CITY OF ALBANY
CITY COUNCIL AGENDA
STAFF REPORT

Agenda Date: December 5, 2022
Reviewed by: NA

SUBJECT: Amendments to Green Building Requirements

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SUMMARY

The action before the City Council is to adopt a Resolution amending the City of Albany Green Building Requirements.

STAFF RECOMMENDATION

That the Council adopt Resolution No. 2022-135, amending the City of Albany Green Building Requirements.

CLIMATE ACTION COMMITTEE RECOMMENDATION

That the Council adopt a resolution to amend the City of Albany Green Building Requirements.

PLANNING AND ZONING COMMISSION RECOMMENDATION

That the Council adopt a resolution to amend the City of Albany Green Building Requirements with an edit changing the electric vehicle charging requirement from 20% to 25%.

BACKGROUND

The City of Albany General Plan Policy ***CON-6.1: Green Construction*** directs the City towards development of standards and guidelines which support "green" construction and environmental leadership in the building industry. Action ***CON-6.A*** requires that "new construction to meet or exceed California Green Building Code standards for energy and water efficiency," and that "Albany's building codes should be regularly reviewed and periodically amended to meet or exceed state requirements."

The City of Albany Climate Action and Adaptation Plan (CAAP) established the objective of 70% greenhouse gas (GHG) emissions reductions by 2035, and net zero emissions by 2045. The CAAP focuses on reducing emissions from the City's largest emissions sectors, including new and existing buildings. An estimated 40% of GHG emissions in Albany result from the building sector.

The *California Green Building Standards Code*, also known as CALGreen, is Part 11 of thirteen parts of the official *California Code of Regulations* (Title 24), also referred to as the *California Building Standards Code.* CALGreen was the nation's first mandatory green buildings standards code, adopted by the State of California in 2007 to reduce statewide greenhouse gas emissions resulting from the building sector. Local governments may adopt additional requirements that go beyond the state building code.

On January 19, 2021, the City Council adopted a set of green building measures for new construction and renovations as Resolution No. 2020-127. The requirements were approved by the California Energy Commission (CEC) on May 12, 2021 and are now in effect and being implemented by staff. On December 6, 2021, the Council adopted Resolution No. 2021-118 (Attachment 1), which updated the green building measures to include energy efficiency requirements for new mid-rise and high-rise buildings. This resolution has not yet been approved by the Energy Commission.

Local ordinances must be updated along with the new state building codes every three years. Albany's current green building codes must be updated by January 1, 2023, when the 2022 California Building Code goes into effect. This updated Resolution includes several changes, including an all-electric requirement.

DISCUSSION

All-Electric Requirement

The City's current Green Building Resolution contains requirements that incentivize the construction of all-electric buildings, but all-electric construction is not mandated. New mixed-fuel buildings are required to meet a higher standard of energy efficiency than all-electric buildings, which can be accomplished through various measures such as additional solar panels, solar storage batteries, and insulation. The additional cost and complexity of these measures serves as an incentive for all-electric construction.

Since 2019, over 30 cities throughout California have adopted local ordinances requiring that new buildings are built all-electric, with no natural gas appliances. This trend is part of a larger effort to reduce emissions from the building sector and take advantage of California's growing supply of renewable energy. The proposed Resolution (Attachment 2) includes an all-electric requirement to replace the current electric-incentive model in Resolution No. 2021-118. In contrast to the City's current Resolution, this all-electric measure would require all new subject buildings to be fully electric; natural gas infrastructure and appliances would not be allowed.

- ***Buildings Subject to All Electric Requirement***

In general, the all-electric requirement would apply to all newly-constructed buildings. The draft resolution (Attachment 2) contains an exception for scientific laboratory buildings because they often require very specific equipment or indoor conditions. This exemption still requires the building to install electric appliances wherever technically feasible. The resolution also includes a general infeasibility and financial hardship exemption to provide flexibility for special cases.

In accessory dwelling units (ADUs), all newly installed appliances would need to be electric. However, new ADUs could utilize pre-existing gas water heaters and heating, ventilation and air-conditioning (HVAC) systems if they are shared with the main house. For instance, an attached ADU could be connected to the home's existing gas water heater, but if a new water heater is installed it would need to be electric.

Finally, any project that is subject to the City's fire sprinkler requirement would also need to completely electrify. The trigger for the fire sprinkler requirement is as follows:

> The cumulative aggregate of the area of new construction in the structure, plus the area of substantial remodel of the structure, since November 7, 1996, exceeds 50% of the floor area of the structure that was existing on November 7, 1996 (attached garages are included as part of the existing floor area); or the aggregate of the area of new construction in the structure, plus the area of substantial remodel of the structure, exceeds 1,500 square feet.

- ***Impact of All Electric Requirement***

All-electric buildings prevent carbon emissions and other noxious gases that are produced when natural gas appliances are used. The exact amount of emissions avoided by building all-electric will vary from building to building, but in general, electrification will prevent approximately one metric ton of carbon dioxide ($MTCO_2$) per year for single family buildings, 0.5 tons in ADUs, and 0.25 tons per unit in multifamily buildings.

The cost of building all-electric versus mixed-fuel depends on the building type, however, with the new building code, in most cases an all-electric building will be less expensive to build. The 2022 building code will require all new buildings to be electric-ready, meaning that all the electrical infrastructure and wiring must be in place for future electrification, even if the builder or homeowner installs gas appliances. Buildings in Albany's climate zone must also install heat pump HVAC systems.

Given these requirements, the added cost of electrification is only in the form of electric appliances, which generally cost slightly more than gas. However, these costs are offset by the savings from not having to install gas piping. One notable exception is large multifamily buildings, where electric water heating can be much more expensive, and raise building costs by up to $100,000.

Other Green Building Measures

In addition to energy-efficiency requirements, the current green building Resolution contains the following measures:

Residential Measures	New Construction	Alterations/Additions
30% of new paving must be permeable paving	X	X
At least 1 Energy Star washing machine or dishwasher per unit	X	X
Kitchen faucets must have a flow rate of no more than 1.5 gallons per minute	X	X
Cement content of concrete must be reduced by at least 25%	X	X
90% of resilient flooring must be meet Low-VOC emissions limits	X	X
Multifamily only: 20% of parking spaces must have level 2 EV chargers installed. The remainder must be EV-ready, with sufficient panel capacity and inaccessible wiring installed	X	

Non-Residential Measures	New Construction	Alterations/Additions
Solar panels must be installed on the entire solar zone (mandated solar accessible area) of the roof	X	
12% of parking spaces must designated for clean air vehicles	X	X
Outdoor lighting power must be reduced by 10%	X	X
12% reduction in indoor water use via efficient fixtures	X	
Cement content of concrete must be reduced	X	X
90% of resilient flooring must be meet Low-VOC emissions limits	X	X

Most of the measures that Albany currently requires have not been affected by the new code and have not been edited aside from updates to relevant code section numbers. However, the proposed Resolution does include changes to the outdoor lighting and non-residential solar requirements.

- ***Outdoor Lighting***

Albany currently requires non-residential buildings to reduce outdoor lighting power by 10%, however, the draft resolution drops this requirement so that the Resolution will not need to be approved by the California Energy Commission (CEC). With the shift from electric-preferred to an all-electric requirement, no other part of this draft Resolution would need to be approved by the CEC. This only provides minor energy savings and avoiding the CEC approval process will simplify and speed up enforcement of the Resolution.

- ***Non-Residential Solar***

Albany currently requires all new non-residential buildings to install solar panels on the entire "solar zone". The solar zone is an area on the roof that is designed to support solar panels and in the sunlight. It must make up at least 15% of the roof area. The 2022 code now includes both solar and battery storage requirements for most new non-residential buildings, based on floor area rather than the solar zone. Because the new code goes beyond Albany's current requirement in most

cases, this section has been deleted from the draft resolution to avoid overlapping and contradictory requirements.

- ***Electric Vehicle (EV) Charging***

The Commission recommended that the City Council adopt the Resolution with one further change: to raise the requirement for multifamily EV charger installations from 20% of spaces to 25% in order to expand access for multifamily tenants. Staff and the Climate Action Committee recommend keeping the level at 20% for now, as this is still significantly more than the current demand and the requirements prepare buildings for easy and inexpensive charger installation later on. Additionally, raising the charger requirement at time of construction will increase costs for already expensive housing projects.

SUSTAINABILITY/SOCIAL EQUITY CONSIDERATIONS

SUSTAINABILITY: Implementation of the proposed green building measures will reduce greenhouse gas emissions, conserve water, improve indoor air quality, and increase access to electric vehicles. The most impactful measure will be the all-electric requirement, which will prevent 0.25 to one metric ton of carbon dioxide ($MTCO_2$) per year for each unit subject to the requirement.

SOCIAL EQUITY: The proposed measures will likely cause a slight increase in the cost of construction, although in many cases the requirements will be cost neutral. New, large multifamily buildings are likely to see the most significant cost impacts, from electric vehicle charging and electric water heating. These costs will incrementally affect the ability of low and moderate income households to be able to afford new multifamily housing. However, these measures will also increase the quality and comfort of housing by improving indoor air quality, reducing water usage and costs, and providing access to electric vehicles for renters.

CITY COUNCIL STRATEGIC PLAN INITIATIVE

Adopting green building measures advances the Council Strategic Plan Initiative Goal 1, Objective 1 to "Advance Climate Action."

FINANCIAL CONSIDERATIONS

There will be a small amount of expenses associated with education and outreach, implementation, and enforcement. There will also be some staff time required to implement the changes to current green building requirements.

ATTACHMENTS

1. Resolution 2022-135
2. Resolution 2022-135 with Redline Changes