BOMA California – Year-End Report (2021)
Codes and Regulations

Solar Mandate for New Construction

Background: In late 2021, the State of California will adopt the first set of building codes in the nation that will require solar photovoltaic (PV) and battery storage for many non-residential and multi-family buildings as part of the 2022 Energy Code.

This action follows a similar adoption for single family homes in 2018. The Commercial real estate groups noted above have worked closely with the California Energy Commission (CEC) for over a year to draft a set of workable, cost-effective regulations.

The CEC updates its code every three years and in early August 2021, its governing board adopted the 2022 Energy Code which sets building standards for new commercial construction. The new codes also expand the existing single family home requirement to design new homes so that battery storage can easily be added to an existing system.

The new codes will apply to buildings for which the permit application is submitted to the local building department on or after January 1, 2023.

The 2022 Energy Code extends PV/battery storage standards to the following building types and applies to both public and private buildings:

* Office, medical office, and clinics
* Warehouses
* Retail and grocery stores and restaurants
* High-rise multifamily (apartments and condos)
* Hotel-motel * Schools and Civic (theaters, auditoriums, and convention centers)

The PV/battery requirements are for new construction only and do not apply to tenant improvements or alterations of existing space nor expansions that are connected to an existing structure and add volume or square footage to the existing structure.

Recognizing that not all non-residential buildings are alike and that it is not cost-effective or technically feasible for all buildings to accommodate solar, the PV and battery requirements have exemptions for situations that include inadequate roof space, inadequate solar access, occupied roofs, roofs where PV installation is not possible/feasible, and in areas without Virtual Net Metering or a community solar program.

Update to EV Charging Regulations

Background: The Governor has announced plans to prohibit the sale of new cars with internal combustion engines starting in 2035. This means that auto manufacturers will only be offering Zero-Emission Vehicles for sale in California after 2034.

Current standards in Cal Green require 10% of the parking spots have an empty conduit (plastic or metal pipe) connecting the parking lot with the electrical panel. Also, the electrical panel must have enough unused capacity (unused plug slots) to allow for the later installation of EV-charging stations.

To ensure the availability of charging stations throughout the state, the Air Resources Board (ARB) petitioned the Building Standards Commission to update their EV-Ready requirements for new commercial buildings by increasing the percentage of EV-Capable parking spots and requiring fully functioning EV charging systems in a subset of those spaces.

Who will pay for this? After all, the state would be mandating the installation of something that may not see significant use for years. More importantly, this will provide a revenue stream for the local utility (not the building owner). Also, how will this impact utility grid infrastructure requirements? Lastly, will utilities be required to provide service as EV-charging facilities are installed?

On a positive note, the California Energy Commission is proposing significant energy code compliance credit for owners of new buildings who choose to install fully functioning EV-Charging systems. Also, the Governor's budget contains over a billion dollars for incentivizing the installation of EV charging stations in new and existing buildings.

Standards Commission Appoints a New Slate of Advisory Committee Members

Background: As required by industry-sponsored legislation, any state agency change to the national codes must first be reviewed by one of six code-advisory committees that make recommendations to the BSC on the viability of the code-change proposal. Code advisory committee members serve 3-year terms and are comprised of code-related experts from various fields in the private and public sectors. None of the voting members can be from a state agency.

The BSC Code Adoption Committee went through the applications on January 21st and nominated individuals for consideration by the full Commission at their February 18th meeting. We successfully got multiple business-friendly representatives appointed to the Green CAC, Building & Fire CAC, Plumbing & Mechanical CAC, Accessibility CAC, and the Structural CAC. These appointments are for three years, starting in March of 2021.

Governor Appoints Four to Standards Commission

In a move strongly supported by industry, the Governor appointed Laura Rambin to the architect slot. He reappointed Raj Patel to the Building Official slot, Peter Santillan to the Organized Labor slot, and Elley Klausbruckner to the Fire Protection Engineer slot. BOMA is a member of the Code Coalition, which supported all four of these appointments recently confirmed by the Senate. The coalition is still promoting nominees for the two remaining vacancies on the Commission.

Seismic Safety Proposal Fails Passage Again

For the third time in four years, Assembly Member Nazarian introduced legislation (AB 1329) that would require several state agencies to develop and adopt a mandatory "Functional Recovery" standard. In theory, a "functional recovery" standard would allow a building's occupants to safely exit during a seismic event and then re-enter and occupy the building immediately after that.

After accepting several amendments from the industry, this latest effort would require the Building Standards Commission and the Department of Housing & Community Development to

adopt a functional recovery standard by January of 2026. However, it gives the agencies the authority to recognize existing building standards as adequate for many commercial buildings throughout the state. Like previous efforts, AB 1329 was held in Appropriations Committee due to concerns over high costs to the state. It is unclear at this time if the author will return with similar legislation in the 2022 session.

Firestorm Response

As expected, legislation prohibiting all commercial and residential construction in areas designated as "high fire severity zones" was reintroduced in January. SB 55 (Stern) would have banned any new commercial or residential construction (no matter how small) in State Responsibility Areas (SRAs). Unfortunately, the SRA's make up one-third of California. In addition to having a catastrophic impact on the state's economy, the housing crisis, and local government, this proposal completely neglects the proven benefit of California's mandatory fire safety and defensible space standards for those areas. A broad industry-led coalition was successful in convincing the author to drop the measure and instead focus on mitigation efforts. However, we anticipate the author will try again during the 2022 legislative session.

Decarbonization Policy Efforts Begins to Take Shape

An ongoing effort among several state agencies seeks to eliminate natural gas use in new construction and reduce gas usage in existing buildings. This effort goes beyond "zero net energy" (ZNE) and is being referred to by proponents as "zero-emission buildings" or ZEB's. In addition to producing as much on-site renewable energy a building needs throughout one year, a ZEB would also create a net-zero level of greenhouse gas emissions over 12 months.
The easiest way to accomplish this is to elevate energy efficiency measures, on-site solar photovoltaic panels combined with battery storage technology, and lastly, going all-electric. While this may sound good from a climate-change perspective, severe, unresolved local and statewide electric grid reliability issues exist.

A Collision of Well-Intended Policies:

- **Too Much Renewable Energy:** In a relatively brief period (within 3-6 years), California's electric grid will be dealing with a substantial increase in daytime renewable energy flowing into the grid during the middle of the day when the grid does not need that power. Since the electric grid is not a battery, the utilities will be forced to send that power to neighboring states like Arizona and Nevada.

- **Electric Vehicle Charging:** The Air Resources Board (ARB) wants to see a two-fold increase in the number of electric vehicles in California by 2025 (1.5 million versus today's 750,000). And by 2030, ARB wants to see at least 5 million EV's on the road.

- **Electrification:** As mentioned earlier, there is a serious effort to eliminate natural gas use in new construction to reduce greenhouse gas emissions. This will mean an increase in electricity demand during peak load periods from the beginning of May until the end of October, while the grid must withstand firestorms and maintenance shutdowns. Any of these issues could lead to rolling blackouts and place severe stress on the grid, increasing the likelihood of more wildfires.

Switching over to electric power is not as cost-effective as gas in specific applications. Therefore, proponents of electrification are seeking to change the CEC's longstanding definition of "cost-effective." For decades, the Public Resources Code requires all the CEC's building energy efficiency standards to be "cost-effective over the structure's life (30 years) based on historical practice".

This means the building owner will get their money back in reduced utility bills over those 30 years. Proponents of electrification want to require the CEC to add to this calculation the "quantification of the economic value of greenhouse gas reduction measures on a per-building basis." This means whatever the CEC says is cost-effective will be cost-effective, and the building owner will no longer get their money back.

In response, we will vigorously oppose any proposed change to the existing statutory definition of "cost-effective." With the passage of industry-supported legislation (AB 3232), the CEC was required to investigate the interactive effect of the three issues cited above and suggest appropriate policy responses. The Final AB 3232 Report was released in October and failed adequately address the issues raised by the industry, and we responded with a written submittal taking objection to the omission. The Legislature will likely take up this shortcoming in 2022.