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CALGreen: California Green Building Standards Code: Blog 3

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CALGREEN: CALIFORNIA'S GREEN BUILDING STANDARD

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CALGREEN EMISSION REDUCTIONS & OPPORTUNITIES IN 2022:

CALGreen encourages local governments to go beyond statewide Energy Code regulations to achieve greater building energy efficiency and cost savings, all while providing the necessary resources to do so. The currently enforced version of CALGreen is the 2019 CALGreen code. Mandates and voluntary provisions in the 2022 CALGreen update will go into effect January 1, 2023.[1] If both the 2022 Energy Code and 2022 CALGreen mandatory and voluntary standards were to be adopted statewide, the carbon reductions would be equivalent to removing 8,000 fuel-powered cars off the road for the first year and 24,000 fuel-powered cars by the third year.[2] This means that 2022 is a critical year for local jurisdictions throughout California and the San Diego region to inform, educate, and implement opportunities that maximize energy savings, greenhouse gas emission reductions, and public health benefits.

FOCUS AREAS OF 2022 CALGREEN PRIORITIES:

2019 CALGreen Priorities	2022 CALGreen Priorities
The 2019 CALGreen code went into effect January 1, 2020 and focuses on mandatory measures that require EV infrastructure, increase efficient water use, provide cleaner air quality, and maintain pollutant control.[3]	The 2022 CALGreen code goes into effect January 1, 2023 and focuses on battery storage system controls, demand management, heat pump space and water heating, and building electrification.

Table 1 highlights the shift in focus areas from the 2019 CALGreen code cycle to the 2022 code cycle.

OVERVIEW OF CALGREEN:

CALGreen is a green buildings standards code adopted at the state level where local municipalities are the enforcers, and even voluntary adopters, of more stringent prerequisites from Tier 1 and Tier 2 leveled compliance options. In 2010 through CALGreen, California became the first state in the United States to mandate green building standards.[4] Since then, statewide, regional, and local legislation have aided in developing a culture where buildings are not seen as separate components of our communities, but in direct relation to the health, safety, and wellbeing of both people and the natural environment.

HOW CALGREEN SUPPORTS THE ENERGY CODE:

CALGreen strengthens the Energy Code by streamlining pathways for buildings to obtain and meet Energy Code compliance requirements and building performance standards.

2022 CALGREEN CODE		2022 CALIFORNIA ENERGY CODE
Designed as a green building standards code	→	Designed to reduce wasteful and unnecessary energy consumption in newly constructed and existing buildings
Mandates a selection of sustainable building practices	→	Regulates the overall energy performance of buildings
Applies to new residential and nonresidential buildings	→	Categorizes buildings by “Single Family”, “Multifamily and “Nonresidential” groups
Mandatory and voluntary measures around energy efficiency, water conservation, sustainable building materials, site design, and air quality[5]	→	Mandatory measures around electric heat pump requirements, electric ready requirements, increased ventilation standards, Solar Photovoltaic (PV) Systems & Battery Storage Standards
Signals future Energy Code direction, supports jurisdictional greenhouse gas emission reduction and provides a ready-made template for jurisdictions to go beyond state mandates[6]	→	Helps California meet its long-term climate and carbon neutrality goals

Table 2 highlights some ways in which CALGreen supports and strengthens the role of the Energy Code.

REMOVING THE TWO-TIERED PROVISIONARY OPTIONS

The 2022 CALGreen update eliminates the two-tiered menu of compliance prerequisites and enforces a single tiered menu of provisionary options. The reason behind this update is to make it easier for statewide jurisdictions to adopt the more stringent voluntary provisions.[7] The 2022 CALGreen code has also been updated to require that two-rather than one-prerequisites be chosen from the expanded, single tiered compliance menu.

ENERGY DESIGN RATING UPDATES

The 2022 CALGreen standards have another significant change - the proposed metric margins for Energy Design Ratings (EDR) are based on hourly source energy when evaluating a building's performance. The reason for this is to achieve a more accurate carbon output measurement.[8] This is also to maintain synergy with the 2022 Energy Code update which introduces the source EDR metric to capture a closer look at a building's carbon output. The 2022 CALGreen update pivots towards the technology of the built environment's future and calls for EDR targets to be met most efficiently through the installation of electric heat pumps for space heating and electric heat pump water heaters. The options for compliance, however, are diverse and vary depending on the jurisdiction's climate zone.

IMPROVING QUALITY OF LIFE IN THE SAN DIEGO REGION

With buildings being the second largest contributor to greenhouse gas emissions in California, the green building sector has a critical impact on the state achieving climate action goals. When addressing the climate crisis through the built environment - key aspects of green buildings are: energy use, water use, indoor environmental quality, material section and the building's effects on its site.[9] As the 2022 CALGreen updates go into effect - San Diego's regional network of local governments have the opportunity to catalyze regional energy efficiency, support equitable community development and achieve regional decarbonization goals.

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The San Diego Regional Climate Collaborative was established in 2011 as a network for public agencies to advance climate change solutions and is currently housed at The Nonprofit Institute at the University of San Diego.

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