



DATE: November 1, 2022

TO: Mayor and City Council

FROM: Development Services Director and Fire Chief

SUBJECT: Building and Fire Code Updates: Introduction of Ordinances and Adoption of Resolutions Adopting the California Code of Regulations 2022 Edition of Title 24, including the 2022 Building, Fire, Plumbing, Mechanical, Electrical, Energy and Green Building Codes, and Related Amendments.

RECOMMENDATION

That the Council introduces the attached ordinances (Attachments II and V) and adopts the attached resolutions (Attachment III and IV) adopting the California Code of Regulations 2022 Edition of Title 24, including the 2022 Building, Fire, Plumbing, Mechanical, Electrical, Energy and Green Building Codes, and Related Amendments.

SUMMARY

Every three years, all of the codes that regulate construction in California (Title 24 of the California Code of Regulations) are comprehensively updated by the State of California. Jurisdictions throughout California adopt the State codes to serve as local codes, sometimes with amendments to the State codes, as Hayward has done historically. Regardless of local adoption, the 2022 State codes will be in effect throughout California on January 1, 2023.

This report, along with attached ordinances and resolutions, recommends that the Council adopts the State Codes with some amendments and codifies the Building Codes to become part of Chapter 9 (Building Regulations) of the Hayward Municipal Code. The recommended action will allow the code regulations to be more accessible and usable by the public.

BACKGROUND

The California Code of Regulations Title 24 is a comprehensive series of regulations that governs all aspects of construction. The purpose of this code is to establish the minimum requirements to safeguard the public health, safety, and general welfare. This set of codes covers everything from fire safety to green building and energy efficiency. State law requires that all communities enforce these building standards in their entirety. The enforcement of these regulations is accomplished through a combination of permitting, plan review, and onsite field inspections. The Building Division of the Development Services Department is responsible for enforcing the majority of Title 24 in Hayward. The Hayward Fire Department

is specifically responsible for enforcing Part 9 of Title 24, which is the California Fire Code. Title 24 covers five broad topics:

- LIFE SAFETY (earthquake and fire safety through the Building Code and Fire Code)
- ENVIRONMENTAL QUALITY, SAFETY and SANITATION (core system functioning - through the Plumbing Code, Electrical Code, and Mechanical Code)
- CIVIL RIGHTS (disabled access provisions through the Building Code)
- ENERGY CONSERVATION (through the Energy Code)
- GREEN BUILDING (through the California Green Building Standards Code, or 'CalGreen').

DISCUSSION

Most jurisdictions undergo a code adoption process every three years to formally incorporate the California Building Code and Fire Code into their municipal regulations. This local adoption process is not mandatory since state law automatically requires all jurisdictions in California to enforce the current version of Title 24 on the effective date. However, if the local jurisdiction chooses to modify the state codes in any way, this must be done through an ordinance. There are specific guidelines for this local adoption process in state law. The modifications proposed by any local jurisdiction must meet the following criteria:

- Local code amendments must not be less restrictive than the state codes.
- Technical modifications must have reasonable findings based on climatic, geological, or topographical conditions that impose particular constraints within the jurisdiction.
- Findings related to local conditions must be submitted to the California Building Standards Commission for recordation.
- Changes to the administrative sections of the code (non-technical components) do not require findings. Examples include policies related to refunds or plan review expiration.

Building Code (Attachments II and III)

As part of this code cycle, staff is recommending making several changes to the administrative section of the Building Code and making three technical changes/amendments based on the City's seismic zone. To view these changes and a brief explanation of the rationale, please see the second page of Attachment II (2022 Building Code Ordinance) for a summary. For the full rationale, please see Attachment III (2022 Building Code Resolution).

Fire Code (Attachments IV and V)

Staff is recommending that Council adopts the 2022 California Fire Code and local amendments to the Hayward Fire Ordinance, which can be seen in Attachment V. The amendments are designed to ease the approval for development review by standardizing Hayward's local code with neighboring jurisdictions and deleting sections where the State Fire Code has caught up with the local code. In the past, Council passed reach codes that exceeded State requirements. Since then, the State has incorporated these elements into the State Code. The amendments to the local ordinance also include cleanup language to incorporate previously adopted amendments designating a Hazardous Fire Area in the Hayward Hills and clarifying the construction method requirements within the Hazardous Fire Area.

ECONOMIC IMPACT

The California Energy Commission (CEC) estimates that the new 2022 standards will increase the construction costs of a home; however, the secondary ownership benefits outweigh the costs of construction in energy and efficiency gains made to the structure. Heat pump technology with the added requirements for Electric Vehicle (EV) chargers and solar Photovoltaic (PV) systems will reduce gas usage. With additional restrictions on gas systems, Hayward will be moving towards the goals of electrification by 2045 and over the life of the structure the monetary savings will be recouped.

The remainder of the Building Code and Fire Code updates outside of the energy regulations are incremental in nature and do not represent any substantial changes that will have an economic impact.

FISCAL IMPACT

With the increase in efficiency moving into Zero Net Energy standards (*ZNE*)¹, enforcement of the new codes will have an impact on staff. Additional training is required, and projects will take longer to complete during the plan review and inspection stages. Staff does not foresee an immediate substantial fiscal impact from adopting the new codes; however, over the course of the code cycle, staffing may need to be adjusted (internally and/or through consulting services) to maintain present review timelines. There also may be a need to increase the training budget as staff learns and implements these new standards. Costs for additional staffing or consulting services are offset by revenues collected through permit fees.

STRATEGIC ROADMAP

This agenda item does not directly relate to the Council's Strategic Roadmap.

SUSTAINABILITY FEATURES

¹ ***Zero Net Energy*** means that the total amount of energy consumed by a building on an annual basis is equal to the amount of renewable energy produced on site.

The 2022 update to the CEC's Building Energy Efficiency Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings, as well as additions and alterations to existing buildings. The most significant efficiency improvements to the Residential Standards include: (1) encouraging electric heat pump technology and use; (2) establishing electric-ready requirements when natural gas is installed; (3) expanding solar photovoltaic (PV) system and battery storage standards; and (4) strengthening ventilation standards to improve indoor air quality. Significant efficiency improvements to the Nonresidential Standards include: (1) establishing combined solar PV and battery standards for select businesses; (2) establishing new efficiency standards for commercial greenhouses (primarily cannabis growing); and (3) improving efficiency standards for building envelope, various internal systems, and grid integration equipment, such as demand-responsive controls to buoy grid stability. The 2022 Energy Code update revises energy efficiency standards for newly constructed buildings, as well as alterations to existing buildings. The new goal for the CEC will be based on obtaining Zero Net Carbon by 2045 and dramatically reducing Green House Gases (GHG). The most notable shift will be to move away from the use of natural gas and fuel burning appliances, and utilizing heat pump technology for water and space heating.

The following strategies represent the accomplishment of the 2022 Standards Goals-Path to the Future:

- Increase building energy efficiency cost effectively by designing buildings that meet minimum **Energy Design Ratings (EDR)²**
- Contribute to the State's GHG reduction goals
- Substantially reduce the homes' impact on the grid through efficiency and PV
- Promote grid harmonization and self-utilization of PV generation
- *Provide tools for title 24 Part 11 (CalGreen) Reach Codes.

*NOTE: Reach codes for 100% electrification of new structures as well as provisions for enhanced EV charging readiness are currently being developed by the Environmental Services Division which will be introduced separately from this standard code adoption process. For more information on the subject please visit <https://www.hayward-ca.gov/reach-code>.

PUBLIC CONTACT

² ***Energy Design Rating** – According to the California Energy Commission, the Energy Design Rating (EDR) is a way to express the energy performance of a building using a scoring system where 100 represents the energy performance of a home designed to meet the 2006 Energy Code and 0 represents the energy performance of a home that combines high levels of energy efficiency with renewable generation to “zero out” its time-dependent value (TDV) of energy. As defined in the cost-effectiveness studies, the TDV calculation is “intended to capture the “societal value or cost” of energy use including long-term projected costs such as the cost of providing energy during peak periods of demand and other societal costs such as projected costs for carbon emissions, as well as grid transmission and distribution impacts. This metric values energy uses differently depending on the fuel source (gas, electricity, and propane), time of day, and season. Electricity used (or saved) during peak periods has a much higher value than electricity used (or saved) during off-peak periods (Horii et al., 2014). This is the methodology used by the Energy Commission in evaluating cost-effectiveness for efficiency measures in Title 24, Part 6.

Staff has directly contacted all developers with active projects that are nearing submittal to notify them of the upcoming code changes. Staff will also include notifications on the City's website and provide useful links for developers and homeowners to learn about the new codes.

NEXT STEPS

If the Council adopts the attached resolutions, determining the need to modify the 2022 California Building Code and California Fire Code, and introduces the attached ordinances, the ordinances will be adopted on November 15, 2022, and the new 2022 codes with amendments will be in effect on January 1, 2023.

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Approved by:



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