

Date of Hearing: June 28, 2023

**ASSEMBLY COMMITTEE ON UTILITIES AND ENERGY**

Eduardo Garcia, Chair

SB 48 (Becker) – As Amended June 8, 2023

**SENATE VOTE:** 31-9

**SUBJECT:** Building Energy Savings Act

**SUMMARY:** Requires the California Energy Commission (CEC), in consultation with the California Air Resources Board (CARB), California Public Utilities Commission (CPUC), and Department of Housing and Community Development (HCD) on or before July 1, 2026, to jointly develop a strategy using the existing energy usage data found in the benchmarking program requirement to track and manage the energy and greenhouse gas (GHG) emissions of covered buildings in order to achieve the state’s energy and climate goals of covered buildings.

Specifically, **this bill:**

- 1) Specifies that the building benchmarking requirement does not require the owner of a building with less than 50,000 square feet of gross floor space to collect or deliver energy usage information to the CEC.
- 2) Proposes the strategy to include building performance standards.
- 3) Requires the CEC to consider and attempt to incorporate in the strategy a number of specified concerns, including: avoiding utility and rental cost burdens, evictions or displacement of tenants, cost-effectiveness of building upgrades, equitable access to jobs, prioritizing reductions in fuel-related GHG emissions, and others.
- 4) Requires the CEC to consider input from affected stakeholders, including housing and environmental justice community-based organizations, energy efficiency providers, labor unions, building owners, low-income tenants, and others.
- 5) Ensures equal participation of affected stakeholders by requiring CEC to contract with organizations with experience, and consider recommendations from the affected stakeholders.
- 6) Requires the CEC to consider authorizing a local jurisdiction to implement its own program for increasing energy efficiency and reducing GHGs as an alternative to the strategy.
- 7) Requires the CEC to submit the strategy to the Legislature on or before August 1, 2026.

**EXISTING LAW:**

- 1) Requires the CEC to assess the potential for the state to reduce GHG emissions from the state's residential and commercial building stock by at least 40% below 1990 levels by January 1, 2030. (Public Resources Code § 25403)
- 2) Requires the CEC to develop, and publish on the commission's internet website, guidance and best practices to help building owners, the construction industry, and local governments overcome barriers to electrification of buildings. (Public Resources Code § 25233.5)
- 3) Requires the CEC to award funds to research and development projects that advance technologies critical to meeting the state's environmental and energy goals and benefit electricity ratepayers. (Public Resources Code § 25711)
- 4) Require the California Air Resources Board (CARB) to ensure that statewide greenhouse gas emissions are reduced to 40% below the 1990 level by 2030. (Health & Safety Code § 38566)

**FISCAL EFFECT:** According to the Senate Committee on Appropriations:

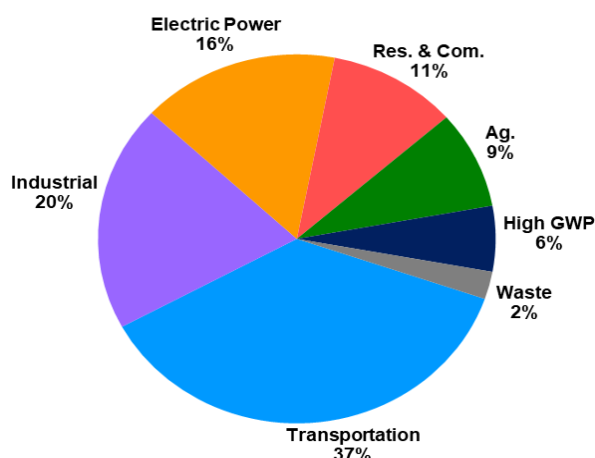
- Likely significant ongoing costs from General Fund or the Energy Resources Program Account (ERPA) for the CEC to develop the state strategy.
- The Department of Housing and Community Development (HCD) estimates ongoing costs of \$179,000 annually from General Fund and one position within its State Housing Law Program that would coordinate with other state agencies in order to develop a strategy for using data to track and manage energy use and emissions of GHGs of "covered buildings" to meet state energy savings and emissions targets by July 1, 2026.
- Potentially significant costs for the CPUC to consult and support the CEC and provide input from the Disadvantaged Community Advisory Group.
- Costs would be minor and absorbable as estimated by the California Air Resources Board (ARB) estimates that any costs would be minor and absorbable.

**BACKGROUND:**

*California's Climate Goals and Building Emissions* – AB 32 (Nunez, Chapter 488, Statutes of 2006), also known as the California Global Warming Solutions Act of 2006, required CARB to develop a Scoping Plan that describes the state's approach to reduce GHGs to achieve the goal of reducing emissions to 1990 levels by 2020. This plan has since been updated by SB 32 (Pavley, Chapter 249, Statutes of 2016) which required statewide GHG emissions to be reduced to 40% below the 1990 level by 2030. Also in 2006, the Legislature passed AB 1803 (Committee on Budget, Chapter 77, Statutes of 2006), a budget bill that directed CARB to develop California's GHGs Inventory Program which provides estimates and monitors GHGs emissions from

different sectors of the state.<sup>1</sup> These estimates are sourced from local, state, and federal data, and aggregated into facility-specific emission reports. For the electricity sector, the Scoping Plan establishes a target range for the sector’s GHG emission reductions that reflect its relative role in achieving the economy wide GHG reductions.<sup>2</sup> The updated Scoping Plan<sup>3</sup> released by CARB in December 2022 calls for targets of 38 million metric tons of carbon dioxide equivalent (MMTCO<sub>2</sub>e) by 2030 and 30 MMTCO<sub>2</sub>e by 2035 in the electricity sector.<sup>4</sup>

**Figure 1: 2020 GHG Emissions Categorized by AB 32 Scoping Plan Category<sup>5</sup>**



According to Figure 1, residential and commercial buildings account for about 11% of the state’s total GHG emissions by scoping plan category. However, these buildings are responsible for roughly 25% of California’s GHG emissions when accounting for fossil fuels consumed onsite and electricity demand.<sup>6</sup> This is largely attributed to natural gas which is the primary fuel used to produce heat at industrial facilities, as well as in residential and commercial buildings during activities such as space cooling (refrigerants) and water heating.

*Energy Efficiency Initiatives* – California’s commitment to energy efficiency has resulted in many different efficiency programs across the state. The programs span a variety of sectors encompassing residential homes and commercial buildings, large and small appliances, lighting and HVAC, industrial manufacturers, and agriculture. Within those sectors, efficiency programs may use any number of different tools: financial incentives and rebates, research and development for energy efficiency technologies, financing mechanisms, codes and standards development, education and public outreach, marketing, and others. Each of these programs helps California be more energy efficient, and collectively, these programs result in significant reductions in California’s GHG emissions.

*Energy Code* – California has been a leader in advancing appliance and building energy efficiency. In the 1970’s the CEC developed the nation’s very first energy conservation standards for buildings and appliances.<sup>7</sup> Adopted in 1976 and updated every three years by the CEC, the building energy efficiency standards for residential and non-residential buildings, otherwise

<sup>1</sup> CARB; “Current California GHG Emission Inventory Data”; <https://ww2.arb.ca.gov/our-work/programs/greenhouse-gas-inventory>

<sup>2</sup> Public Utilities Code § 454.52(a)(1)(A)

<sup>3</sup> In its previous draft plan, CARB set the electric sector targets at 38 million metric tons of carbon dioxide equivalent (MMTCO<sub>2</sub>e) in 2030 and 30 MMTCO<sub>2</sub>e in 2045.

<sup>4</sup> Pg.75, CARB, “DRAFT 2022 Scoping Plan Update,” May 10, 2022

<sup>5</sup> Pg.30, CARB; “California Greenhouse Gas Emissions for 2000 to 2020 Trends of Emissions and Other Indicators; October 2022; [California Greenhouse Gas Emissions for 2000 to 2020 Trends of Emissions and Other Indicators](https://ww2.arb.ca.gov/our-work/programs/greenhouse-gas-inventory)

<sup>6</sup> CARB, “Building Decarbonization” [https://ww2.arb.ca.gov/our-work/programs/building-decarbonization/about#\\_ftn1](https://ww2.arb.ca.gov/our-work/programs/building-decarbonization/about#_ftn1)

<sup>7</sup> CEC, “Energy Efficiency”; September 2018

known as the Energy Code or Title 24, Part 6, entails energy and water efficiency standards for newly constructed buildings, additions to existing buildings, and alterations to existing buildings. The standards are updated to ensure that builders use the most energy-efficient technologies and construction, save energy, increase electricity supply reliability, increase indoor comfort, and help preserve the environment.<sup>8</sup> These standards vary by building type and climate zone and are listed in the California Code of Regulations. The CEC strives to balance environmental and cost concerns to provide California residents with energy that is environmentally sustainable and affordable. As such, cost-effectiveness is calculated by determining the energy savings associated with a more efficient building standard. Realizing these benefits, the legislature passed SB 350 (De León Chapter 547, Statutes of 2015), which requires the state to double statewide energy efficiency savings in electricity and natural gas end uses by 2030.

*California Building Decarbonization Assessment* – AB 3232 (Friedman, Chapter 373, Statutes of 2018) directed the CEC by January 1, 2021, to develop an assessment of the feasibility of reducing the GHG emissions of California’s buildings 40 % below 1990 levels by 2030, working in consultation with the CPUC and other state agencies. The legislation only required a cost-effectiveness assessment addressing emissions from space and water heating, but not other applications, such as cooking. The assessment provided a framework to tackle the challenges in developing a path toward reducing GHG emissions associated with California’s buildings. The assessment was published in 2021 and has identified efficient electrification of space and water heating in California’s buildings combined with refrigerant leakage reduction as the most readily achievable pathway to a greater than 40% reduction in GHG emissions by 2030. However, the assessment also acknowledged the challenges, including consumer awareness and financing availability.

*BUILD and TECH* – SB 1477 (Stern, Chapter 378, Statutes of 2018) directed the CPUC to develop, in consultation with the CEC, two programs (BUILD and TECH) aimed at reducing GHG emissions associated with buildings. SB 1477 makes available \$50 million annually for four years, for a total of \$200 million, derived from the revenue generated from the GHG emission allowances, as part of the CARB’s Cap-and-Trade program. CPUC is responsible for a Building Decarbonization proceeding to implement SB 1477 and develop pilot programs to address new construction in areas damaged by wildfires, coordinate policies with CEC's Energy Code and Appliance Efficiency Standards. The CPUC allocated 40% of the \$200 million budget for the BUILD Program and 60% for the TECH Initiative.

*The 2019 Energy Efficiency Building Action Plan* – In 2019, the SB 350 energy efficiency goal was integrated into the CEC’s Energy Efficiency Building Action Plan, which provides a 10-year roadmap to transform California’s existing residential, commercial, and public building stock into high-performing and energy-efficient buildings. The 2019 California Energy Efficiency Action Plan covers challenges, opportunities, and savings estimates relating to energy efficiency in California’s buildings, industrial, and agricultural sectors.<sup>9</sup> The Action Plan is separated into three goals that drive energy efficiency: doubling energy efficiency savings by 2030, removing and reducing barriers to energy efficiency in low-income and disadvantaged communities, and reducing GHG emissions from the building sector.<sup>10</sup>

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<sup>8</sup> Title 24 Express, “What is 24?” <https://www.title24express.com/what-is-title-24/>

<sup>9</sup> CEC, “Energy Efficiency in Existing Buildings”; <https://www.energy.ca.gov/programs-and-topics/programs/energy-efficiency-existing-buildings>

<sup>10</sup> Pg iv, CEC, “2019 California Energy Efficiency Action Plan”; November 2019

*The Integrated Energy Policy Report (IEPR)* – Every two years, the CEC conducts an IEPR to forecast all aspects of energy industry supply, production, transportation, delivery, distribution, demand, and pricing. The CEC is then required to use these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety. A lead commissioner provides oversight and policy direction related to collecting and analyzing data needed to complete the IEPR on trends and issues concerning electricity and natural gas, transportation, energy efficiency, renewables, and public interest energy research. CEC has acknowledged the role of BPS in buildings. In the 2021 IEPR report, CEC stated that according to the U.S. EPA, “BPS [building performance standards] can improve the comfort and productivity of building occupants. As building owners seek to manage indoor air quality, high-efficiency HVAC systems with improved controls have become increasingly important.”<sup>11</sup> However, in the same IEPR report, CEC has recognized that there is a disconnect between the metrics required to show compliance for new buildings versus existing buildings. The CEC aims to create a building performance standard with metrics for existing buildings that align with new building metrics.

*Building Energy Benchmarking Program* – Energy benchmarking is a process for measuring a building’s energy efficiency by comparing its energy consumption per square foot of floor space against similar buildings. The Building Energy Benchmarking program that is administered by the CEC was created through legislative action<sup>12</sup> and requires building owners to calculate energy use intensity<sup>13</sup> by dividing the energy use by the square footage of the floor space of the building. That number acts as a baseline to compare the efficiency of the building to that of previous years or those of similar buildings. Reporting began in 2018 for buildings with no residential units and more than 50,000 square feet of gross floor area, and in 2019 for buildings with 17 or more residential utility accounts and more than 50,000 square feet of gross floor area. For the 2021 reporting year, 18,310 of the 26,054 building owners made their reports. The building owners report their energy consumption using ENERGY STAR Portfolio Manager, an online tool provided by the United States Environmental Protection Agency. The software has features to track inaccurate submissions. To further improve data quality, CEC staff also conducts post-submission data verification to address outliers that cannot be explained. Reporting is due by June 1 every year, and CEC regulations allow for buildings reported under a local benchmarking program to be exempted from reporting to the state program. Local benchmarking programs authorize cities and counties to customize California’s benchmarking requirements to align with their energy, resiliency, and climate change plans. As such, building owners within an exempt jurisdiction must report to their local jurisdiction, but not to the CEC.

*Building Performance Standards (BPS)*. Building performance standards are new policy tools that require owners of multifamily and commercial buildings to meet performance targets by actively improving their buildings over time, often with interim targets that drive energy savings and emission reductions.<sup>14</sup> In California, Chula Vista seems to be the only city to have implemented BPS. As of February 2021, Washington, D.C.; New York City; St. Louis, Missouri; and Washington State have adopted BPS policies to help meet their goals, and several more local

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<sup>11</sup> Pg.50, CEC, “2021 Integrated Energy Policy Report.”; IEPR Vol 1; [CEC 2021 Integrated Energy Policy Report](#)

<sup>12</sup> AB 802 (Williams, Chapter 590, Statutes of 2015)

<sup>13</sup> Energy Use Intensity is a metric that describes a building’s energy efficiency based on the amount of space it takes up.

<sup>14</sup> EPA, Pg. 2 “State & Local Government Coordination: Benchmarking and Building Performance Standards”; February 2021

and state governments are exploring them.<sup>15</sup> In January 2022, President Biden’s Administration launched a National Building Performance Standards Coalition which includes 37 local officials (mostly mayors, including several from California), the Governors of Washington and Colorado, and CEC Commissioner Andrew McAllister.

**COMMENTS:**

- 1) *Author’s Statement.* According to the author, “California faces parallel challenges of extreme weather and droughts, brought on by climate change, and housing and utility rate affordability. Improving building efficiency can help by reducing utility bills, energy usage, and greenhouse gas (GHG) emissions while improving the comfort of these buildings. Strong building codes have dramatically improved the efficiency of new buildings, but the state also needs a policy for improving its older buildings. SB 48 directs the CEC to develop a strategy for leveraging energy benchmarking data, which we already collect for large commercial and residential buildings, to help achieve the state’s targets for efficiency improvements and GHG emissions reductions. This bill only applies to very large buildings, so it is not going to impact smaller building owners or single family homes. It makes sense to focus on large buildings because they represent a small share of all buildings but a majority of building emissions. For example, commercial buildings >50,000 square feet – the ones covered by this bill – make up 6% of all commercial buildings but 53% of total space and energy use. They account for about 19 million tons of CO<sub>2</sub> per year – 5% of our state’s total. California can follow the example of other cities and states (including Washington, Maryland, Colorado, New York City, and Washington, DC) who have enacted building performance standard programs, leveraging benchmarking data, to improve efficiency in older buildings.”
- 2) *Fulfilling the Reporting Requirements.* The time it takes to collect data and submit the report to the CEC is estimated to be between 48-72 hours. This period does not include the time taken to request and receive data from utilities, which can take between two weeks and twelve weeks, depending on the clarity of the request and the property type's complexity. For instance, campuses and large multifamily buildings can take longer as it also requires tenant permission to share data. In May 2023, CEC reported that it has recently been receiving a large volume of emails and calls from building owners expressing concerns regarding this year’s reporting deadline and seeking technical assistance to comply with the requirements of the regulations. As such, the CEC extended the 2023 benchmarking reporting deadline by a month.
- 3) *Efforts to Increase Number of Buildings.* For the 2021 reporting year, 18,310 of the 26,054 identified building owners submitted reports to the CEC’s Benchmarking program. The CEC staff is now working with a contractor to update the building list and the total count of buildings that need to report to the benchmarking program. This effort is expected to increase the total count of covered buildings by about 15-20% in the next couple of years. This bill requires the CEC along with other agencies to develop a strategy for using the benchmark data to track and manage the energy usage and GHGs of existing buildings in order to achieve the state’s climate and energy goals of buildings. The bill would then require the CEC to submit the strategy and recommendations for

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<sup>15</sup> Ibid

further legislative action on or before August 1, 2026. It is unclear if these expectations can be met given the challenges related to reporting and the effort to increase the number of buildings in the benchmarking program.

- 4) *Funding in Budget.* On June 15, 2023, SB 101 (Committee on Budget) provided \$10 million to support the Building Energy Benchmarking Program. Specifically, this funding requires the CEC to develop processes for outreach and enforcement to increase compliance by building owners, and improve the quality of the data collected by the program. As such, this funding may help to remedy some of the noted challenges.
- 5) *Include Local Government Representatives.* The author recently amended § 25416 (c)(7) which authorizes the CEC and the other agencies to, “consider including a process by which a city or county may approve or reject an alternative compliance plan for unusual circumstances where a covered building cannot reasonably meet the building performance standards.” *As such, the author and committee may also wish to consider amendments that will include representatives of city or county as part of affected stakeholders in section 25402.16 (d)*
- 6) *Prior Legislation.*

SB 596 (Becker) would require the state board to establish interim targets for reductions in the greenhouse gas intensity of cement used within the state relative to the average greenhouse gas intensity of cement used within the state during the 2019 calendar year, with the goal of reducing the greenhouse gas intensity of cement used within the state to 40% below the 2019 average levels by December 31, 2035. Status: Chapter 246, Statutes of 2021.

SB 68 (Becker) directed the CEC to gather and develop guidance and best practices to overcome barriers to the electrification of buildings and installation of electric vehicle charging equipment. This project implements the requirements of that bill to help commercial and residential building owners, the construction industry, and local governments. Status: Chapter 720, Statutes of 2021.

AB 3232 (Friedman) requires the CEC, by January 1, 2021, to assess the potential for the state to reduce GHG emissions from the state’s residential and commercial building stock by 40% below 1990 levels by January 1, 2030. Status: Chapter 373, Statutes of 2018.

SB 1477 (Stern) requires the CEC to develop a statewide market transformation initiative to transform the state’s market for low-emission space and water heating equipment for new and existing residential and nonresidential buildings and to develop an incentive program to fund near-zero emission technology for new residential and commercial buildings. Status: Chapter 378, Statutes of 2018.

SB 32 (Pavley) requires the CARB to ensure that statewide GHG emissions are reduced to 40% below the 1990 levels by 2030. Status: Chapter 249, Statutes of 2016.

AB 32 (Núñez) requires CARB to develop a Scoping Plan that describes the state's approach to reducing GHGs to achieve the goal of reducing emissions to 1990 levels by 2020. Status: Chapter 488, Statutes of 2006.

- 7) *Double Referral*. This bill is double-referred; upon passage in this Committee, this bill will be referred to the Assembly Committee on Natural Resources.

**REGISTERED SUPPORT / OPPOSITION:**

**Support**

350 Bay Area Action  
350 Petaluma  
350 Sacramento  
350 Ventura County Climate Hub  
52nd District  
A. O. Smith Corporation  
Active San Gabriel Valley  
All Rise Alameda  
American Institute of Architects California  
Ban Sup (single Use Plastic)  
Biodiversity First!  
Breathe Southern California  
Building Decarbonization Coalition  
Building the Base Face to Face  
California Efficiency + Demand Management Council  
California Energy Alliance  
Californians for Energy Choice  
Californians for Western Wilderness  
Calpirg  
Center for Community Energy  
Center for Sustainable Energy  
Change Begins With Me (INDIVISIBLE)  
City of West Hollywood  
Cleaneearth4kids.org  
Climate Action California  
Climate Action Campaign  
Climate Action Mendocino  
Cloverdale Indivisible  
Coalition for Clean Air  
Contra Costa Moveon  
Defending Our Future: Indivisible in Ca  
Drawdown Bay Area  
East Valley Indivisibles  
Edison International and Affiliates, Including Southern California Edison  
El Cerrito Progressives  
Elders Climate Action, Norcal and Social Chapters  
Environment California  
Environmental Working Group



Environtees.org  
Extinction Rebellion San Francisco Bay Area  
Feminists in Action Los Angeles  
Friends Committee on Legislation of California  
Green the Church  
Hillcrest Indivisible  
Indi Squared  
Indian Valley Indivisibles  
Indivisible East Bay  
Indivisible 30/keep Sherman Accountable  
Indivisible 36  
Indivisible 41  
Indivisible Alta Pasadena  
Indivisible Auburn CA  
Indivisible Beach Cities  
Indivisible CA Statestrong  
Indivisible Ca-25 Simi Valley-porter Ranch  
Indivisible Ca-29  
Indivisible Ca-3  
Indivisible Ca-37  
Indivisible Ca-39  
Indivisible Ca-43  
Indivisible Ca-7  
Indivisible Ca: Statestrong  
Indivisible California Green Team  
Indivisible Claremont / Inland Valley  
Indivisible Colusa County  
Indivisible East Bay  
Indivisible El Dorado Hills  
Indivisible Elmwood  
Indivisible Euclid  
Indivisible Lorin  
Indivisible Los Angeles  
Indivisible Manteca  
Indivisible Marin  
Indivisible Media City Burbank  
Indivisible Mendocino  
Indivisible Normal Heights  
Indivisible North Oakland Resistance  
Indivisible North San Diego County  
Indivisible Oc 46  
Indivisible Oc 48  
Indivisible Petaluma  
Indivisible Ross Valley  
Indivisible Sacramento  
Indivisible San Bernardino  
Indivisible San Jose  
Indivisible San Pedro  
Indivisible Santa Barbara

Indivisible Santa Cruz County  
Indivisible Sausalito  
Indivisible Sebastopol  
Indivisible Sf  
Indivisible Sf Peninsula and Ca-14  
Indivisible Sonoma County  
Indivisible South Bay LA  
Indivisible Stanislaus  
Indivisible Suffragists  
Indivisible Ventura  
Indivisible Westside L.a.  
Indivisible Windsor  
Indivisible Yolo  
Indivisible: San Diego Central  
Indivisibles of Sherman Oaks  
Institute for Market Transformation  
Livermore Indivisible  
Los Angeles Regional Collaborative for Climate Action and Sustainability  
Menlo Spark  
Mountain Progressives  
Natural Heritage Institute  
New Buildings Institute  
North County Climate Change Alliance  
Nothing Rhymes With Orange  
Orchard City Indivisible  
Orinda Progressive Action Alliance  
Our City San Francisco  
Our Revolution Long Beach  
Pacifica Climate Committee  
Peninsula Interfaith Climate Action  
Rewiring America  
Riseup  
Rmi  
Rooted in Resistance  
Ross Valley Indivisible  
San Diego Indivisible Downtown  
San Joaquin Valley Democratic Club  
Santa Cruz Climate Action Network  
Santa Cruz County Democratic Central Committee  
Sfv Indivisible  
Sierra Club California  
Silicon Valley Youth Climate Action  
Social 350 Climate Action  
Sunflower Alliance  
Sunrise Movement Orange County  
Sunrise Orange County  
Sustainable Mill Valley  
Sustaining Way  
Tehama Indivisible

The Climate Alliance of Santa Cruz County  
The Climate Center  
The Energy Coalition  
The Resistance Northridge-indivisible  
Throop Unitarian Universalist Church, Pasadena  
Together We Will Contra Costa  
Tww/indivisible - Los Gatos  
Undauntedk12  
US Green Building Council  
Usgbc Los Angeles  
Vallejo-benicia Indivisible  
Venice Resistance  
Women's Alliance Los Angeles  
Yalla Indivisible

**Oppose Unless Amended**

California Association of Realtors

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