
**SENATE COMMITTEE ON ENERGY, UTILITIES AND
COMMUNICATIONS**
Senator Ben Hueso, Chair
2021 - 2022 Regular

Bill No: SB 31 **Hearing Date:** 4/19/2021
Author: Cortese
Version: 3/5/2021 Amended
Urgency: No **Fiscal:** Yes
Consultant: Nidia Bautista

SUBJECT: Building decarbonization

DIGEST: This bill explicitly incorporates building decarbonization within several aspects of electric utility ratepayer funded programs and within future, yet to be provided, federal moneys to address economic recovery, and incorporates requirements for prevailing wage, as specified. This bill also expands current legislative findings and declarations regarding the principal goals of electric and natural gas utilities' resource planning and investment to include building decarbonization.

ANALYSIS:

Existing law:

- 1) Establishes the State Energy Resources Conservation and Development Commission (also known as the California Energy Commission (CEC)) and requires the CEC to implement various energy efficiency programs. (Public Resources Code §25200 et seq.)
- 2) Requires the CEC, except as provided, to administer federal funds allocated to, and received by, the state for energy-related projects under certain federal laws, including the American Recovery and Reinvestment Act of 2009. (Public Resources Code §25460, 25461, et seq.)
- 3) Requires the CEC to develop and implement the Electric Program Investment Charge (EPIC) program to award funds for projects that will benefit electricity ratepayers and lead to technological advancement and breakthroughs to overcome the barriers that prevent the achievement of the state's statutory energy goals and that result in a portfolio of projects that is strategically focused and sufficiently narrow to make advancement on the most significant technological challenges. (Public Resources Code §§25710-25712)

- 4) Requires the California Public Utilities Commission (CPUC) to require each electrical corporation to identify a separate rate component to collect revenues to fund various programs, including, programs for cost-effective energy efficiency and conservation activities and programs to provide low-income electricity customers targeted energy-efficiency services. (Public Utilities Code §§381, 382)
- 5) Requires each local publicly owned electric utility to establish a nonbypassable, usage-based charge on distribution service, as specified, to fund various programs, including programs for cost-effective, demand-side management services and programs to provide energy efficiency services to low-income electricity customers. (Public Utilities Code §385)
- 6) Makes a legislative finding and declaration regarding the principal goals of electric and natural gas utilities' resource planning and investment. (Public Utilities Code §701.1)

This bill:

- 1) Requires the CEC to identify and implement programs to promote existing and new building decarbonization.
- 2) Authorizes the CEC, to the extent clean energy or energy efficiency funds are made available from the federal government to address economic recovery and development due to the COVID-19 pandemic, to expend federal moneys, to the extent authorized by federal law, for projects for existing and new building decarbonization.
- 3) Requires the CEC, under the EPIC program, to award funds for projects that will benefit electricity ratepayers and lead to the development and deployment of commercial and residential building decarbonization technologies and investments that reduce or eliminate greenhouse gas generation in those buildings.
- 4) Authorizes the expenditure of revenues as required of electrical corporations by the CPUC and nonbypassable, usage-based charges on distribution services by local publicly owned electric utilities for existing and new building decarbonization. Requires the entity implementing the decarbonization project and its subcontractors at every tier to pay prevailing wage in order to receive funding.

- 5) Expands the legislative finding and declarations regarding the principal goals of electric and natural gas utilities' resource planning to include as the decarbonization of existing and new buildings.

Background

SB 32 GHG goals. California must reduce statewide greenhouse gas (GHG) emissions to a level 40 percent below 1990 levels by 2030, as adopted in SB 32 (Pavley, Chapter 249, Statutes of 2016). California's Climate Change Scoping Plan outlines the path for California reaching the 2030 climate target as well as reducing GHG emissions 80 percent below 1990 levels by 2050.

Building decarbonization. Building decarbonization is a term of art used to capture the need to reduce greenhouse gas emissions from the building sector. According to the California Air Resources Board (CARB), residential and commercial buildings are responsible for roughly 25 percent of California's GHG emissions when accounting for fossil fuels consumed onsite, refrigerants, and electricity demand. Of the 25 percent, roughly ten percent of emissions are attributable to fossil fuel combustion, including natural gas, with residential buildings accounting for slightly more of those emissions than commercial buildings. However, CARB has noted that these emissions numbers can vary some year-to-year. Several strategies can be deployed to reduce carbon emissions from the building sector, including: improved energy efficiency of buildings and appliances, reducing carbon emissions from fossil fuel sources, ensuring cleaner sources of energy to operate buildings and associated appliances, addressing methane leaks, and others. CARB has noted that reducing emissions from refrigerants used for space cooling and refrigeration systems also contribute directly to building-related GHG emissions, as these are a growing source of greenhouse gas related emissions from buildings. The CARB Climate Change Scoping Plan identifies actions to reduce GHG emissions from the building sector, including progressively improving building codes and standards, pursuing voluntary efforts to exceed code requirements, and completing existing building retrofits.

CEC tasked to assess the potential for reducing GHGs from buildings. AB 3232 (Friedman, Chapter 373, Statutes of 2018) requires the CEC by January 1, 2021, to develop an assessment of the feasibility of reducing the greenhouse gas emissions of California's buildings 40 percent below 1990 levels by 2030, working in consultation with the CPUC and other state agencies. The CEC has developed a draft of the report, primarily focused on the emissions sources and challenges with quantifying these sources. The CEC has stated they anticipate finalizing the report by June or July 2021. AB 3232, appropriately, does not require specific actions to

implement the plan. Rather, the results of the assessments required of the CEC can help inform whether future policies have merit and are cost-effective to achieve the stated goal. Of note, this bill only required a cost-effectiveness assessment of addressing emissions from space and water heating, but not other applications, such as cooking.

New v. existing buildings. California energy efficiency policy related to buildings is based on savings of electricity measured in kilowatt hours and gas savings measured in therms. The policies have also distinguished between new construction and older building stock (although building renovations do sometimes fall under new construction regulations).

SB 350 (De León, 2015). In 2015, the Legislature adopted SB 350 (De León, Chapter 547, Statutes of 2015). Primarily, SB 350 increased California's renewable energy procurement goal from 33 percent by 2020 to 50 percent by 2030. SB 350 also requires the CEC to take specified actions to double the statewide energy efficiency savings in electricity and natural gas by January 1, 2030. In October 2017, CEC adopted energy efficiency targets and sub-targets to achieve the SB 350 goal in its report, SB 350: Doubling the Energy Efficiency Savings by 2030. In 2019, the SB 350 energy efficiency goal was incorporated into the CEC's Energy Efficiency Building Action Plan.

Energy Efficiency Building Action Plan. This CEC-developed plan provides a 10-year roadmap to activate market forces and 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 issues, opportunities, and savings estimates pertaining to energy efficiency in California's buildings, industrial, and agricultural sectors. 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 buildings sector.

Title 24. The CEC is required by statute to adopt energy efficiency building standards every three years that are cost effective for occupants over the 30-year lifespan of a building. The standards ensure that builders use the most energy efficient technologies and construction, save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants and help preserve the environment. These measures (Title 24, Part 6) are listed in the California Code of Regulations. Since 1978, the standards have made buildings more comfortable with lower energy costs. Cost-effectiveness is calculated by determining the energy savings associated with a more efficient

building standard. Savings are calculated by multiplying cumulative savings in each year by the average residential or commercial electricity rates to determine savings over the life of the measure.

Energy efficiency. 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. The investor-owned utility (IOU) programs are funded by a small portion of electricity and gas rates included in customer bills, which provides over one billion dollars per year to fund energy efficiency programs. These ratepayer-funded energy efficiency programs are usually administered by the state's four IOUs: Pacific Gas and Electric Company (PG&E), Southern California Edison (SCE), San Diego Gas & Electric (SDG&E), and Southern California Gas Company (SoCal Gas). Some programs are administered by Marin Clean Energy (MCE) or through two "Regional Energy Networks" in the Bay Area and Southern California. All of the programs administered by these different entities are regulated by the CPUC to ensure they are meeting the goals and cost-effectiveness metrics the CPUC is statutorily required to set for the IOU efficiency portfolios. Publicly-owned utilities (POU) are also required to report to the CEC a description of each energy efficiency and demand reduction program, program expenditures, the cost-effectiveness of each program, and expected and actual energy efficiency savings and demand reduction results from providing service to existing residential and nonresidential buildings, while taking into consideration the effect of the program on rates, reliability, and financial resources.

BUILD and TECH. SB 1477 (Stern, Chapter 378, Statutes of 2018) directs 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 directly allocated to gas corporations and consigned to auction as part of CARB's Cap-and-Trade program. This decision appropriates 40 percent of the \$200 million budget for the BUILD Program and 60 percent for the TECH Initiative. CPUC is responsible for a Building Decarbonization proceeding to implement SB 1477, develop pilot programs to address new construction in areas damaged by wildfires,

coordinate policies with CEC's Energy Code and Appliance Efficiency Standards, and establish a policy framework.

EPIC. The Electric Program Investment Charge Program (EPIC) was first authorized by the CPUC (in Decision 11-12-035) which instituted a new surcharge, but essentially maintained that surcharge at the same levels as had been previously authorized for public interest energy innovation. Decision 11-12-035 went on to identify and discuss the expectations for EPIC's potential to advance, for public benefit, research, development, and demonstration (RD&D) programs. The CPUC ordered PG&E, SCE, and SDG&E (collectively, the investor-owned electric utilities) to institute ratepayer surcharges for the year 2012 to pay for EPIC. The EPIC supports the development of new, emerging, and pre-commercialized clean energy technologies in California. These projects must be designed to produce electricity ratepayer benefits in the form of increased reliability, improved safety, and/or reduced electricity costs. EPIC consists of three program areas: Applied Research and Development (Applied R&D), Technology Demonstration and Deployment (TD&D), and Market Facilitation. To date, more than \$1 billion has been allocated to fund EPIC projects. In a recent decision, the CPUC authorized the collection of \$148 million for the EPIC surcharge through December 31, 2030. The decision requires the CEC to file investment plan applications for the five-year investment cycle periods 2021-2025 and 2026-2030 on October 1, 2021 (EPIC 4) and October 1, 2025 (EPIC 5) respectively. In its EPIC 5 application, the CEC is allowed to request an adjustment for inflation for years 2026-2030. The collection for the funding of EPIC is required to continue to be allocated to the utilities in the following percentages: PG&E 50.1 percent, SCE 41.1 percent, and SDG&E 8.8 percent.

SB 31. This bill incorporates “building decarbonization” within several aspects of electric utility ratepayer funded programs and within future, yet to be provided, federal moneys to address economic recovery and development due to COVID-19 pandemic, and incorporates requirements for prevailing wage, as specified. This bill also expands current legislative findings and declarations regarding the principal goals of electric and natural gas utilities’ resource planning and investment to include building decarbonization.

Incorporating building decarbonization. The explicit mention of the term “building decarbonization,” as proposed by this bill, as an eligible project for a myriad of ratepayer-funded, and yet to be provided federal funds, is likely in all cases an eligible use given the broader meaning of building decarbonization – to reduce GHG emissions from the building sector. However, within each category of funding existing limitations may apply for certain applications. As an example, the EPIC program is already funding research and market development in electric

heat pump applications and energy efficiency technologies. EPIC is funded by electric ratepayers, therefore, the program is limited to research, development, and demonstration of electric applications. The author's office notes their desire to maintain the goals and parameters of each program, but to explicitly mention building decarbonization as an eligible use.

Need to define "building decarbonization." As noted above, the term building decarbonization is a term that is often referenced to mean reducing GHG emissions from the building sector. However, as some supporters and opponents of this bill note, the term "building decarbonization" is often used by some to equate to electrification of all fossil-fuel uses in the building, including space and water heating, cooking, etc. Due to the lack of clarity, *the author and committee may wish to amend this bill to include a definition for building decarbonization that encompasses the many strategies to reducing GHG emissions from the building sector, and clarify that such a term does not necessarily equate with electrification of all uses.*

Prevailing wage. All workers employed on public works projects must be paid the prevailing wage determined by the Director of the Department of Industrial Relations, according to the type of work and location of the project. The prevailing wage rates are usually based on rates specified in collective bargaining agreements. This bill would require prevailing wage for each tier involving contractors and subcontractors for a myriad of energy efficiency programs. In outreach to the CEC, they noted there could be some complications with the language in this bill pertaining to prevailing wage as it may undermine existing prevailing wage requirements for several of their programs. The CEC notes that projects awarded public funds from the CEC are already subject to prevailing wage laws. In requesting information from POUs, some POUs noted the provisions of this bill related to prevailing wage requirements would be difficult to verify as many of their programs provide incentives whereby customers hire contractors, who may hire subcontractors, to implement projects or install appliances or equipment. Should this bill move forward the author may wish to work with these entities to address these concerns.

Need to delete proposed goal. Many opponents of this bill express their concerns that the building carbonization goal could be an attempt to establish a singular pathway, one that is not fuel-neutral. Several of the labor unions in opposition to this bill express opposition to amending the principal goals of electric and gas utilities' resource planning and investment to include the decarbonization of existing and new buildings. As noted above, the AB 3232 report is still in development and not expected to be finalized until June or July of this year, according to the CEC. Additionally, the cost-effectiveness assessments required

by statute in the report will cover only space and water heating. As a result, the report may not provide a full cost-effectiveness assessment of other building-related emissions sources. Nonetheless, the need to have the report finalized to help inform future policy decisions seems reasonable. *Therefore, the author and committee may wish to amend this bill to delete the proposed amendments in Section 7, while preserving the thrust of this bill to incorporate building decarbonization within the funding sources identified in this bill.*

Prior/Related Legislation

SB 68 (Becker, 2021) includes numerous provisions related to actions to reduce greenhouse gas emissions from the building sector, including: requiring the CEC to develop and publish a guide for electrification of buildings, authorize ratepayer moneys from the EPIC program for projects that reduce the costs of building electrification, and others. The bill is being heard today in this committee.

SB 1477 (Stern, Chapter 378, Statutes of 2018) required 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.

AB 3232 (Friedman, Chapter 373, Statutes of 2018) required the CEC to assess the potential for the state to achieve the goal of reducing the emissions of GHGs by the state's residential and commercial building stock by at least 40 percent below the 1990 levels by January 1, 2030.

SB 96 (Budget, Chapter , Statutes of 2013) required, the CEC, in administering moneys in the fund for research, development, and demonstration programs, to develop and administer the EPIC program for the purpose of awarding funds to projects that may lead to technological advancement and breakthroughs to overcome barriers that prevent the achievement of the state's statutory energy goals and that may result in a portfolio of projects that is strategically focused and sufficiently narrow to make advancement on the most significant technological challenges.

FISCAL EFFECT: Appropriation: No Fiscal Com.: Yes Local: No

SUPPORT:

350 Bay Area Action
350 Humboldt
350 Silicon Valley
350 Ventura County Climate Hub
Acterra Action for A Healthy Planet
Active SGV
Bay Area for Clean Environment
California Association of Student Councils
California League of Conservation Voters
California Young Democrats
Carbon Free Silicon Valley
Ceres
Elders Climate Action NorCal Chapters
Elders Climate Action SoCal Chapters
Enigmatics
Futures Unbound
Glendale Environmental Coalition
International Interior Design Association Northern California Chapter
League of Women Voters of California
Menlo Spark
Mothers Out Front Silicon Valley
Pacifica Climate Committee
Plant-based Advocates - Los Gatos
San Diego Green Building Council
San Jose Community Energy Advocates
School Energy Coalition
Sierra Club California
Silicon Valley Democratic Club
SoCal 350 Climate Action
South Bay Progressive Alliance
Sunrise Movement - Silicon Valley
The Climate Center
The Climate Reality Project: San Francisco Bay Area Chapter
The Climate Reality Project Bay Orange County Chapter
The Climate Reality Project San Diego Chapter
The Climate Reality Project: San Fernando Valley Chapter
The Climate Reality Project Santa Clara Count
United Methodist Women: El Camino Real District
Westmont High School Ecallogy Club
Zanker Recycling
12 Individuals

OPPOSITION:

Building Owners and Managers Association of California
California Apartment Association
California Association of Realtors
California Building Industry Association, unless amended
California Business Properties Association
California Business Roundtable
California Chamber of Commerce
California State Association of Electrical Workers
California State Council of Laborers
California State Pipe Trades Council
California Teamsters Public Affairs Council
Californians for Affordable & Reliable Energy
Crenshaw Chamber of Commerce
Desert Valleys Builders Association
El Dorado County Chamber of Commerce
El Dorado Hills Chamber of Commerce
Elk Grove Chamber of Commerce
Folsom Chamber of Commerce
Glendora Chamber of Commerce
Hemet San Jacinto Valley Chamber of Commerce
International Association of Bridge, Structural, Ornamental & Reinforcing Iron
Workers
International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths,
Forgers & Helpers
International Council of Shopping Centers
International Union of Operating Engineers
International Union of Painters and Allied Trades
Liuna Local 1309
Murrieta Temecula Group
NAIOP of California
Orange County Business Council
Rancho Cucamonga Chamber of Commerce
Rancho Cordova Chamber of Commerce
Roseville Area Chamber of Commerce
Southern California Gas Company
Southwest California Legislative Council
State Building and Construction Trades Council, AFL-CIO
United Chamber Advocacy Network

Utility Workers Union of America, AFL-CIO
Western States Council Sheet Metal, Air, Rail and Transportation
Yuba Sutter Chamber of Commerce
An Individual

ARGUMENTS IN SUPPORT: According to the author:

We must refocus our outdated energy efficiency programs to ensure we have the necessary tools to address the climate crisis. The current emphasis on cost-savings does little to combat the modern issues of reducing greenhouse gas emissions to meet our ambitious climate goals. It is critical that we take swift action to reduce our emissions in the building sector by revitalizing these programs. SB 31 helps achieve these goals by incorporating building decarbonization into the state's energy efficiency programs

In support of the bill, the Sierra Club states:

"...a just transition to zero-emission buildings is absolutely critical to ensure that California reaches the state's current climate goals... Because a third of California's 2045 building stock will be built between now and 2045, decarbonizing newly constructed buildings is key to reaching the state's fossil fuel reduction targets, including returning the state to its 1990 GHG emission levels by 2020, going 40% below our 1990 GHG emission levels by 2030, and achieving carbon neutrality by 2045. In general, all-electric "decarbonized" buildings cost less to build to code than those requiring additional gas infrastructure. They also enhance indoor and outdoor air quality, reduce safety risks associated with gas, and improve public health."

ARGUMENTS IN OPPOSITION:

The Utility Workers Union of America opposes this bill and states:

The UWUA represents thousands of gas workers in Southern California and its members fully support decarbonization. While we applaud and respect the author's intent here, we must oppose this measure because it is built on the premise that decarbonization can only happen if we abandon natural gas and, perhaps more importantly, the natural gas infrastructure in exchange for full electrification. In our view, we can achieve our decarb goals through a mix of solutions that are science based and cost effective.

In opposition to this bill, SoCal Gas states:

Bearing in mind that the vast majority of Californians currently use natural gas as their preferred energy source for space and water heating, as well as cooking, electrifying end uses could increase annual utility bills almost \$900 more than in mixed-fuel homes. In fact, this would be a regressive tax as SoCalGas CARE customers consume more gas than non-CARE customers. The Legislature should be aware of this fact and the unintended consequences of shifting all consumption to electricity. Most families cannot afford to shoulder this undue and onerous financial burden.

The California Building Industry Association opposes the elements of this bill that require entities implementing the myriad of programs captured by this bill to undertake the projects a manner that includes an enforceable commitment that the entity, and its subcontractors at every tier, will pay prevailing wage. CBIA expresses concerns that incentive funding for building decarbonization may not cover the costs of the prevailing wage requirements proposed in this bill.

-- END --