



# Local Building Code Amendments

Environment and Climate Commission

September 28, 2022





# Building Code Adoption Process

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- **California Building Standards Code, Title 24, is updated every 3 years**
  - California Energy Code, Title 24, Part 6
  - California Green Building Standards Code (CALGreen), Title 24, Part 11
- **2022 Code becomes effective on January 1, 2023**
  - Local governments may adopt stricter code provisions if justified by findings of local climatic, geological, or topographical conditions
    - Energy Code amendments must also be cost-effective and approved by the California Energy Commission (CEC)
    - Local amendments must be filed with the Building Standards Commission



# 2019 Code Amendments

- **Included amendments to Energy Code, CALGreen & Mechanical Code**
  - Deep Green Building Initiative (City Council referral)
  - Declaration of Climate Emergency
  - Fossil Fuel Free City
- **Prohibition on Natural Gas Infrastructure in New Buildings**



Photo: Emilie Raguso



# Successes

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- **Prohibition on Natural Gas Infrastructure in New Buildings**
  - Inspired over 50 California communities to adopt all-electric new construction requirements
  - Recommended model for all-electric requirements in 2023
- **2019 Energy Code Amendments → 2022 Energy Code**
  - All-electric baseline: heat pump space heating for Climate Zone 3
  - Expands solar PV systems from single family & low-rise residential to solar and storage requirements at new nonresidential and multifamily buildings
  - Energy efficiency improvements
  - Electric readiness requirements for residential buildings

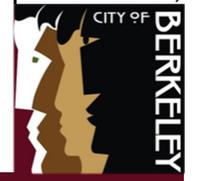


# Maintain and Strengthen

- **Prohibition on Natural Gas Infrastructure in New Buildings**
- **2022 Energy Code**
- **2022 Mechanical Code amendment**
  - Kitchen range hood sound ratings
- **2022 CALGreen amendments**
  - Construction & Demolition debris diversion
  - Low-carbon concrete
  - EV charging readiness and installation
- **New: Green Building Program Manager**



Image: MWA Architects



# 2022 Mechanical Code amendment proposal

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## Kitchen Range Hoods

- Amendment requires in residential units
  - 100 cfm or greater
  - 3 sones maximum sound rating
- Improves likelihood of range hood use, resulting in better air quality



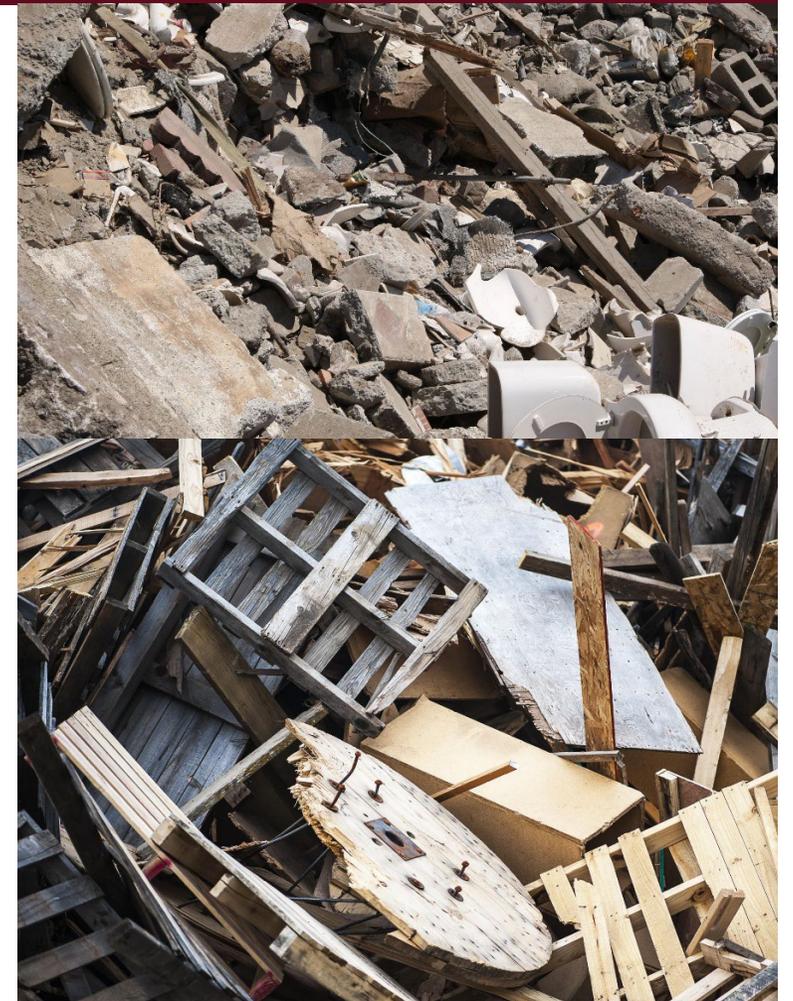


# 2022 CALGreen amendment proposal

## Construction and Demolition (C&D) Waste Management

- Diversion of at least 65% of nonhazardous C&D waste by recycling, reuse, and salvage
- 100% diversion of asphalt, concrete, and land-clearing debris (excavated trees, stumps, rocks, etc.)

**Note:** GreenHalo required for C&D tracking and reporting: [berkeley.wastetracking.com](https://berkeley.wastetracking.com)





# 2022 CALGreen amendment proposal

## Low-Carbon Concrete

- Reduce cement in concrete mix design by at least 25%
  - Cement alternatives include fly ash, slag, silica fume, rice hull ash, etc.
- Cement used in concrete is the single largest material source of embodied emissions in buildings, responsible for 8% of global emissions
- Replacing cement with alternatives can reduce total emissions for concrete by 50%

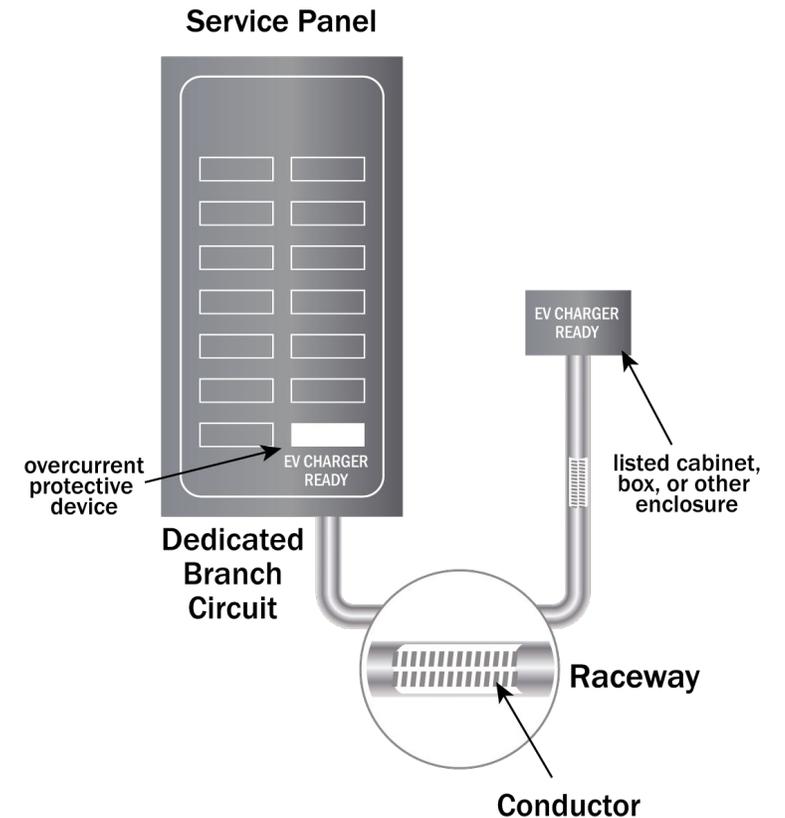




# 2022 CALGreen amendment proposal

## Electric Vehicle (EV) Charging

- Single-family homes, duplexes & townhomes
  - At least one parking space per dwelling unit (with on-site parking) must be equipped with raceway, wiring, and power to support a future Level 2 EV charging station

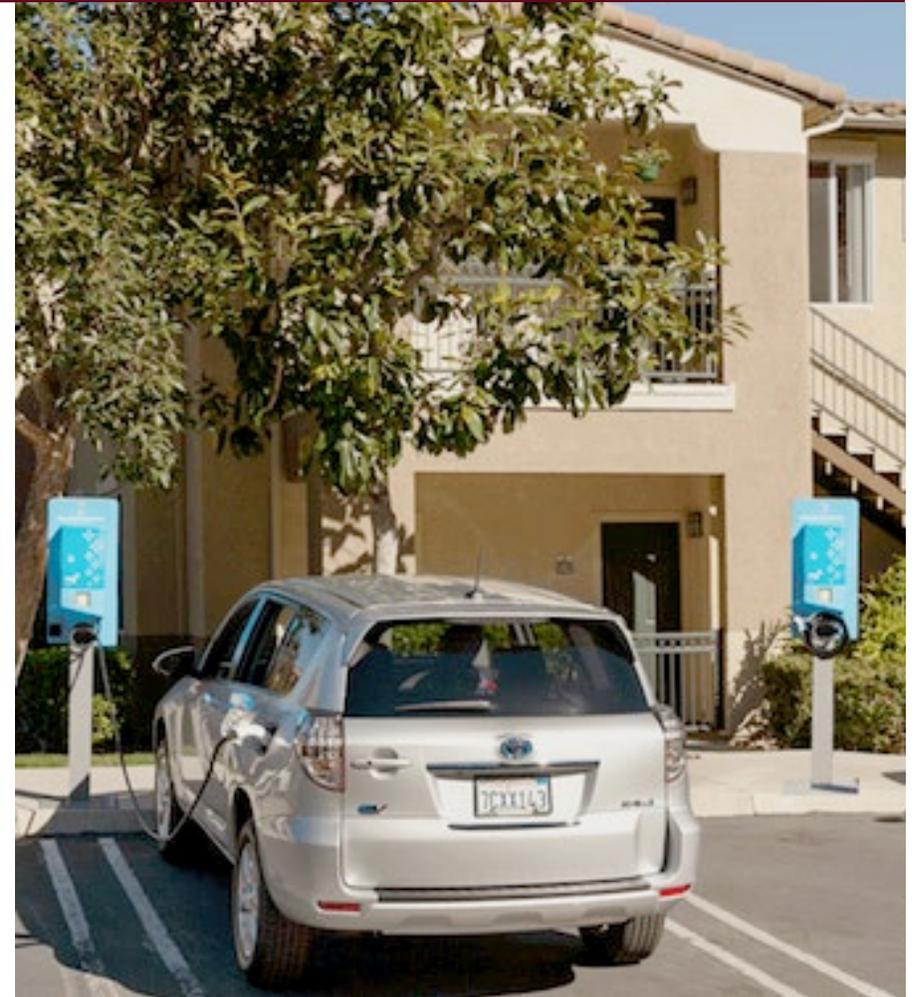




# 2022 CALGreen amendment proposal

## Electric Vehicle (EV) Charging

- Multifamily and Hotel/Motel Buildings
  - **5%** of parking spaces equipped with Level 2 charging stations
  - **20%** of parking spaces as EV Capable to support future Level 2 EV charging stations
  - 25% of parking spaces as EV Ready with low power Level 2 EV charging receptacles



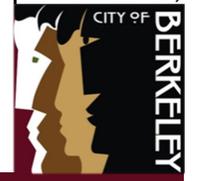


# 2022 CALGreen amendment proposal

## Electric Vehicle (EV) Charging

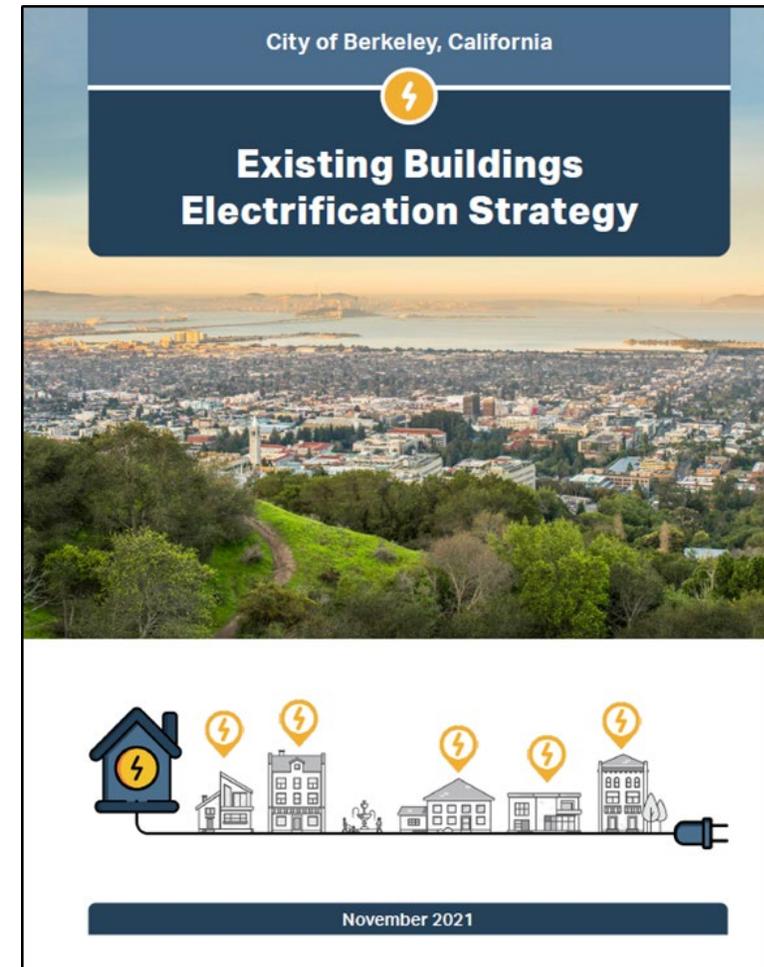
- Nonresidential Buildings
  - **10%** of parking spaces equipped with charging stations (Level 2 or DCFC)
  - **20%** of parking spaces as EV Capable to support future Level 2 EV charging stations





# Additional Opportunities to Advance Building Electrification

- Climate Equity Fund Pilot Projects
- Just Transition Healthy Home Electrification Pilot
- Berkeley Efficient & Resilient Multi-Use Showcase (BERMUS)
  - CEC Grant Award #EPC-21-029
- Natural Gas Prohibition
- Building Emissions Saving Ordinance





# Thank You!

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## **Kurt Hurley**

Green Building Program Manager  
Building & Safety Division  
(510) 981-7501  
[khurley@CityofBerkeley.info](mailto:khurley@CityofBerkeley.info)

## **Sarah Moore**

Sustainability Program Manager  
Office of Energy & Sustainable Development  
(510) 981-7494  
[smoore@CityofBerkeley.info](mailto:smoore@CityofBerkeley.info)

