

STATE OF CALIFORNIA

Public Utilities Commission
San Francisco

M e m o r a n d u m

Date: August 15, 2018

To: The Commission
(Meeting of August 23, 2018)

From: Hazel Miranda, Director
Office of Governmental Affairs (OGA) – Sacramento

Subject: **Commission Position on Building Decarbonization - SB 1477 (Stern):
*Low-emissions buildings and sources of heat energy (amended
8/6/18)***

RECOMMENDED POSITION: SUPPORT

REASON: SB 1477 (Stern): Low-emissions buildings and sources of heat energy furthers California's progress towards achieving its aggressive and leading greenhouse gas (GHG) emission reduction goals by establishing two new programs aimed at decarbonizing the state's building sector. This is likely a cost-effective next step toward reducing GHG emissions in California, which can primarily be done by switching building heating equipment away from natural gas to efficient electrical equipment, such as heat pumps, and possibly to renewable gaseous fuels. However, to date there has been little movement away from natural gas fueled building heating equipment to other end-using equipment, even when cost effective options exists. This is likely the result of a combination of challenges, including a lack of customer awareness, low availability of equipment and the relative high cost of electric conversions in existing buildings. Other challenges include regulatory rules that were developed when switching to natural gas was considered the "cleaner" option. The programs proposed in this bill could be helpful policy tools and could transform markets for near-zero- and low-emission building technology.

SUMMARY OF BILL & STATUS

- ***SB 1477 (Stern): Low-emissions buildings and sources of heat energy (amended 8/6/18)***

Status – Assembly Appropriations Committee (as of 8/6/18)

- 1) Establishes two new programs, the Building Initiative for Low-Emissions Development (BUILD) and Technology and Equipment for Clean Heating (TECH) initiative, to be developed and supervised by the California Public Utilities

Commission (CPUC), in consultation with the California Energy Commission (CEC), to reduce greenhouse gas emission (GHG) emissions, as follows:

- a. BUILD Program would provide financial incentives, provided by natural gas investor owned utilities, for the deployment of near-zero-emission building technologies aimed at reducing building GHG emissions below what they would otherwise be pursuant to CEC's building energy efficiency standards.
 - i. Directs CPUC to set incentives to achieve GHG emissions reductions beyond industry practices and to offer greater incentives for larger projected GHG emissions reductions.
 - ii. Sets aside 30 percent of BUILD funds for new low-income residential housing in disadvantaged communities and directs the CPUC to ensure such projects receive technical assistance and higher incentives than do other new residential buildings and do not increase utility bills for building occupants.
 - b. TECH Initiative would provide incentives to develop markets for low-emission space- and water-heating equipment for new and existing residential equipment.
- 2) Beginning in fiscal year 2019 through fiscal year 2023, directs the CPUC to annually allocate \$50 million of revenues received by a natural gas corporation from direct allocation of GHG emissions allowances (GHG allowance auction revenue) to the BUILD and TECH programs.
 - 3) Authorizes CPUC to determine whether each program should be administered by natural gas investor owned utilities or a third-party, including the CEC.
 - 4) Requires CPUC to report annually on the programs and on related efforts.

CURRENT LAW

Existing law:

- Requires the California Air Resources Board to ensure that statewide greenhouse gas (GHG) emissions are reduced to at least 40 percent below 1990 levels by December 31, 2030. (Health and Safety Code Section 38566)
- Requires that the California Energy Commission (CEC) set statewide targets that will achieve a cumulative doubling of energy efficiency savings from all electricity and natural gas retail end-users by 2030, to the extent that is feasible, cost-effective and will not adversely impact public health and safety. (Public Resources Code Section 25310(c))

- Requires the California Public Utilities Commission (CPUC) to establish targets for all potentially achievable cost-effective electricity efficiency savings. (Public Utilities Code Section 454.55)
- Requires the CPUC to establish targets for all potentially achievable cost-effective natural gas efficiency savings; and that natural gas IOUs shall first meet their unmet resource needs through all available natural gas efficiency and demand reduction resources that are cost effective, reliable, and feasible. (Public Utilities Code Section 454.56)

CRITICAL ANALYSIS:

In 2015, the Energy and Environmental Economics consulting firm on behalf of the California Air Resources Board (CARB), California Energy Commission (CEC), California Public Utilities Commission (CPUC) and the California Independent System Operator (CAISO) developed and released its “Pathways Project”, a scenario-based analysis that identified and examined various pathways for how California could achieve a greenhouse gas (GHG) emission reduction target of 40 percent below 1990 levels by 2030.

The analysis identified 4 main “Energy Transitions” -

1. Maximize economy-wide energy efficiency and conservation;
2. Substitute fossil fuels with cleaner alternatives in buildings and transportation (i.e. electrification);
3. Decarbonize electricity generation (i.e. develop and integrate zero-carbon and renewable electric generation resources); and
4. Decarbonize liquid and gaseous fuels (i.e. increase production and utilization of renewable liquid fuels (biofuels) and renewable gaseous fuels (biomethane and hydrogen).

Recognizing the need to place California on a pathway to significantly reduce GHG emissions beyond 2020 and out to 2030, Governor Edmund G. Brown Jr. affirmed these Energy Transitions in his 2015 State of the State address and proposed the following goals –

1. Increase from one-third to 50 percent California’s electricity derived from renewable energy resources;
2. Reduce today’s petroleum use in cars and trucks by up to 50 percent;
3. Double the efficiency of existing buildings and make heating fuels cleaner.

Following Governor Browns proposal, the Legislature responded with SB 350 (de Leon, Statute of 2015) that, among other provisions, -

1. Increased the Renewables Portfolio Standard (RPS) to 50 percent by 2030;
2. Directed the CPUC to move forward with the widespread electrification of transportation;

3. Established the Integrated Resource Planning process for all load-serving entities (electric investor owned utilities, community choice aggregators and electric service providers) and the 16 largest publicly owned utilities; and
4. Directed the CEC to create annual energy saving targets for the state electric and natural gas utilities.

The following year, the Legislature officially codified the reduction of GHG emissions 40 percent below 1990 levels by 2030 goal in SB 32 (Pavely, Statutes of 2016).

The CPUC and CEC, with sister agencies and stakeholders, have been actively implementing the various policies and provisions in SB 350 (de Leon) for the last several years. However, despite these monumental policies, and significant progress in their implementation, there remains promising opportunities to drastically reduce GHG emissions from the building sector beyond demand side management initiatives, such as energy efficiency, and decarbonizing the supply of electricity buildings consume.

This bill would seek to build off of these initiatives and further advance the state's progress toward decarbonizing buildings by creating two new incentive programs aimed at encouraging building owners and developers to utilize near-zero- and low-emission building technologies to drastically reduce GHG emissions from this sector. Currently, natural gas (a fossil fuel) is the predominant heating fuel for buildings in California and according to *California's 2017 Climate Change Scoping Plan*, commercial and residential GHG emissions accounted for 9 percent of the statewide total in 2015. This bill would help encourage the substitution of natural gas in buildings with cleaner alternatives, such as electricity, which in California is increasingly produced by zero-carbon and renewable energy resources.

CUMULATIVE RATEPAYER IMPACT

SB 1477 (Stern) would decrease the yearly credit on natural gas residential ratepayer bills by a total of \$50 million spread across all residential ratepayers in the natural gas investor owned utilities territories.

CUMULATIVE FISCAL IMPACT

The total fiscal impact to develop and oversee the implementation of this bill would be about \$1.4 million for consulting budgets and new positions at the California Public Utilities Commission.

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http://leginfo.legislature.ca.gov/faces/billCompareClient.xhtml?bill_id=201720180SB1477