

Date of Hearing: April 20, 2022

ASSEMBLY COMMITTEE ON EDUCATION  
Patrick O'Donnell, Chair  
AB 1738 (Boerner Horvath) – As Amended April 7, 2022

**[Note: This bill is double referred to the Assembly Housing and Community Development Committee and was heard by that Committee as it relates to issues under its jurisdiction.]**

**SUBJECT:** Building standards: installation of electric vehicle charging stations: existing buildings

**SUMMARY:** Requires, commencing with the next triennial edition of the California Building Standards Code, the California Building Standards Commission (commission) to research, develop, and propose for adoption mandatory building standards for the installation of electric vehicle charging stations in existing multifamily dwellings, schools, hotels, motels, and non-residential development during certain retrofits, additions, and alterations to existing parking facilities that are issued permits on and after the effective date of those building standards. Specifically, **this bill:**

- 1) Defines the following terms:
  - a) “Direct current fast charger” to mean EV supply equipment capable of supplying direct current electricity to a vehicle fitted with the appropriate connection to support recharging the vehicle’s energy storage battery.
  - b) “Level 2 or higher” to mean any of the following:
    - i) Direct current fast charger;
    - ii) Level 2 EV supply equipment; or
    - iii) Low power level 2 EV charging receptacle.
  - c) “EV charging station,” “EV supply equipment,” “level 2 EV supply equipment,” and “low power level 2 EV charging receptacle” to all mean the same as those terms are defined in the most recent update of California’s Green Building Standards (CALGreen).
  - d) “Proposing entities” to mean either of the following:
    - i) The Department of Housing and Community Development (HCD) for standards relating to parking facilities serving existing multifamily dwellings, hotels, and motels; or
    - ii) The Division of the State Architect (DSA) for standards relating to parking facilities serving existing schools.
- 2) Requires, commencing with the next triennial edition of the California Building Standards Code, the commission and the proposing entities to research, develop, and propose for

adoption of mandatory building standards for the installation of electric vehicle charging stations in existing multifamily dwellings, schools, hotels, motels, and non-residential development during certain retrofits, additions, and alterations to existing parking facilities that are issued permits on and after the effective date of those building standards.

- 3) Requires the HCD to research, develop, and propose for adoption mandatory building standards for the installation of EV charging stations with Level 2 or higher EV supply equipment in existing parking facilities serving multifamily dwellings, hotels, and motels. Requires the HCD to submit the proposed mandatory building standards to the commission for consideration.
- 4) Requires the DSA to research, develop, and propose for adoption mandatory building standards for the installation of EV charging stations with Level 2 or higher EV supply equipment in parking facilities serving existing school buildings and submit the proposed mandatory building standards to the commission for consideration.
- 5) Requires the commission to research, develop, and propose for adoption mandatory building standards for the installation of EV charging stations with Level 2 or higher EV supply equipment in parking facilities serving existing non-residential buildings.
- 6) Requires in researching, developing, and proposing for adoption mandatory building standards, the proposing to do all of the following:
  - a) Use Sections 4.106.4 and 5.106.5.3 of the CALGreen as the starting point for the mandatory building standards;
  - b) Consult with interested parties, including, but not limited to, the State Air Resources Board, the State Energy Resources Conservation and Development Commission, investor-owned utilities, municipal utilities, vehicle and EV supply equipment manufacturers, local building officials, commercial building and apartment owners, and the building industry;
  - c) Invite the participation of the public at large in the development of those building standards; and
  - d) Propose standards that only apply to retrofits, additions, and alterations of existing parking facilities when a building permit is required and other significant construction, retrofits, or repair action is taking place.
- 7) Requires the proposing entities and the commission to review the building standards proposed and adopted every triennial code cycle, and, if needed, update those building standards with increasing percentages of parking spaces required to have EV supply equipment installed, to ensure that the building standards support statewide needs for EV charging stations that align with the state's zero-emission vehicle targets until both of the following goals are met:
  - a) There is adequate availability of charging given near-term EV charging needs; and

- b) There is sufficient charging capacity to support the long-term goal of achieving 100% EV statewide.

**EXISTING LAW:**

- 1) Requires, in adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions, the State Air Resources Board to ensure that statewide greenhouse gas emissions are reduced to at least 40% below the statewide greenhouse gas emissions limit no later than December 31, 2030. (Health and Safety Code (HSC) 38566)
- 2) Specifies the duties of a governing board of a school district and gives authority to the governing board to enter into contracts, establish funds, and make payments for the purpose of maintaining property.
- 3) Requires the DSA, under the police power of the state, to supervise the design and construction of any school building or the reconstruction or alteration of, or addition to, any school building to ensure that plans and specifications comply with existing law and Title 24 regulations. (California Building Standards Code)
- 4) Authorizes the CBSC to approve and adopt building standards. Every three years, the commission undertakes building standards rulemaking to revise and update the California Building Standards Code. (Title 24 of the California Code of Regulations)
- 5) Requires proposed building standards that are submitted to the commission for consideration to be accompanied by an analysis completed by the appropriate state agency that justifies approval based on the following criteria:
  - a) The building standard does not conflict with, overlap, or duplicate other building standards;
  - b) The proposed standard is within the parameters of the agency's jurisdiction;
  - c) The public interest requires the adoption of the building standard;
  - d) The standard is not unreasonable, arbitrary, unfair, or capricious;
  - e) The cost to the public is reasonable, based on the overall benefit to be derived from the building standard;
  - f) The standard is not unnecessarily ambiguous or vague; and
  - g) The applicable national specifications, published standards, and model codes have been appropriately incorporated into the standard. (HSC 18930)
- 6) Requires the commission to receive proposed building standards from a state agency for consideration in an 18-month code adoption cycle. Requires the commission to adopt regulations governing the procedures for 18-month code adoption cycle, which must include adequate provision of the following:

- a) Public participation in the development of standards;
  - b) Notice in written form to the public of the compiled building standards with justifications;
  - c) Technical review of the proposed building standards and accompanying justification by advisory boards appointed by the commission; and,
  - d) Time for review of recommendations by the advisory boards prior to the commission taking action. (HSC 18929.1)
- 7) Requires the HCD to propose the adoption, amendment, or repeal of building standards to the commission for residential buildings, including hotels, motels, lodging houses, apartment houses, dwellings, buildings, and structures. (HSC 17921(a))
- 8) Requires the commission to adopt, approve, codify, and publish mandatory building standards for the installation of future EV charging infrastructure for parking spaces in multifamily dwellings in non-residential development in the next triennial edition of the California Building Standards Code adopted after January 1, 2014 and requires that the HCD do the following:
- a) Propose the mandatory building standards for the installation of future EV charging infrastructure for parking spaces in multifamily dwellings and submit the proposed mandatory building standards to the commission for consideration;
  - b) Use specified sections of the CALGreen (Title 24, Part 11, California Code of Regulations (CCR)) as the starting point for the mandatory building standards and amend those standards as necessary; and
  - c) Actively consult with interested parties, including, but not limited to, investor-owned utilities, municipal utilities, manufacturers, local building officials, commercial building and apartment owners, and the building industry. (HSC Section 18941.10 *et seq.*)
- 9) Establishes building standards for EV charging infrastructure and charger installation in new residential and non-residential development. Requires future EV capacity when certain additions and alterations of existing parking facilities. (Title 24, Part 11, CCR)

**FISCAL EFFECT:** Unknown

**COMMENTS:**

**Key provisions of the bill.** This bill proposes to expand on the residential, hotel, and motel EV charging building standards for retrofits or modernizations adopted by the commission in December of 2021, that will go into effect January 1, 2023. Specifically, AB 1738 would require the adoption of building standards that involve installation of an EV charger and not simply a requirement for “EV capable” spaces. Additionally, these provisions would apply to retrofits, additions, and alternations of existing school parking facilities when a building permit is required and other significant construction, retrofits, or repair action is taking place, which are not currently covered by the new, forthcoming building standards. The CBSC, the HCD, and the

DSA would be required to research, develop, and propose for adoption the standards specified in this bill as part of the next triennial edition of the California Building Standards Code. Moreover, the bill would mandate future updates until the following goals are met: there is adequate availability of charging given near-term EV charging needs, and there is sufficient capacity to support the long-term goal of achieving 100% EV statewide.

***Need for the bill.*** According to the author, “The bill would require the adoption of mandatory building standards to require a certain percentage of parking spaces in existing multifamily dwellings, schools, hotels and motels, and non-residential buildings be ‘EV installed,’ meaning that Level 2 EV charging stations or direct current fast chargers must be installed. These requirements would apply to existing multifamily dwellings, schools, hotels and motels, and non-residential developments at cost-effective trigger points, which include when retrofits, additions, or alterations are made to buildings. Under current law, only a certain percentage of parking spaces in multifamily dwellings are required to be ‘EV-capable’ and ‘EV-ready.’”

According to information provided by the author’s office, this bill is based on a recommendation from CARB’s 2020 Report, *Assessment of CARB’s Zero-Emission Vehicle Programs per SB 498*: “Require that EV charging infrastructure provisions in CALGreen include mandatory installation of Level 2 charging in new construction, and require infrastructure installation at existing buildings undergoing major renovations. Current electric vehicle charging requirements in CALGreen do not address the need for charging at existing residential and commercial buildings and school facilities, and do not require the installation of charging equipment, which would significantly increase Californians’ access to charging.”

***Background on building standards:*** The California Building Standards Law establishes the process for adopting state building standards by the commission. Statewide building standards are intended to provide uniformity in building across the state. The commission’s duties include the following: receiving proposed building standards from state agencies for consideration in each triennial and intervening building code adoption cycle; reviewing and approving building standards submitted by state agencies; adopting building standards for state buildings where no other state agency is authorized by law; and publishing the approved building standards in the California Building Standards Code.

There are approximately twenty state agencies that develop building standards and propose them for adoption to California Building Standards Code. The HCD is responsible for the standards for residential buildings, hotels and motels. The DSA proposes building standards for schools and community colleges. Updates and changes to building standards are adopted on two timelines: through the triennial code adoption cycle which occurs every three years and through the intervening code adoption cycle which provides an update to codes 18 months after the publication of the triennial codes. Regulatory activities for each cycle begin over two years before the effective date of the codes. The standards adopted in the next intervening code cycle will be effective on July 1, 2024, and the next triennial cycle’s standards will be effective on January 1, 2026.

***Background on the School Facility Program (SFP).*** The construction and rehabilitation of public K-12 facilities are funded by a combination of state and local general obligation (GO) bonds, developer's fees and local assessments such as Mello-Roos community facilities districts. State bond funds are allocated pursuant to the SFP and administered by the Office of Public School Construction under the direction of the SAB, a ten member body comprised of the

Department of Finance, the Director of the Department of General Services, the State Superintendent of Public Instruction, three Senators, three Assemblymembers, and a Governor's appointee. Under the SFP, the New Construction program requires a 50% local match, unless the school district qualifies for financial hardship, which pays up to 100% of project costs. Modernization funds are awarded at 60% with a 40% match. Since the inception of the SFP in 1998, voters have approved \$54 billion in state GO bonds for K-12 schools.

The last bond passed by voters, Proposition 51 on the November 2016 statewide ballot, provided \$9 billion for K-12 and California Community Colleges facilities. While the full amount of the bond has not been sold, there is a total of \$3.3 billion in applications submitted without funding authority. Of that amount, \$1.94 billion are from applications for modernization funding.

***DSA Review and Title 24 Regulations.*** The SFP requires a school district seeking state bond funds to receive approval from the California Department of Education (CDE), to ensure that the selected site and school specifications are safe and meet the school's education plan; and the DSA, to ensure that the architectural design plans meet fire, life and safety requirements, Field Act requirements, and access requirements under the Americans with Disability Act pursuant to Title 24 of the CCR.

CALGreen is one part of Title 24 and was first adopted by the commission in 2009. CALGreen establishes regulations for energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality, and apply to residential, commercial and public school buildings. All new school construction design plans submitted to the DSA after July 1, 2011 must comply with CALGreen. CALGreen does not currently apply to existing buildings.

***CALGreen standards for EV charging infrastructure.*** CALGreen establishes standards for the installation of EV charging infrastructure and EV charging stations in new multifamily buildings and non-residential structures, which include schools. Beginning in 2015, the California Building Code requires all new construction to be EV-capable.

In December of 2021, the commission adopted updated standards which go into effect on January 1, 2023, and will require all new construction of multifamily housing, hotels, and hotels to contain a certain percentage of parking spaces which are EV-capable and EV-ready. ***The Committee may wish to consider*** that the updated standards did not include schools. "EV-capable" refers to parking spaces with electrical panel capacity, a dedicated branch circuit and a raceway to the EV parking spot to support future installation of charging stations while "EV-ready" goes a step further and also requires a receptacle (outlet) to be installed.

According to the CDE, there are 10,393 schools in California, of which 325 are nonpublic nonsectarian schools. It is unclear how many of these schools have parking lots or the infrastructure necessary to accommodate EV charging equipment.

***Climate mitigation efforts and EV charging need:*** The California Global Warming Solutions Act of 2006 was passed as AB 32 (Núñez), Chapter 488, Statutes 2006 and established targets for reducing climate change and greenhouse gas (GHG) emissions such that GHG emissions in 2020 would be at 1990 levels (a reduction of approximately 30%), and then an 80% reduction below 1990 levels by 2050. The state has implemented many strategies to help meet these targets, including the requirement for regions to create Sustainable Communities Strategies (SB

375 (Steinberg), Chapter 728, Statutes 2008) to help integrate land use, transportation, and housing decisions.

The transportation sector presents the greatest challenge of meeting our GHG targets. Transportation accounts for approximately 40% of California's GHG emissions, of which the greatest comes from passenger vehicles, and therefore decreasing emissions from transportation is essential to meeting emission reduction targets. However, despite efforts in this area, emissions continue to increase; according to the California Air Resources Board's *2018 Progress Report: California's Sustainable Communities and Climate Protection Act*, since 2008 vehicle miles traveled per capita have increased substantially with a commensurate increase in carbon dioxide emissions per capita.

To help address the issue, in 2018 Governor Brown issued Executive Order B-48-18, establishing new GHG reduction goals and a \$2.5 billion investment plan over eight years to reduce carbon emissions from transportation. The plan includes the goals of five million zero-emission vehicles (ZEV) on the road by 2030 (\$1.6 billion over eight years); and 250,000 ZEV chargers, including 10,000 fast charging stations and 200 hydrogen fueling stations by 2025 (\$900 million over eight years).

There are currently about 1,000,000 light-duty EVs on the road in California. According to the California New Car Dealers Association, fully EVs made up 9.5% of the market share and plug-in EVs made up 3.3% of market share during the last quarter of 2021. Governor Newsom signed an Executive Order N-79-20 in 2020 to require all new cars and passenger trucks sold in California be zero-emission vehicles by 2035.

California is making modest but steady progress towards increasing the number of electric and hydrogen charging stations. According to the 2021 California Energy Commission's AB 2127 EV Charging Infrastructure Assessment, "the state will need nearly 1.2 million public and shared chargers by 2030 to meet the fueling demands of the 7.5 million passenger plug-in EVs anticipated to be on California roads." The costs to install a charger can vary from \$1,500 to \$300,000, depending on the type of charger and access to power.

***Recommended Committee Amendments:*** *Staff recommends that the bill be amended to remove all provisions related to schools.*

***Arguments in support.*** 350 Sacramento writes, "California's vehicle fleet is expected to include sharply increasing numbers of electric vehicles over the next two decades. Because the vehicle fleet will turn over faster than our existing building stock, simply requiring EV chargers or "EV-ready" electrical circuits on new construction will not keep pace with California's charging needs. Although we support similar requirements for new construction, it would be a missed opportunity not to require EV charger installation when cost-effective during other construction, remodeling and retrofit projects."

***Arguments in opposition.*** The Southern California Rental Housing Association writes, "Since 2015, new residential and commercial construction have been required to apply EV-charging standards to a minimum percentage of parking spaces. This bill requires them to be installed when retrofits are done. Unfortunately, the bill does not address the critical question; who pays for the additional cost of installing the charging stations? If the state would like to supply grants and/or other funding to the property owner for these costs we would be happy to rethink our

position. However, as it currently stands the building owner would have to absorb these costs without anyway to recoup those costs.”

**Related legislation.** AB 965 (Levine) of the 2021-22 Session requires the HCD and the CBSC to propose for adoption, building standards for EV charging infrastructure for parking spaces in existing non-residential structures. Outlines specific factors for the HCD to consider when proposing future EV charging standards.

AB 684 (Levine) of the 2019-20 Session would have required the HCD and the CBSC to research, develop, and propose for adoption building standards regarding the installation of future EV charging infrastructure for parking spaces in existing multifamily and non-residential buildings on or before July 1, 2022, or in the next interim code cycle, whichever came first. This bill was vetoed by the Governor, with the following message:

I agree with the intent of this bill to increase inclusive access to EV charging technology for Californians living in multifamily housing, which is necessary to increase the number of zero emission vehicles on the road.

However, I believe this issue is best addressed administratively in order to balance our charging infrastructure objectives with our efforts to expand affordable housing. Therefore, I am directing the HCD to develop and propose a building standard that would increase the availability of EV charging infrastructure at existing multifamily properties, while limiting costs for affordable housing.

California can combat climate change while addressing our housing crisis. We must advance strategies to achieve both goals.

AB 1082 (Burke) Chapter 637, Statutes of 2017, authorizes an electrical corporation to file with the California Public Utilities Commission (CPUC) a pilot program proposal for the installation of electric charging stations at school facilities and other educational institutions.

AB 1239 (Holden) of the 2017-18 Session would have required the HCD and the CBSC to research and propose for adoption mandatory building standards regarding the installation of EV-capable parking spaces in existing multifamily housing projects and non-residential buildings when those buildings are being reconstructed, as specified. This bill was vetoed by the Governor, with the following message:

In 2013, I signed AB 1092 which required the CBSC to adopt mandatory standards for the installation of EV charging stations for parking spaces in new multifamily dwellings and non-residential buildings. Furthermore, the PUC is currently working on a comprehensive plan that will determine where investor-owned utilities can install charging stations around the state.

Increasing transportation electrification will require additional coordination and collaboration from the California Energy Commission, the PUC and the various departments within the Administration. I am directing the Government Operations Agency to work with all the key parties to identify barriers to the construction of charging stations in existing buildings.

AB 1236 (Chiu), Chapter 598, Statutes of 2015, requires each city and county to adopt an ordinance to streamline and expedite the permitting process for EV charging stations.



AB 1092 (Levine), Chapter 1092, Statutes of 2013, requires the CBSC, as part of the next building code adoption cycle, to include mandatory building standards for the installation of EV charging infrastructure in multifamily dwellings and non-residential development.

SB 32 (Pavley), Chapter 249, Statutes of 2016, requires the Air Resources Board to ensure that statewide greenhouse gas emissions are reduced to at least 40% below the 1990 level by 2030.

**REGISTERED SUPPORT / OPPOSITION:**

**Support**

350 Sacramento  
350 Silicon Valley  
California Environmental Voters (formerly CLCV)  
Civicwell (formally the Local Government Commission)  
Cruise LLC  
Elders Climate Action, Norcal and Social Chapters

**Oppose**

Apartment Association of Greater Los Angeles  
Building Owners and Managers Association of California  
California Apartment Association  
California Association of Realtors  
California Building Industry Association (CBIA)  
California Building Officials  
California Business Properties Association  
California Hotel & Lodging Association  
California Rental Housing Association  
South California Rental Housing Association

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