
**SENATE COMMITTEE ON ENERGY, UTILITIES AND
COMMUNICATIONS**

Senator Ben Hueso, Chair

2021 - 2022 Regular

Bill No:	SB 1164	Hearing Date:	3/28/2022
Author:	Stern		
Version:	2/17/2022	Introduced	
Urgency:	No	Fiscal:	Yes
Consultant:	Sarah Smith		

SUBJECT: Energy: building energy efficiency: document repository and registry

DIGEST: This bill requires the California Air Resources Board (CARB) and the California Energy Commission (CEC) to report on establishing a central repository to track the sales of heating, ventilation, and air conditioning (HVAC) equipment in the state and a repository to track building construction and installations impacting energy efficiency building code compliance.

ANALYSIS:

Existing law:

- 1) Establishes the CEC's authority to create regulations for building efficiency standards. Existing law requires the CEC to create cost-effective regulations for lighting, insulation, climate control systems, and other building design and construction standards that increase energy and water efficiency for new residential and new nonresidential buildings. Local governments may not issue permits for construction and installation projects that fail to comply with the CEC's certified efficiency standards. (Public Resources Code §25402(a-b))
- 2) Establishes the CEC's authority to create regulations for appliance efficiency standards. Existing law requires the CEC to set minimum levels of operating efficiency and allows the CEC to set other cost-effective measures, including incentive programs, fleet averaging, energy and water consumption labeling not preempted by federal labeling law, and consumer education programs, to promote the use of energy and water-efficient appliances. (Public Resources Code §25402(c))
- 3) Requires the CEC to adopt standards for appliances to facilitate the deployment of flexible demand technologies. These regulations may include labeling provisions to promote the use of appliances with flexible demand capabilities. (Public Resources Code §25402(f))

- 4) Requires the CEC to adopt a plan by January 1, 2019, to promote compliance with Part 6 of Title 24 of the California Code of Regulations in the installation of central air conditioning and heat pumps. The CEC must consult with the Contractors' State License Board, local building officials, and other stakeholders to create the plan. Existing law authorizes the CEC to create regulations to increase compliance with permitting and inspection requirements for central air conditioning and heat pumps, based on the plan. (Public Resources Code §25402.12)

This bill:

- 1) Requires CARB to submit a report to the Legislature by July 1, 2023, proposing the creation of a statewide system for tracking the sales of HVAC equipment. This bill specifies the proposed system must have certain capabilities, including the following:
 - a) Enable local building departments to identify non-compliant installations and allow the Contractors' State License Board to identify and investigate contractors that are routinely violating licensure requirements by not obtaining permits and failing to comply with the California Building Energy Efficiency Standards.
 - b) Require stores and dealers that sell HVAC equipment to register the HVAC equipment serial number and the purchaser's contractor license number.
 - c) Include the capability to linking to the CEC compliance document repository established pursuant to this bill and identify HVAC equipment that has not submitted required compliance documentation to the CEC's repository within a specified period of time.
- 2) Specifies various recommendations and findings CARB's report must make, including, but not limited to, the following: identifying the types of HVAC equipment that should be included in registry and compliance tracking system, recommending enforcement measures for HVAC equipment purchasers that do not comply with the registry requirements, identifying barriers to implementation, and recommendations for fees that may be charged to cover costs for creating and maintaining the tracking systems.
- 3) Requires the CEC to submit a report to the Legislature by July 1, 2023, proposing the creation of a statewide system for tracking all compliance, installation and acceptance testing documentation required under the California Building Energy Efficiency Standards for residential and nonresidential

buildings. This bill specifies that this system must have certain capabilities, including the following:

- a) Enable building officials and other parties responsible for completing the compliance documentation.
 - b) Electronically track compliance, installation and acceptance test documentation.
 - c) Enable local building departments to access these records for their permit review process, and allow the Contractors' State License Board and applicable agencies to access the records for their enforcement activities.
 - d) Provide building owners access to documents linked to buildings they own, and allow the public to check if projects in their area have obtained correct permits and complied with the compliance documentation requirements.
 - e) Include HVAC equipment serial numbers and enable future integration with the tracking system established under CARB's report required by this bill.
 - f) Allow the CEC to use the data from documents submitted to the registry to inform future building, appliance and demand flexibility standards and policy.
- 4) Specifies various elements that must be included in the CEC's report, including, but not limited to, an estimated fee that may be charged to cover the cost of creating and maintaining the document repository, a discussion of barriers to implementing the compliance repository, and identification of any privacy or trade secret concerns associated with the document repository.
- 5) Sunsets this bill on January 1, 2028.

Background

CEC's Title 24 Building Code Authority. Existing law establishes the CEC's authority to adopt cost-effective building and appliance standards to promote the conservation of energy and water. Title 20 of the California Code of Regulations includes the CEC's appliance standards and Title 24 includes the CEC's Building Energy Efficiency Standards. While the CEC establishes the Building Energy Efficiency Standards, enforcement of these standards rests with local building officials. Existing building codes require the completion of compliance documents and testing to demonstrate that certain installations are correctly installed and

functioning. Correct installation of appliances and building elements ensures that these appliances and building elements deliver expected energy savings. Existing building codes also specify a process for submitting compliance and testing records in a digital format to a compliance document repository; however, these requirements depend upon the CEC approving a document repository. In March 2022, the CEC issued a notice to award a contract for developing a document repository.

This bill requires the CEC to conduct a report on creating a document repository with certain capabilities, including the collection of serial numbers for HVAC equipment and future integration into an HVAC sale tracking system recommended by CARB. The CEC is in the process of creating a compliance document repository; however, this bill may require the CEC to propose a registry with capabilities that differ from the system it is in the process of building.

HVAC systems are a major contributor to peak energy consumption. This bill requires CARB to report on creating a system for tracking the sales of HVAC equipment, including the serial numbers of the equipment. As average temperatures have increased and higher temperatures occur later in the day and year, HVAC energy consumption has increased. According to the CEC's Summary of the 2022 Building Code Update, residential and non-residential buildings are responsible for approximately 70 percent of California's electricity consumption, and in certain climate zones, HVAC systems are the largest source of buildings' energy consumption.

Improper installation of HVAC systems can limit potential energy savings. In 2011, the CEC issued an update to the California Energy Efficiency Strategic Plan. The plan identified trends in energy efficiency, barriers to greater potential energy savings, and goals for addressing those barriers. The plan noted that only approximately 10 percent of HVAC installations may be meeting permitting requirements, and the lack of HVAC installation compliance could limit potential peak energy savings by up to 30 percent. The plan identified a goal of correctly installing and permitting 90 percent of HVAC installations by 2020. However, it is unclear if California has met that goal.

To address concerns about energy losses from incorrectly installed HVAC systems, the Legislature passed SB 1414 (Wolk, Chapter 678, Statutes of 2016). SB 1414 required the CEC to adopt a plan by January 1, 2019, to promote HVAC and heat pump installations' compliance with building code. The bill allowed the CEC to adopt regulations to increase HVAC installations' compliance with permitting requirements as outlined in its plan. The bill also required a customer or contractor to demonstrate that a permit is closed for the customer or contractor to obtain a

rebate or incentive provided by a utility for HVAC or heat pump installation. At the time of this analysis, The CEC has not published its plan pursuant to SB 1414; however, the CEC indicates that it is in the process of creating this plan and intends to publish it later this year. The CEC estimates that this plan will include a number of recommendations that align with the goals of this bill, including, but not limited to, expanding oversight to enforce permitting requirements and requiring HVAC distributors to sell equipment only to licensed contractors and report to the CEC the number of equipment units sold to each purchaser. This bill does not modify the requirements assigned to the CEC under SB 1414. Instead, this bill requires CARB to create a new report on establishing a tracking system for HVAC equipment purchases to track the installation of HVAC equipment. To the extent that the CEC develops a plan for improving HVAC installation pursuant to SB 1414, this bill may require duplicative reporting from the state agencies.

Need for amendments. This bill requires CARB to complete a report that is substantially similar to a report already assigned under existing law to the CEC. Additionally, this report pertains to the enforcement of regulations that are under the jurisdiction of the CEC. *As a result, the author and the committee may wish to amend this bill to shift reporting these reporting duties from CARB to the CEC and consolidate this bill's HVAC repository planning requirements under the CEC's existing duties to develop a plan for improving HVAC installation compliance.* Additionally, this bill requires the CEC to complete develop its document repository proposals through a public stakeholder process and submit the report to the Legislature within six months of this bill's enactment. *To ensure that the CEC has sufficient resources to conduct a meaningful public stakeholder process and incorporate the HVAC compliance recommendations, the author and committee may wish to amend this bill to extend the reporting deadline to January 1, 2024.*

As currently written, this bill requires the CEC and CARB to create two reports to the Legislature proposing tracking systems for building construction and installation projects. These reports may not substantially change existing law regarding building code enforcement and local government duties; however, should this bill be subsequently amended to implement the tracking system specified in the reporting requirements, it is likely that building code permit requirements and local government enforcement duties will increase.

Double referred. This bill has been double-referred to the Senate Committee on Environmental Quality.

Prior/Related Legislation

SB 49 (Skinner, Chapter 697, Statutes of 2019) expanded the CEC's authority to create appliance efficiency standards to require the CEC to adopt standards to promote the deployment of appliances with flexible demand capabilities.

SB 1414 (Wolk, Chapter 678, Statutes of 2016) required the CEC to create a plan to promote HVAC and heat pump installations' compliance with building codes. The bill also required customers or contractors to demonstrate that a permit for the installation of an HVAC or heat pump system is closed for the customer or contractor to obtain a rebate or incentive provided by a public utility.

Assembly Bill 2021 (Levine, Chapter 734, Statutes of 2006) established energy efficiency procurement and planning requirements for local publicly owned electric utilities. The bill also required the CEC to take certain steps for energy efficiency planning, including requiring the CEC to create a plan to improve HVAC energy efficiency and decrease the peak electricity demand of air conditioners.

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

SUPPORT:

California State Pipe Trades Council, Co-sponsor
Western States Council of Sheet Metal Workers, Co-sponsor
California Association of Sheet Metal and Air Conditioning Contractors Association
California Building Officials
California Legislative Council of the Plumbing, Heating and Piping Industry

OPPOSITION:

None received

ARGUMENTS IN SUPPORT: According to the Author:

Barriers to effective compliance and enforcement are undermining California's building energy efficiency standards. Studies show, for example, that the vast majority of HVAC replacement projects are performed without a permit and without completion of acceptance testing and other Title 24 energy efficiency verification requirements. This puts contractors that pull permits and comply with the California Energy Code at a disadvantage because they must bid against contractors that cut costs by ignoring these requirements altogether.

Some estimates have put permit and code compliance for HVAC replacement projects at just 10 to 15 percent. It is estimated that increasing permit and Title 24 Energy Code compliance could reduce peak energy demand by up to 400 megawatts.

Currently, however, there is no way to readily track and identify HVAC replacements that are installed without a permit. To address this issue, past Energy Commission reports have called for developing an HVAC equipment sale registry that can be used to track HVAC sales to ensure that permit requirements are being followed for all HVAC installations.

In addition, stakeholders have long called for a central Title 24 compliance document repository and data registry that would provide building officials the ability to simply type in an address in order to confirm that all required Title 24 compliance documents have been completed. Even when permits are pulled, the large number of Title 24 energy efficiency compliance documents now required for each project makes it difficult for building officials to verify compliance, resulting in uneven enforcement.

My legislation requires the development of proposals for creation of a central Title 24 compliance document repository/registry and a HVAC sales registry. These proposals shall include identification of funding requirements and identification of any further legislative action that would be required to implement these plans.

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