: Modify standards for building insulation and air tightness, lighting controls, daylighting, and use of solar; Consider new technologies such as battery storage and building automations
- Water Management: Integrate water management strategies that promote use of alternative water sources, influences consumer behavior, and further reduces water use
- Solid Waste Management: Prepare for future organics storage & collection

Additional Program Themes: Areas for Improvement & Innovation

- Open Space, Green Space, & Public Realm: Integrate and incentivize green features in open space and public realm spaces
- Local characteristics: Take advantage of West Hollywood's unique physical elements (i.e. east-west orientation, topography, passive design, etc.)
- Administration & Implementation: Integrate with existing city process; Consider "task force" or special team for oversight and verification
- Program Metrics: Establish program indicators to measure impact over time
- Education & Awareness: Establish public repository of green building best practices and resource guides for developers and building community

Feedback: Planning Commission & City Council

Planning Commission

- Supportive of preliminary framework: CALGreen + local amendments
- Focus on green space, public realm, water management
- Cost/benefit of green building alternatives – inform opportunities and incentives
- Courtyard building designs fostering vegetated space, daylighting, ventilation

City Council

- Supportive of preliminary framework: CALGreen + local amendments
- Focus on green space, local characteristics, water management, daylighting, sustainable roof elements
- Strengthen administration and verification processes
- Parking reduction as an incentive for increased green space

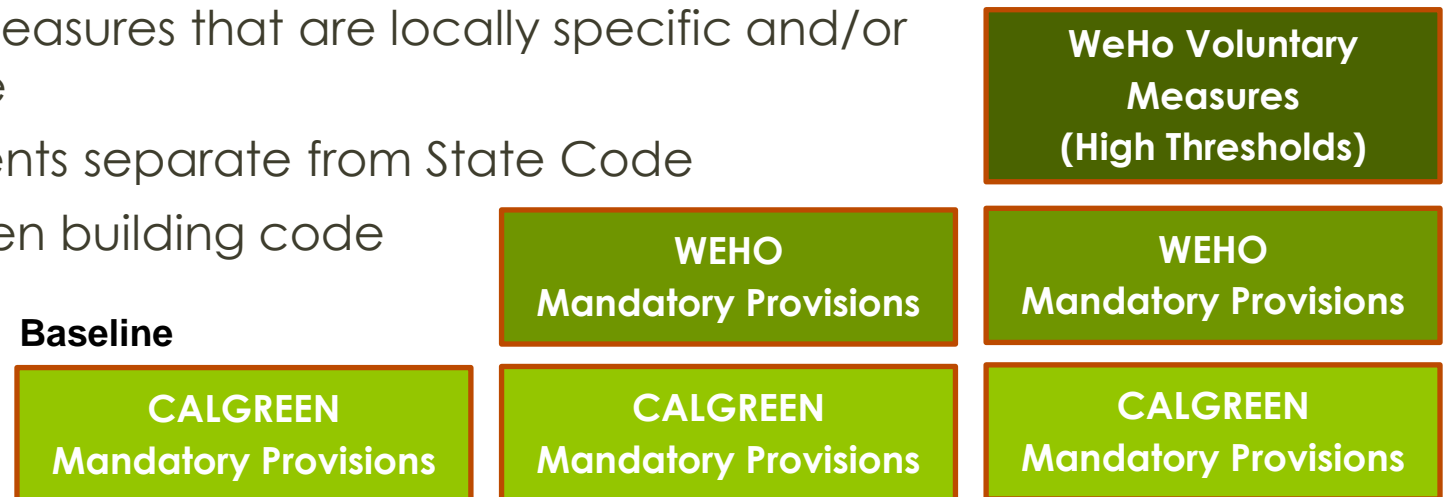
Progress since Summer

- Held internal working sessions to chart path forward
- Reviewed multiple sections of the California Building Code and West Hollywood Municipal Code in detail
- Consulted extensively with external and City SMEs on existing and new green building topic areas

Green Building Recommendations

New Format

- Utilize existing state building code as basis for green building blocks
 - Strikeout duplicate language in municipal code
 - Keep existing green building measures that are locally specific and/or more stringent than state code
 - Introduce new local requirements separate from State Code
- Categorically align with CALGreen building code



Degree of Stringency / Environmental Impact

Green Building Recommendations

Green Building Categories	Recommendation	Justification	Benefits
Site Planning & Design	<ul style="list-style-type: none"> Flexibility in development standards for open space/green space Sustainable roof treatments 	<ul style="list-style-type: none"> Flexibility in provision of open space, green space, and roof treatments allows for creativity in building and site design 	<ul style="list-style-type: none"> Urban cooling, stormwater management GHG emissions reductions/air quality Promotes clean energy Addresses new and existing buildings
Energy Efficiency	<ul style="list-style-type: none"> 2019 Title 24 All electric/battery storage readiness Energy Benchmarking readiness 	<ul style="list-style-type: none"> Improves building performance Avoid costly future retrofits Facilitates sustainable management of existing buildings 	<ul style="list-style-type: none"> GHG emissions reductions Forward-looking Builds resiliency
Water Efficiency	<ul style="list-style-type: none"> High efficiency fixtures & fittings Indoor & outdoor submetering MWEL0 	<ul style="list-style-type: none"> Influences fixture selections Facilitates behavior change Requires climate-appropriate landscapes 	<ul style="list-style-type: none"> Water use & GHG emissions reductions Provides info on inefficiencies, use, leaks Urban cooling
Materials Conservation	<ul style="list-style-type: none"> Organics collection readiness 	<ul style="list-style-type: none"> Prepares new construction for upcoming state requirements 	<ul style="list-style-type: none"> Increases waste diversion Reduces GHG emissions
Environmental Quality	<ul style="list-style-type: none"> Follow existing State requirements 	<ul style="list-style-type: none"> State requirements are consistent with industry trends 	<ul style="list-style-type: none"> Public health, better indoor air quality
Other	<ul style="list-style-type: none"> Public Green Buildings (LEED) Update of WHMC Definition section 	<ul style="list-style-type: none"> Consistent w/other municipalities Precursor to City's ZNE facilities plan City leads by example 	<ul style="list-style-type: none"> Reduced municipal GHG emissions Improved building operations & performance
Voluntary Measures	<ul style="list-style-type: none"> Use of 3rd party certification NZE/Near Net Zero Energy or Passive House PHIUS+ Certification Greywater collection/piping systems (indoor/outdoor) 	<ul style="list-style-type: none"> 3rd-Party certs go above and beyond typical code requirements Premiums associated with NZE buildings and renewable energy Can be used to negotiate terms of development agreements 	<ul style="list-style-type: none"> Promotes very high standards in green building within city Promotes alternative water use mgmt & GHG emissions reductions Allows flexible options for marketplace Builds resiliency
Incentives	<ul style="list-style-type: none"> % Parking reduction Additional unit 0.1 FAR 	<ul style="list-style-type: none"> Attractive high-value incentives provide significant cost savings or value to developer 	<ul style="list-style-type: none"> Installation of innovative voluntary measures

Green Building Topic	Recommendation	Applicability	Relative to Earlier Feedback Received
Topics Remaining Unchanged	<ul style="list-style-type: none"> Alternative Transportation Transportation Demand Management Construction Debris Control Stormwater diversion / Storm drains Parking lot landscaping for surface lots Permeable surfaces 	<ul style="list-style-type: none"> As stated in local code 	<ul style="list-style-type: none"> N/A: Continuation of best practices
EV Charging Readiness	<ul style="list-style-type: none"> Add reference to existing language in GBO 	<ul style="list-style-type: none"> New residential projects of 10+ units All new nonresidential projects 	<ul style="list-style-type: none"> Readies the market for new technologies and industry trends
Flexibility in Development Standards for Open Space & Green Space	<ul style="list-style-type: none"> Allow private open space to be transferred to and provided as common open space and vice versa (existing GB incentive) Area in side setbacks may be used to satisfy private or common open space requirements (existing GB incentive) Allow 1:1 replacement of parking spaces with vegetated space at grade 	<ul style="list-style-type: none"> New Multi-family and mixed-use projects New Multi-family residential New Multi-family residential 	<ul style="list-style-type: none"> Takes advantage of/Responds to WeHo's local characteristics Promotes flexibility in design of open space & location of vegetated areas
Sustainable Roof Treatments	<ul style="list-style-type: none"> Projects shall install one of the following sustainable roof treatments: <ul style="list-style-type: none"> ✓ PV (15% min roof area), ✓ solar thermal (15% min roof area) ✓ Vegetated roof (30% min roof area) Projects must install cool roof per cool roof rating council; Cool roof may be substituted by vegetated roof, solar or solar thermal (min of 15% roof area). A combination of sustainable roof treatments may be proposed 	<ul style="list-style-type: none"> New commercial/mixed-use projects with a gross floor area of greater than 30,000 square feet All other new construction projects and roof replacements of existing buildings 	<ul style="list-style-type: none"> Takes advantage of/Responds to WeHo's local characteristics Multiple benefits per each measure Promotes increased energy efficiency, clean energy sourcing, vegetation, stormwater management

Green Building Topic	Recommendation	Applicability	Relative to Earlier Feedback Received
Topics Remaining Unchanged	<ul style="list-style-type: none"> Defer to 2019 Title 24 Focus is on strengthening commissioning & inspection processes 	<ul style="list-style-type: none"> Nonresidential projects (as defined by Energy Code) Residential projects (as defined by Energy Code) 	<ul style="list-style-type: none"> 2019 California Energy Code addresses daylighting, ventilation, lighting sensors, solar mandates on low-rise residential
EnergySTAR Appliances	<ul style="list-style-type: none"> No change Energy Star qualified appliances required 	<ul style="list-style-type: none"> Appliances provided in residential and mixed-use projects, and commercial projects 	<ul style="list-style-type: none"> N/A: Continuation of best practices
Energy Benchmarking Readiness	<ul style="list-style-type: none"> Nonresidential - must register to EnergySTAR Portfolio Manager and demonstrate the property address has an established account. 	<ul style="list-style-type: none"> Nonresidential projects \geq 25,000SF 	<ul style="list-style-type: none"> Readies the market for new technologies and industry trends
All-electric/Battery storage readiness	<ul style="list-style-type: none"> Electrical panels shall be installed with capacity to support a minimum amperage/voltage, plus conduit run with access point 	<ul style="list-style-type: none"> Residential projects (as defined by Energy Code) 	<ul style="list-style-type: none"> Readies the market for new technologies and industry trends

Water Efficiency

Green Building Topic	Recommendation	Applicability	Relative to Earlier Feedback Received
Water-efficient Landscaping	<ul style="list-style-type: none"> Follow requirements of State’s Model Water Efficient Landscaping Ordinance 	<ul style="list-style-type: none"> New landscapes of 500SF or more Existing landscapes of 2500SF or more 	<ul style="list-style-type: none"> Addresses outdoor water use management Responsive to drought conditions Promotes urban cooling
Water Conserving Plumbing Fixtures	<ul style="list-style-type: none"> Lower fixture maximums for kitchen faucets (1.5gpm), water closets (1.1gpm), metering faucets (0.2 gpc), showerheads (1.5gpm) 	<ul style="list-style-type: none"> Nonresidential & residential projects (as defined by CALGreen) 	<ul style="list-style-type: none"> Promotes water efficiency Responsive to drought conditions
Water Submetering	<ul style="list-style-type: none"> Follow state requirements on <u>indoor</u> water submetering for rentals Require <u>outdoor</u> water submetering (based on CALGreen voluntary measures) 	<ul style="list-style-type: none"> All new multifamily rental bldgs (indoor) New residential landscapes less than 500SF - 5,00SF New nonresidential landscapes between 500SF – 1,000SF 	<ul style="list-style-type: none"> Influences behavior by bringing awareness of individual water usage (indoor) or specific water used for landscaping (outdoor) Promotes water conservation

Materials Conservation & Green Public Buildings

Green Building Topic	Recommendation	Applicability	Relative to Earlier Feedback Received
Topics Remaining Unchanged	<ul style="list-style-type: none"> Environmental protection, pollution, and solid waste Construction & Demolition waste – 80% diversion 	<ul style="list-style-type: none"> As stated in local code 	<ul style="list-style-type: none"> N/A: Continuation of best practices
Recycled Materials Storage -- Organics Collection Readiness	<ul style="list-style-type: none"> Add additional storage for organics (effective 2020) 	<ul style="list-style-type: none"> Multifamily residential projects with five or more dwelling units Nonresidential structures and uses within all zoning districts 	<ul style="list-style-type: none"> City Council supportive of organics collection & diverting more waste from landfill
Green Public Buildings	<ul style="list-style-type: none"> Minimum achievement of LEED Gold Use of an equivalent comprehensive green building program is permissible 	<ul style="list-style-type: none"> All new public buildings or additions to public buildings of 10,000 square feet or more, or public building tenant improvement and major remodel projects of 10,000 square feet or more All other buildings receiving public funding from the City of West Hollywood encouraged to meet requirements 	<ul style="list-style-type: none"> City should lead by example

Voluntary Measures

Green Building Topic	Recommendation	Applicability	Relative to Earlier Feedback Received
Third-Party Rating System	<ul style="list-style-type: none"> • Use of Third-Party Green Building Rating System. Project must achieve one of the following: <ul style="list-style-type: none"> ✓ LEED Gold or Platinum Certification ✓ GreenPoint Rated Gold or Platinum Certification ✓ Living Building Challenge Certification 	<ul style="list-style-type: none"> • All project types 	<ul style="list-style-type: none"> • General support for higher green building standards & verifiable certification processes
Near Net Zero Energy Buildings	<ul style="list-style-type: none"> • Achieve CALGreen Tier 2 (mixed fuel or all-electric) for energy performance, or; • Meet Passive House (PHIUS+) Certification 	<ul style="list-style-type: none"> • Nonresidential & Residential projects (as defined by Energy Code) • Residential Only 	<ul style="list-style-type: none"> • General support for higher green building standards • City Council supportive of net zero energy/highly energy efficient buildings • Encourages use of new technologies and industry trends
Greywater reuse systems (indoor/outdoor)	<ul style="list-style-type: none"> • Install graywater collection system for onsite subsurface irrigation that entirely meets the site's landscape water requirements (Outdoor) • Install a treated graywater system to supply water closets, urinals, and other allowed uses and demonstrate a minimum of XX-percent reduction in indoor water use (Indoor) 	<ul style="list-style-type: none"> • Projects w/new landscapes of at least 500SF • Nonresidential & Residential projects (as defined by CALGreen) 	<ul style="list-style-type: none"> • General support for higher green building standards • Broad support for use of alternative water sources • Encourages use of new technologies and industry trends

Green Building Topic	Recommendation	Applicability	Relative to Earlier Feedback Received
Incentive - Parking	<ul style="list-style-type: none"> 10-20% Reduction in Parking Requirements 	<ul style="list-style-type: none"> New MF residential 10 units or less (20%) New MF residential 10+ units (10%) New Nonresidential structures (10%) 	<ul style="list-style-type: none"> Value of incentives should be relative to cost of high thresholds
Incentive - FAR	<ul style="list-style-type: none"> Commercial projects or mixed-use projects on commercially-zoned lots may obtain a 0.1 FAR increase. 	<ul style="list-style-type: none"> Commercial projects or mixed-use projects on commercially-zoned lots 	<ul style="list-style-type: none"> Value of incentives should be relative to cost of high thresholds
Incentive – Additional Unit	<ul style="list-style-type: none"> Multi-family residential projects of three or more units may receive one additional residential unit; If unit is 700SF or less, no parking is required. 	<ul style="list-style-type: none"> Multi-family residential projects of three or more units 	<ul style="list-style-type: none"> Value of incentives should be relative to cost of high thresholds

Explanation of Certain Applicability Terms

Term	Definition
Nonresidential projects (as defined by Energy Code)	<ul style="list-style-type: none"> • Newly constructed nonresidential buildings • Includes additions or alterations of existing nonresidential buildings where the addition or alteration increases the building’s conditioned area, volume, or size
Residential projects (as defined by Energy Code)	<ul style="list-style-type: none"> • Any building that is of residential occupancy and is three stories or less in height (Low-rise) • Any building that is of residential occupancy and is four stories or more in height (High-rise)* • Includes additions or alterations of existing residential buildings where the addition or alteration increases the building’s conditioned area, volume, or size.
Nonresidential projects (as defined by CALGreen)	<ul style="list-style-type: none"> • Newly constructed nonresidential buildings, building additions of 1,000 square feet or greater, and/or building alterations with a permit valuation of \$200,000 or above (for occupancies within the authority of California Building Standards Commission)
Residential projects (as defined by CALGreen)	<ul style="list-style-type: none"> • Any building that is of residential occupancy and is three stories or less in height (Low-rise) • Any building that is of residential occupancy and is four stories or more in height (High-rise)** • Includes additions or alterations of existing residential buildings where the addition or alteration increases the building’s conditioned area, volume, or size.
Mixed Occupancy	<ul style="list-style-type: none"> • When a building is designed and constructed for more than one type of occupancy (residential and nonresidential), the space for each occupancy shall meet the provisions of the Energy code applicable to that occupancy (certain exceptions may apply)

*High-rise residential buildings must follow the nonresidential requirements of the Energy Code, unless otherwise stated.

**Newly constructed high-rise residential buildings of seven stories or greater must follow the nonresidential requirements of CALGreen, unless otherwise stated.

Related Topics needing further study

- Tree Preservation and Protection of Trees during construction
- Green Alleys
- Urban Design Strategies / Building Typologies
 - Courtyard Housing
 - Passive, Resilient, or Biophillic Design

Implementation & Administration

- Outline the overall steps for compliance with Green Building standards
 - Plan Review
 - Plan Check
 - Field Inspections
- Modify existing CALGreen checklists to include WeHo mandatory measures
- Revise inspection card to integrate green building requirements, including standard procedures for HERs, commissioning, etc.

Next Steps

- Distribute a Working Group survey on green building collateral
- Incorporate Working Group feedback into code language
- Refine process for administration and implementation
- Final Working Group meeting – End of January
- Present final program to Planning Commission and City Council – Early Spring