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

Senator Ben Hueso, Chair

2019 - 2020 Regular

Bill No:	SB 524	Hearing Date:	4/2/2019
Author:	Stern		
Version:	2/21/2019 As Introduced		
Urgency:	No	Fiscal:	Yes
Consultant:	Sarah Smith		

SUBJECT: Energy efficiency: workforce requirements

DIGEST: This bill requires the California Public Utilities Commission (CPUC) to direct energy efficiency program administrators to ensure that work is performed by a skilled and trained workforce for projects receiving at least \$50,000 in ratepayer-funded initiatives within a single facility.

ANALYSIS:

Existing law:

- 1) Creates a charge on electricity and natural gas consumption to fund cost-effective energy efficiency and conservation activities. (Public Utilities Code §381 and §890)
- 2) Requires the CPUC to identify all potentially achievable, cost-effective electricity and natural gas efficiency savings and establish energy efficiency targets and ratepayer-funded programs for investor-owned utilities (IOUs). Gas corporations must first meet its unmet resource needs through all available natural gas efficiency and demand reduction resources that are cost effective, reliable, and feasible. (Public Utilities Code §454.55 and §454.56.)
- 3) Requires the CPUC to authorize an IOU to provide incentives for the cost of energy efficiency programs based on all estimated energy savings, including energy savings from bringing existing buildings into compliance with mandatory energy efficiency codes for existing buildings issued by the California Energy Commission (CEC), and authorizes an IOU to recover the costs in rates. (Public Utilities Code §381.2)
- 4) Requires public entities entering into certain contracts to ensure that a contractor will use a “skilled and trained workforce” to complete the contract and defines a skilled and trained workforce as a workforce as one that meets certain specified requirements, including, but not limited to the following:

- a) All the workers performing work in an apprenticeable occupation in the building and construction trades are either skilled journeypersons or apprentices registered in an apprenticeship program approved by the Chief of the Division of Apprenticeship Standards of the Department of Industrial Relations.
- b) For work performed on or after January 1, 2020, at least 60 percent of the skilled journeypersons employed are graduates of an apprenticeship program for the applicable occupation, except for certain exemptions. (Public Contract Code §2601)

This bill:

- 1) Requires the CPUC to direct an energy efficiency program administrator or program implementer to ensure that work is performed by a skilled and trained workforce for projects receiving \$50,000 or more in ratepayer-funded incentives for energy efficiency projects within the same building, facility, or building complex.
- 2) Defines an “energy efficient project” for the purposes of the bill as a project that does at least one of the following:
 - a) Reduces electricity or natural gas usage, and
 - b) Achieves peak load reduction that improves end-use efficiency, lowers a customer’s utility bill, and reduces system needs.

Background

Ratepayer Funded Energy Efficiency Incentives. Existing law requires the CPUC to work with stakeholders, including the CEC, to identify all potentially achievable, cost-effective electricity and natural gas efficiency savings and establish energy efficiency targets and ratepayer-funded programs for investor-owned utilities. Under existing law, IOUs can offer customers ratepayer-funded incentives to make energy efficiency improvements that produce energy savings. These improvements can include a number of changes to a building, including energy saving lighting, refrigeration, and heating, ventilation and cooling (HVAC). Some improvements require building permits while others are rebates that help lower the cost of less expensive energy saving appliances and equipment like smart thermostats.

The CPUC has established a long-term, regularly reviewed process for approving the IOUs energy efficiency incentives, which is known as the “rolling portfolio.” While the CPUC oversees IOU energy efficiency investments, the utilities’ energy efficiency programs are implemented and administered by program administrators,

which include IOUs, regional energy networks, and Community Choice Aggregators (CCAs). IOUs provide approximately \$1 billion in energy efficiency ratepayer incentives annually. According to a 2018 CPUC report on rolling portfolio investments, the IOUs' energy efficiency programs made a total \$2.6 billion in ratepayer investments between 2013 and 2015 for energy efficiency improvements.

Poor installation leads to poor performance. While ratepayers make significant investments in energy efficiency, benefits for ratepayers are not necessarily guaranteed. A number of factors can limit the degree to which ratepayers realize the system-wide benefits of incentives for which they have paid. Improperly installed energy efficiency upgrades can impact the energy savings achieved from projects and reduce ratepayer benefits from ratepayer-funded programs. A 2008 analysis by the CEC found that a lack of quality control procedures during HVAC installation can increase the system's energy use by 20 to 30 percent, regardless of the HVAC system's rated efficiency. According to the CEC, this lack of quality control is compounded by the failure of many contractors to pull building permits and verify the quality of installation and performance of an HVAC system once installed. A 2014 study from the National Institute of Standards and Technology (NIST) reaffirms the CEC's findings. Prior legislation SB 1414 (Wolk, Chapter 678, Statutes of 2016) addressed the degree to which improper installation can be mitigated through building code compliance by requiring consumers to provide proof of building code permit closure to obtain rebates and incentives from IOUs.

This bill would require IOU energy efficiency program administrators to ensure that energy efficiency upgrade and installation work is performed by a skilled and trained workforce for projects receiving \$50,000 or more in ratepayer-funded incentives for upgrades on a single site. At the \$50,000 threshold, it is unlikely that this requirement would apply to a significant number of ratepayer incentives provided to residential customers. Large residential or commercial and industrial energy efficiency projects are more likely to meet the \$50,000 threshold contained in this bill. This threshold limits the likelihood that this bill's requirements to use a skilled and trained workforce would apply to rebate programs for energy efficiency upgrades that do not require a building permit, including the purchase of smaller demand response appliances and equipment that help shift peak energy loads.

The IOUs role in supply and demand of a skilled workforce. In 2008, the CPUC adopted the first Long Term Energy Efficiency Strategic Plan to establish a roadmap for refocusing the use of ratepayer funds to support energy efficiency measures to achieve maximum energy savings across all major groups and sectors in California. The 2008 plan identified workforce education and training as a key component to the market transformation needed to meet energy efficiency goals.

The plan noted the critical role that workforce and training requirements play in energy efficiency programs, especially low-income energy efficiency programs. The plan initiated a conversation at the CPUC with stakeholders regarding workforce issues and IOU investments.

In 2013, the CPUC directed the IOUs to employ an expert consultant to help develop a comprehensive plan to address workforce issues in the IOU energy efficiency programs. The University of California, Berkeley Donald Vial Center for Employment in the Green Economy was selected as the consultant and developed a guidance plan with recommendations for addressing workforce issues in the IOUs rolling portfolio investments. The plan made three broad recommendations:

- 1) The IOUs should incorporate a set of contractor and workforce standards and other measures into the program requirements for their energy efficiency incentive programs.
- 2) The IOUs should redesign their workforce programs to better align, leverage, and develop influence over California's main training and education institutions.
- 3) The IOUs should create a program to increase opportunities for workers from disadvantaged communities to enter rewarding careers in energy efficiency.

This bill is consistent with the recommendations made to the IOUs by the University of California, Berkeley researchers. While existing law contains mechanisms to restrict receipt of IOU incentives to correctly installed energy efficiency projects, it does not necessarily require the specific use of a skilled and trained workforce. Not all workers making energy efficient upgrades have the same degree of training. Existing law defines a "skilled and trained workforce" as one that meets a number of requirements, including the use of a certain percentage of apprenticeship graduates. Apprenticeship programs that meet the California Division of Apprenticeship Standards requirements generally include significantly more training than non-approved programs. For example, apprenticeship programs for HVAC installers require over 6,500 hours of field experience in addition to more than 1000 hours of classroom training. This bill could increase the use of workers that have graduated from these apprenticeship programs for larger projects receiving ratepayer incentives, which could help further ensure that these investments are made in a manner that maximizes ratepayer benefits and supports the growth of green collar jobs.

Need for Amendments. As currently drafted, this bill contains a definition of "energy efficient project" that must comply with the skilled and trained workforce requirements established by this bill. However, the CPUC currently uses a

different definition of energy efficiency and energy efficiency measures for the purpose of administering the IOUs' energy efficiency investments. The CPUC currently defines an energy efficiency as the following:

An energy using appliance, equipment, control system, or practice whose installation or implementation results in reduced energy use (purchased from the distribution utility) while maintaining a comparable or higher level of energy service as perceived by the customer. In all cases, energy efficiency measures decrease the amount of energy used to provide a specific service or to accomplish a specific amount of work (e.g., kWh per cubic foot of a refrigerator held at a specific temperature, therms per gallon of hot water at a specific temperature, etc). For the purpose of these Rules, solar-powered, nongenerating technologies are eligible energy efficiency measures.

To prevent conflicts between the definition contained in this bill and the existing definition of an energy efficient measure used by the CPUC, the author and the committee may wish to amend this bill to delete the definition of an energy efficient project contained in this bill and make conforming cross-references to existing code regarding the CPUC's existing authority to direct IOU energy efficiency investments.

Prior/Related Legislation

SB 1414 (Wolk, Chapter 678, Statutes of 2016) required the CEC to work with stakeholders to approve a plan to promote the installation of central air conditioning and heat pumps that comply with California building energy efficiency standards and authorized that CEC to adopt regulations consistent with the plan. The bill also conditioned IOU rebate and incentives for energy efficiency upgrades on providing proof of permit closure for upgrades that comply with building energy efficiency standards.

AB 2021 (Levine, Chapter 734, Statutes of 2006) required the CEC to identify all potentially achievable, cost-effective electricity and natural gas efficiency savings and establish 10-year statewide energy efficiency savings targets. The bill also required the CEC to develop a strategic plan to improve the energy efficiency of and reduce peak use from central air conditioning systems in California.

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

SUPPORT:

California State Association of Electrical Workers (Co-sponsor)

California State Pipe Trades Council (Co-sponsor)

Western States Council Sheet Metal Workers (Co-sponsor)

OPPOSITION:

None received

ARGUMENTS IN SUPPORT: According to this bill's sponsors, this bill is needed to ensure that workers for ratepayer-funded energy efficiency projects have had appropriate hands-on, classroom, and laboratory instruction. The sponsors argue that this bill's requirements will increase energy savings and reduce the number of underperforming projects.

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