

*The Santa Clara County Chapter of the
National Association of
Women in Construction
presents*

CALGreen



Introductions

California Building Standards Commission

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The logo for CAL Green features the word "CAL" in a green, cursive script font, followed by the word "Green" in a bold, green, sans-serif font. A thick, green, horizontal brushstroke underline is positioned below the text.

CAL Green

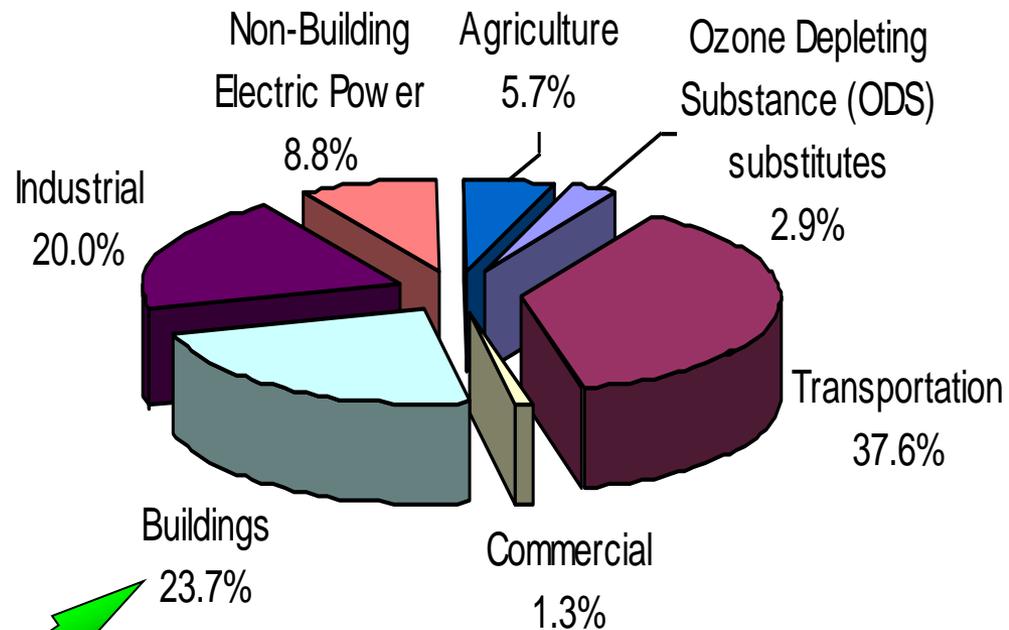
Today's Objectives

- **Why a CALGreen Code**
- **CBSC Process**
- **Overview of Mandatory Nonresidential Code Provisions**
 - Provisions Effective January 1, 2011
 - Modifications Effective July 1, 2012
- **Overview of voluntary Nonresidential Code Provisions – Tier 1 and Tier 2**

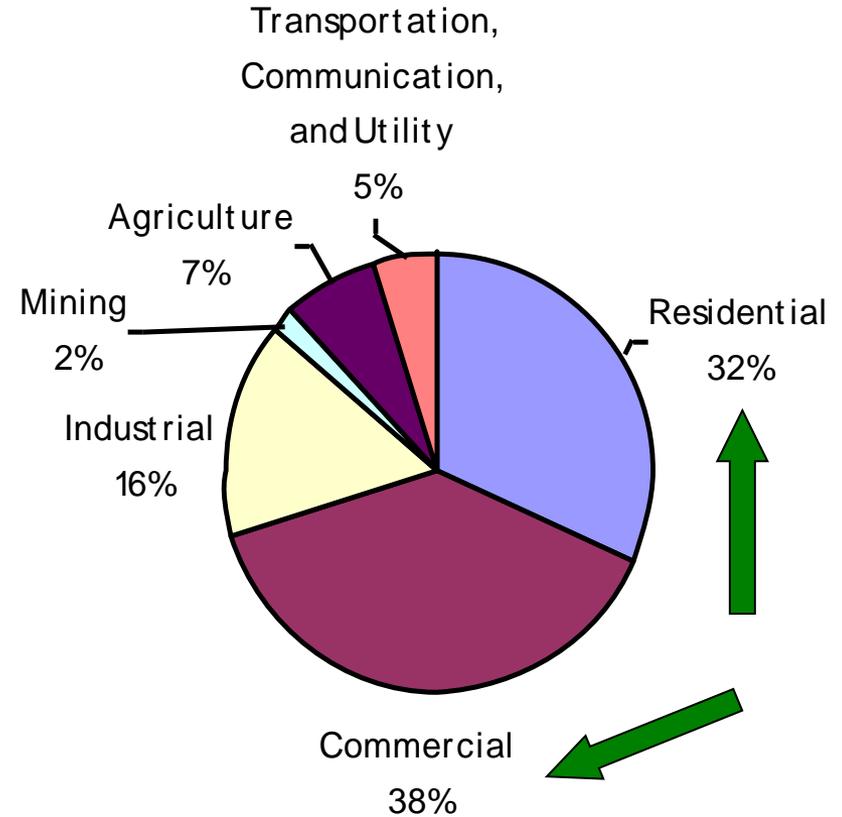
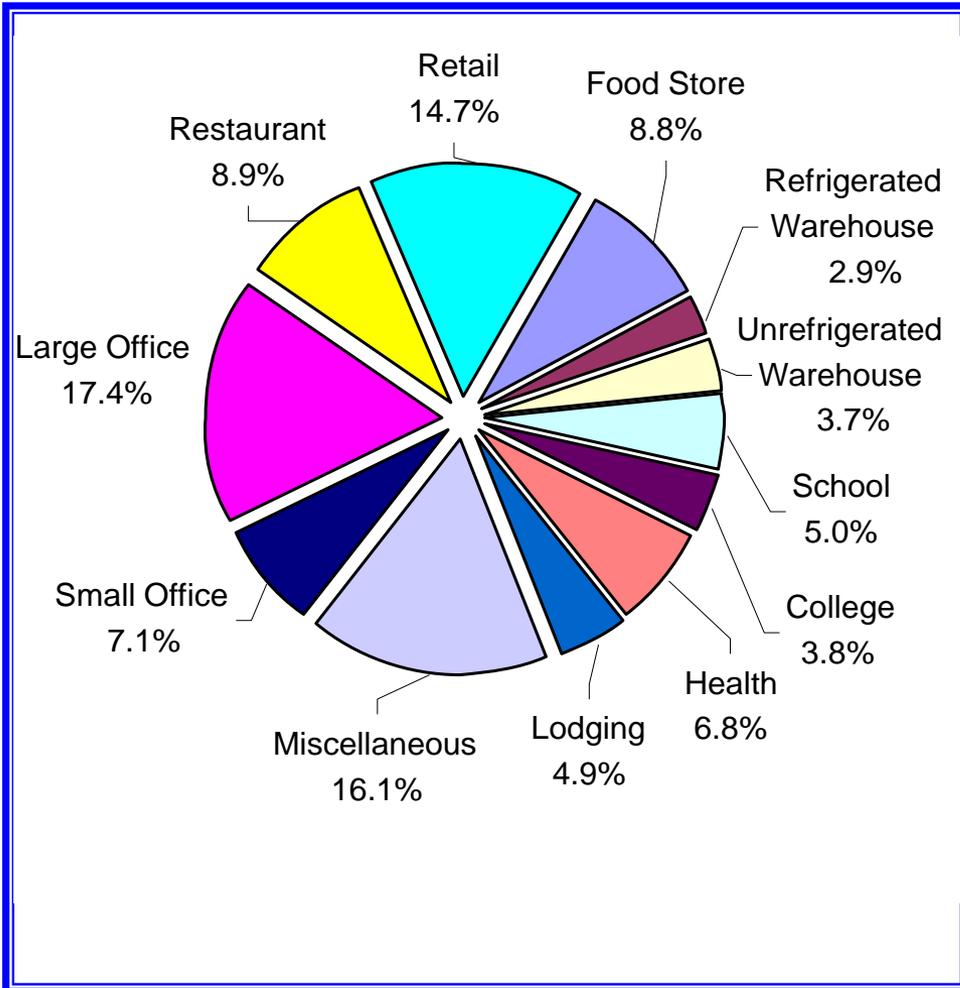
California Green Building Initiative & Global Warming Solutions Act of 2006 (EO S-20-04 & AB32)

- Buildings are 2nd largest contributor (23.7%) to GHG emissions
- EO S-20-04: Reduce grid-based electricity by 20% in state-owned buildings by 2015; reduce associated greenhouse gas emissions
- AB 32: Reduce GHG emissions to 1990 levels by 2020

California GHG Emissions



Energy Use in California



Water Use in California

Executive Order S-06-08

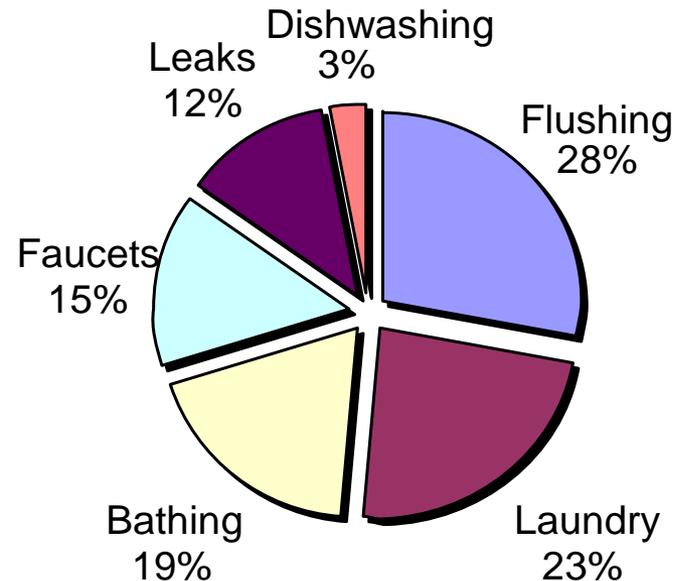
Governor's 2009 Proclamation

Water-related uses account for **19%** of California's electricity, **30%** of its natural gas and **88 billion gallons** of diesel fuel every year.

Water-efficiency measures can reduce water and sewer costs by up to **30 percent**.

Significant savings in energy, chemical and maintenance expenses typically follow.

SOURCE - USGS



Typical Residential Water Use

50 to 300 gpcd - landscape 50%

Source - Water Education Foundation

Why CALGreen

- **Uniformity and Consistency**

- Jurisdictions adopting many different programs
- Works with other California codes
- Sustainability

- **Governor's Directive**

Adopting State Agencies

- ❑ The Department of Housing and Community Development (HCD)
- ❑ Division of the State Architect (DSA)
- ❑ Office of Statewide Health Planning and Development (OSHPD)
- ❑ California Building Standards Commission (CBSC)

California Building Standards Commission



- Independent Commission
 - State and Consumer Services Agency
-

California Building Standards Commission

- **Chair**

- Secretary of the State and Consumer Services Agency

- **Commissioners (10)**

- Appointees specified by law
 - One architect
 - One mechanical, electrical or fire protection engineer
 - One structural engineer
 - One licensed contractor
 - Three public members, at least one must be a person with disabilities
 - One member from organized labor in the building trades
 - One local building official
 - One local fire official
-

CBSC Responsibilities

- Review building standards proposed by state agencies
 - Develop building standards for occupancies where no other state agency has the authority - non-residential
 - Adopt and approve building standards for publication
 - File approved building standards with the Secretary of State
 - Codify approved building standards
 - Contract to publish the California Building Standards Code
 - Act as the state depository for local government modifications
-

Contributing State Agencies

- ❑ Air Resources Board
 - ❑ CalRecycle
 - ❑ Department of General Services
 - ❑ Department of Water Resources
 - ❑ State Water Resources Control Board
 - ❑ Energy Resources Conservation and Development Commission
(Energy Commission)
 - ❑ Department of Public Health
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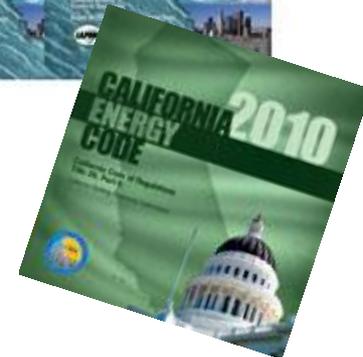
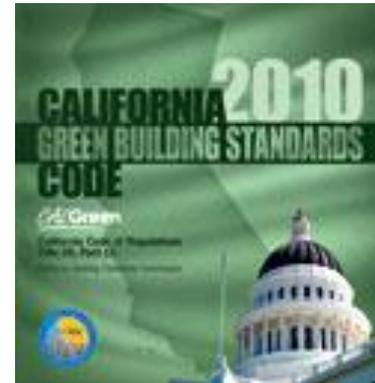
Additional resources utilized in developing California Green Building Standards Code

- ❑ Collaborative for High Performance Schools (CHPS)
 - ❑ California Green Builder
 - ❑ Leadership in Energy and Environmental Design (LEED)
 - ❑ Green Globes
 - ❑ Scottsdale Arizona Checklist
 - ❑ Build It Green
 - ❑ UC Berkeley Green Building Baseline
 - ❑ Draft ASHRAE Standard 189P
-

2010 California Building Standards Code – Title 24

(effective January 1, 2011)

- ❑ Part 1 - California Administrative Code
- ❑ Part 2 - California Building Code
- ❑ Part 2.5 California Residential Code
- ❑ Part 3 - California Electrical Code
- ❑ Part 4 - California Mechanical Code
- ❑ Part 5 - California Plumbing Code
- ❑ Part 6 - California Energy Code
- ❑ *Part 7 - Vacant*
- ❑ Part 8 - California Historical Building Code
- ❑ Part 9 - California Fire Code
- ❑ Part 10 - California Existing Building Code
- ❑ **Part 11 - California Green Building Standards Code**
- ❑ Part 12 - California Referenced Standards Code



California Green Building Standards Code

- **Initial Voluntary Standards**
 - Effective August 1, 2009
- **City and County Adoption**
- **2010 Mandatory Standards**
 - Effective January 1, 2011
- **2010 Code Adoption Cycle**
 - Modifications effective July 1, 2012
- **Next Code Adoption Cycle in 2012**

Support for CALGreen

- Laborers International

LiUNA!

Feel the Power



- AIACC

- NRDC

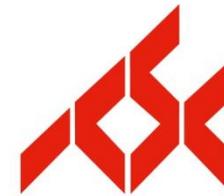
- CAL Chamber

- EDF

- CBPA



California
Business
Properties
Association



International Council of Shopping Centers

NAIOP
COMMERCIAL REAL ESTATE
DEVELOPMENT ASSOCIATION
NAIOP OF CALIFORNIA

*CAL*Green

California Green Building Standards Code

■ Chapter 1 Administration

- Purpose (101.2)
 - Environmental impact
- Scope (101.3)
 - New construction and some additions & alterations on July 1, 2012
 - Not intended to be identified as meeting the requirements of a point rated system
- Local amendments based on findings (101.7)
 - Climate
 - Topography
 - Geology
- Alternate Materials and Methods (101.8)
- Construction Documents (102)
- Application and State Agency Authorities (103 - 106)
- Effective Use of the Code (101.11)

California Green Building Standards Code

- **Matrix Adoption Tables**

- **Chapter 2 Definitions**

- If used in more than one location in the code a defined term will be located in Chapter 2
- If only used in one chapter the defined term will be located in the definition section at the beginning of that chapter
- Matrix adoption tables tell which agency adopts

California Green Building Standards Code

- **Chapter 3 Green Building**
 - Scope
 - Mixed Occupancy Buildings
 - Shall comply with appropriate requirements for each separate occupancy type
 - Phased Projects
 - Voluntary Tiers
 - *CALGreen* Tier 1 and Tier 2

California Green Building Standards Code

- **Chapter 4 Residential Mandatory Measures**
- **Chapter 5 Nonresidential Mandatory Measures**
- **Chapter 6 Reference Organizations and Standards**
- **Chapter 7 Installer and Special Inspector Qualifications**
- **Chapter 8 Compliance Forms and Worksheets**

California Green Building Standards Code

■ Chapter A4

- Residential Electives and Tiers
- Residential Checklist

■ Chapter A5

- Nonresidential Electives and Tiers
- Nonresidential Checklists
 - BSC, DSA-SS, OSHPD effective January 1, 2011
 - BSC, OSHPD effective July 1, 2012

California Building Standards Commission

Chapter 5

Nonresidential Mandatory Measures

- Planning and Design – Division 5.1
- Energy Efficiency – Division 5.2
- Water Efficiency and Conservation – Division 5.3
- Material Conservation and Resource Efficiency – Division 5.4
- Environmental Quality – Division 5.5
- Additions and Alterations – Division 5.7
 - Phased in beginning July 1, 2012

PLANNING AND DESIGN – Chapter 5-Division 5.1

Site Development

January 1, 2011

- Stormwater soil loss prevention plan
- Bicycle parking
- Designated parking

July 1, 2012

- Stormwater pollution prevention BMP *
- Delete UC reference *
- Clarify stall marking *

* Also applies to additions and alterations

PLANNING AND DESIGN – Chapter 5-Division 5.1

Site Development

January 1, 2011

- Light pollution reduction
 - Voluntary on April 20, 2011
- Grading and paving

July 1, 2012

- IESNA 2011 BUG Ratings mandatory as of July 1, 2012
- Coordinate BMP with HCD *

* Also applies to additions and alterations

ENERGY EFFICIENCY - Chapter 5-Division 5.2

Mandatory Measures are Regulated by the California Energy Commission

- Mandatory provisions are found in Part 6 of Title 24

WATER EFFICIENCY AND CONSERVATION

Chapter 5-Division 5.3

Indoor Water Use

January 1, 2011

- Separate water submeters for high water use
- 20% reduction in indoor water use
 - Prescriptive and performance standards

July 1, 2012

- Separate water submeters for subsystems *
- Clarify prescriptive and performance methods, showerheads and tables *

* Also applies to additions and alterations

WATER EFFICIENCY AND CONSERVATION

Chapter 5-Division 5.3

Outdoor Water Use



January 1, 2011

- Water budget
- Separate submeter for outdoor potable water use
- Weather or soil moisture-based irrigation controllers

July 1, 2012

- No change *
- Minor clarifications *
- Minor clarifications *

* Also applies to additions and alterations

MATERIAL CONSERVATION and RESOURCE EFFICIENCY - Chapter 5-Division 5.4

Water Resistance & Moisture Management

January 1, 2011

- Exterior weather protection by Title 24 or local ordinance
- Design for moisture control
 - Sprinklers
 - Entries and openings

July 1, 2012

- No change *
- No change *

* Also applies to additions and alterations

MATERIAL CONSERVATION AND RESOURCE

EFFICIENCY - Chapter 5-Division 5.4

Construction Waste Reduction, Disposal & Recycling

January 1, 2011

- Construction waste reduction of 50%
- Waste management plan required, or meet local ordinance

July 1, 2012

- No change *
- Same; add options for *
 - Waste management company
 - Waste stream reduction

* Also applies to additions and alterations

MATERIAL CONSERVATION AND RESOURCE

EFFICIENCY - Chapter 5-Division 5.4

Construction Waste Reduction, Disposal & Recycling

January 1, 2011

- Exception for isolated jobsites
- Recycle or reuse 100% of land clearing debris

July 1, 2012

- No change *
- Same; add exception for contaminated debris *

* Also applies to additions and alterations

MATERIAL CONSERVATION AND RESOURCE

EFFICIENCY - Chapter 5-Division 5.4

Building Maintenance and Operation

January 1, 2011

- Recycling by occupants



- Building commissioning for new buildings 10,000 s.f. and over

July 1, 2012

- No change *

* Also applies to additions and alterations

- Minor clarifications; add exceptions for
 - Dry warehouses
 - Some tenant improvements

MATERIAL CONSERVATION AND RESOURCE EFFICIENCY - Chapter 5-Division 5.4

Building Maintenance and Operation

January 1, 2011

- Testing and adjusting for buildings less than 10,000 s.f.
 - HVAC balancing

July 1, 2012

- Same with minor clarifications *

* Also applies to additions and alterations

ENVIRONMENTAL QUALITY –

Chapter 5-Division 5.5

Pollutant Control

January 1, 2011

- Fireplaces
- Voluntary
- Covering of duct openings and protection of equipment during construction

July 1, 2012

- No change *
- If HVAC is used for temporary ventilation *
- Minor clarifications *

* Also applies to additions and alterations

ENVIRONMENTAL QUALITY –

Chapter 5-Division 5.5

Pollutant Control

January 1, 2011

- Indoor air quality
 - Finish materials
 - Filters

 - Environmental tobacco smoke

July 1, 2012

- Minor clarifications *
 - Referenced standards
 - Exception for small, ductless units
 - Clarification of authority to regulate

* Also applies to additions and alterations

ENVIRONMENTAL QUALITY –

Chapter 5-Division 5.5

January 1, 2011

- **Indoor moisture control** (Other codes)
- **Indoor air quality** (Energy Code)
 - Ventilation
 - CO₂ monitoring

July 1, 2012

- No change *
- Editorial changes *

* Also applies to additions and alterations

ENVIRONMENTAL QUALITY –

Chapter 5-Division 5.5

January 1, 2011

- **Environmental Comfort**
 - Exterior noise transmission
 - Interior sound
- **Outdoor air quality**
 - Ozone depleting chemicals

July 1, 2012

- Significant changes *
 - Align with HCD in CBC and general plans; add performance alternative
 - No change
- No change *

* Also applies to additions and alterations

2010 California Green Building Standards Code

NONRESIDENTIAL VOLUNTARY MEASURES

■ Appendix A5

- The measures contained in the appendix are not mandatory unless adopted by a city, county, or city and county. Appendix provisions may also be used voluntarily by designers, builders, and property owners.
- *CALGreen* Tier 1 and Tier 2 are intended for adoption by cities, counties, and cities and counties to help California meet its goals for greenhouse gas emission reduction.

NONRESIDENTIAL VOLUNTARY MEASURES

To achieve **CALGreen** Tier 1 or Tier 2, one must comply with the following:

- Meet all mandatory requirements;
- Exceed 2010 California Energy Code by 15% or 30%;
- Employ additional voluntary measures in all the following areas:
 - Parking for clean air vehicles
 - Cool roofs
 - Reduction of indoor and outdoor water use
 - Construction waste diversion of 65% for Tier 1 and 80% for Tier 2
 - Use of materials with recycled content
 - Installation of low-emitting resilient flooring and thermal insulation; and

NONRESIDENTIAL VOLUNTARY MEASURES

To achieve *CALGreen* Tier 1 or Tier 2, one must comply with the following:

- Comply with additional elective measures as follows:
 - 5 electives for Tier 1
 - 15 electives for Tier 2
- **Application Checklist**
 - Mandatory provisions
 - Provisions required for compliance with tiers



Office of Governor

Edmund G. Brown Jr.

Visit his Website



SCSA Secretary

Anna Caballero

Visit SCSA Website



BSC Executive Director

Jim McGowan



FEATURED LINKS

- CALGreen
- Bulletins
- Notices
- SB1473
- Feedback
- Related Sites
- Archives



Welcome! The California Building Standards Commission (CBSC) is responsible for the administration of California's building codes (California Code of Regulation, Title 24), which includes the adoption, approval, publication, and implementation of codes and standards.

California's building codes are published on a triennial basis. Supplements and errata are issued throughout the cycle. Review the [current code cycle](#) here.

The 2010 codes are available online both on this website and on the submitting agencies websites:

Residential construction: California Department of Housing and Community Development, www.hcd.ca.gov

Schools Construction: California Department of General Services, Division of the State Architect, www.dgs.ca.gov/dsa

Access Compliance: California Department of General Services, Division of the State Architect, www.dgs.ca.gov/dsa/Programs/progAccess

Hospitals and clinic construction: California Office of Statewide Health Planning and Development, <http://www.oshpd.ca.gov/>

Fire and Panic Safety: Office of the State Fire Marshal, <http://www.osfm.fire.ca.gov/>

California Building Standards Commission Meetings are now webcast - <http://www.dca.ca.gov/stream/audiocast.asx>. Link is active five minutes prior to meeting start times.

California's building codes are published by the International Code Council (ICC), with the exception of the Plumbing and Mechanical codes, and may be purchased directly from the council. Visit the online store at www.iccsafe.org, or call 800-786-4452 for order information.

Thank you...



Any questions?

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