TOWN OF WINDSOR
AGENDA REPORT

Joint Windsor Town Council, Windsor Redevelopment Successor Agency and Windsor Water District Meeting Date: October 4, 2023

To: Mayor and Councilmembers
From: Patrick Streeter, Community Development Director
Subject: Ordinance Adopting Higher Energy Performance Residential Reach Code

Recommendation to Council:

1. By motion, determine that the higher energy performance measures being proposed by the Town under the proposed Ordinance are cost effective as documented in the 2022 Cost-effectiveness Study for Single-Family New Construction (last modified on June 20, 2023), and 2022 Cost-Effectiveness Study for Multi-Family New Construction (last modified on June 20, 2023), collectively, "Study."
2. Hold first reading, by title only, an ordinance amending Windsor Municipal Code Title VII, "Building and Housing," to require higher energy performance for residential single-family and multi-family new construction.
3. By motion, authorize the Town Manager to submit an application to the California Energy Commission (CEC) for review and approval of the Higher Energy Performance Residential Reach Code as proposed under the proposed ordinance upon adoption by the Town Council.

Strategic Plan Element:
The recommended action supports the goals of Infrastructure and Livability. Goal Statement: Through a lens of sustainability and innovation, invest in the Town's infrastructure and public facilities to meet the needs of future generations. Goal Statement: Preserve community character by maximizing the use of existing amenities and creating future opportunities that enhance quality of life for all.

Background:
On October 16, 2019, by Ordinance No. 2019-338, the Town adopted an Ordinance adding Chapter 7, "All-Electric Residential Reach Code" to the Windsor Municipal Code Title VII, "Building and Housing."

On November 20, 2019, by Ordinance No. 2019-339, the Town adopted an Ordinance adopting by Reference the 2019 Edition of the California Code of Regulations, Title 24, and making local amendments to various portions of the Title 24 Codes, including amendments for the All-Electric Residential Reach Code.

The "All-Electric Residential Reach Code" ordinance, which became effective on January 1, 2020, applied to the development of all new low-rise residential development, including single-family homes, detached accessory dwelling units and multi-family development up to three-stories in height. New low-rise residential development was required to use only electric appliances and mechanical systems; the use of gas appliances and mechanical systems was not allowed.

Following adoption of the All-Electric Residential Reach Code, two lawsuits were brought against the Town to challenge the findings the Town made under the California Environmental Quality Act

(CEQA) when the Town adopted the Code ("Reach Code Cases"). The Town and the petitioners in the Reach Code cases reached a negotiated settlement. The terms of that settlement required the Town to delete Chapter 7, "All-Electric Residential Reach Code" from the Windsor Municipal Code Title VII, "Building and Housing," and all related changes that were made to the 2019 California Energy Code.

On January 20, 2021, by Ordinance No. 2021-348, the Town adopted an ordinance repealing Ordinance No. 2019-338 in its entirety and partially repealing Ordinance No. 2019-339 as it related to the All-Electric Residential Reach Code. Adoption of the Ordinance effectuated and ended litigation in both cases.

On November 16, 2022, the Town Council directed staff to prepare an All-Electric Residential Reach Code responsive to the Town's Climate Action Emergency Resolution 3548-19 and present it to the Town Council for consideration subsequent to the adoption of the 2022 Building Code Update.

On December 21, 2022, the Town Council adopted the California Building Code with local amendments which became effective on January 20, 2023. In the interest of timely adoption of the Building Code, the All-Electric Residential Reach Code consideration was deferred to a later date.

Upon further research and consideration of recent court rulings pertaining All-Electric Residential Reach Codes in California the Town of Windsor staff recommends consideration by the Town Council of a Higher Energy Performance Residential Reach Code for New Single-Family and Multi-Family Buildings which requires higher energy performance for new residential buildings and to exempt free-standing ADUs.

Discussion:
Title 24 of the California Code of Regulations (also more commonly referred to as the California Building Code) sets the building standards for all jurisdictions statewide. The Energy Code is codified in Part 6 of the California Building Code and establishes building energy efficiency standards for a range of aspects of design and construction such as building envelope, mechanical systems, and lighting. Local jurisdictions in California have the authority to adopt local energy ordinances, often called "reach codes," that are more restrictive and require local projects to exceed the state's minimum building energy efficiency standards.

The 2022 California Building Code became effective as of January 1, 2023. The 2022 Energy Code provides baseline efficiency and building performance standards based on different metrics for various building types, and includes significant technical and structural changes compared to the 2019 Code. These changes encourage electrification through various provisions, including battery-storage-ready, electric-ready and heat pump space heating requirements.

<u>California Energy Code Energy Evaluation Metrics</u>

The 2022 California Energy Code provides different metrics for various building types including single-family and multi-family residential buildings, as follows:

Single-Family Residential: A new single-family residential building must comply with three different energy design ratings (EDRs):

EDR1 (Source Energy) –The source energy design rating EDR1 rates the building energy efficiency based on hourly source energy use for the home. This metric approximates the building's greenhouse gas (GHG) emissions to support California's GHG reduction goals.

EDR2 (Efficiency) –The efficiency energy design rating EDR2 rates the building energy efficiency in terms of the value and cost of energy consumed at different times of the day and year.

EDR Total (Total Energy Design Rating) rates the building's total energy in terms of the value and cost of energy consumed at different times of the day and year factoring in solar and energy demand flexibility.

Multi-Family Residential: The multi-family residential building standard combines the value and cost of energy consumed at different times of the day and year (TDV), and the emissions from the building's energy source. The 2022 Source Energy metric is new for all multifamily buildings, and it was added to support decarbonization and electrification policy goals.

Proposed Windsor Higher Energy Performance Residential Reach Code

The Windsor Higher Energy Performance Residential Reach Code would require higher energy performance by mandating that new residential buildings exceed state energy code requirements. As summarized in the table below, the proposed ordinance would require that 1) new single-family residential buildings exceed the standard design total Source Energy Design Rating (EDR1) score by at least 14 points (the current state standard is 4.4), and 2) low-rise (five-story and under) multi-family buildings exceed state standards by at least 10% higher performance. To achieve these higher standards, residential buildings would have to incorporate more robust energy efficiency measures such as solar (PV) and battery storage systems. As required by state law, these more stringent compliance margins have been found to be cost effective in Windsor. No changes are proposed for the state standards for EDR2 or EDR Total.

Recommended Higher Energy Performance Standards	
Residential Building Type	**Energy Performance Requirements**
Single-Family Residential Buildings	Exceed Standard EDR1 requirement by at least 14 points
Multi-Family Residential Buildings (Low Rise)	Exceed Standard Source Energy requirement by 10%

The Windsor Higher Energy Performance Residential Reach Code would apply to the development of all new residential developments (single-family homes and low-rise multi-family developments) by requiring higher energy performance margins. The ordinance would not apply to attached and detached accessory dwelling units; alterations or additions to existing single-family, multi-family or commercial buildings; or new construction of commercial buildings. The ordinance is not applicable to residential buildings greater than five stories, because a cost effectiveness study was not available for those building types.

Requirements for Locally Adopted Energy Standards

Section 10-106-Locally Adopted Energy Standards of the Building Energy Efficiency Standards of Title 24 (Part 1) provides local jurisdictions with the authority to adopt local ordinances that exceed the minimum requirements of the Title 24 Building Energy Efficiency Standards subject to the following:

1. A determination that the standards are cost effective adopted by the local agency at a public

meeting and subsequently filed with the California Energy Commission; and
2. The Energy Commission must find that the standards will require buildings to be designed to consume less energy than permitted by Title 24, Part 6.

Determination by the Town Council at a public meeting that the standards are cost-effective.

Cost-effectiveness studies (Attachments 2 and 3) were prepared by the Statewide Codes and Standards Program, funded by PG&E and the other California investor-owned utilities for single-family residential and multi-family residential construction, (Collectively, "Study"). Single-family residential construction includes single-family homes and detached accessory dwelling units; multi-family residential includes three-story and five-story prototypes for multi-family development. The Study presents cost-effectiveness analysis for all 16 California Climate Zones, and as such, is usable by local jurisdictions throughout California.

Based on the Study, the proposed higher performance measures in the Windsor Higher Energy Residential code for single-family and multi-family buildings in Climate Zone 2 would save more than they cost to implement, using the California Energy Commission's TDV margin. Therefore, the proposed measures are found to be cost-effective and consume less energy than permitted by Title 24, Part 6. The draft ordinance (Attachment 1) includes the required determination that the energy performance measures being adopted by the Town are cost effective. The Study was included as part of the materials published in advance of the noticed public hearing for public review.

Approval of the application by the California Energy Commission

After two readings of the ordinance, an application is required to be submitted to the California Energy Commission (CEC) for review and approval of the Town's proposed Higher Energy Performance Residential Reach Code. The application to the CEC will include the proposed standards, the Town Council's findings and supporting analysis of the energy savings and cost effectiveness of the proposed standards, and environmental determination.

The second staff recommended action is that the Town Council authorize staff to submit the required application, proposed standards and environmental determination to the CEC once the second reading is completed. If adopted by the Town Council, the ordinance would become effective after it is approved by the CEC. The CEC approval process typically takes two to three months. The ordinance will become effective and operable thirty (30) days after approval by the CEC.

General Plan Consistency

Adoption of the Higher Energy Performance Residential Reach Code would serve to advance the following goals and policies contained in the Town's 2040 General Plan.

Environmental Resources Element
The Environmental Resources element of the General Plan includes discussion related to the contributions of greenhouse gas emissions to climate change and includes policies that support local, regional and State efforts to reduce GHG. In Windsor, similar to most other communities, the two primary sources of GHG are transportation and building energy. GHG from buildings is the result of the energy required for the operation, heating, and cooling of homes and businesses. The Town is committed to reducing GHG emissions and the General Plan includes GHG reduction targets that align with Assembly Bill 32 and Senate Bill 32 (Policy ER-5.1 below). The General Plan also includes policies that encourage smart growth development in order to reduce vehicle miles traveled and

connectivity policies to facilitate the use of alternative forms of transportation. The following General Plan GHG policies are consistent with and implement state requirements for GHG reduction:

ER-5.1: Community Greenhouse Gas Reduction
The Town shall strive to reduce emissions by 25 percent below the 1990 community emissions level by 2020, and further reduce community emissions by:

- 40 percent below the 1990 level by 2030;
- 60 percent below the 1990 level by 2040; and
- 80 percent below the 1990 level by 2050

ER-5.10: Energy Performance Standards
The Town shall require new construction to meet targeted energy performance standards to advance Town greenhouse gas reduction and other sustainability goals and policies identified in the General Plan. The Town will allow new development to select from a range of options to achieve a minimum energy performance standard, including but not limited to:

- solar easements to guarantee access to increased renewable energy generation;
- installation of EV charging stations in homes and in commercial development to increase the ability for the public to use zero-emission vehicles;
- passive heating and cooling building design;
- solar roof and carport panels;
- cool roofs;
- smart appliances;
- wind generation;
- installation of energy efficient appliances and fixtures; and
- other emerging technologies as they become available.

ER-5.12: Retrofitting Existing Buildings
The Town shall actively encourage the retrofitting of existing buildings throughout Windsor in order to align those buildings more closely with the Town's energy performance standards.

ER-5.13: Zero Net Energy Goals
The Town shall strive to implement the State goal of zero net energy (ZNE) in all new residential construction by 2020 and ZNE in all new commercial construction by 2030.

Public Health and Safety Element
The Public Health and Safety Element of the 2040 General Plan includes discussion and policies to respond and adapt to climate change. Climate change refers to changes to the average climatic conditions on earth, including changes in temperatures, wind patterns, precipitation, and storm severity. Potential climate change impacts in Windsor include increased average annual temperatures; increased drought caused by decreased rainfall; increased risk of wildfire; and decreased water availability.

Windsor and the surrounding area have experienced the effects of climate change, including: the statewide drought that occurred from 2012 to 2017, which was one of the worst on record; and, the October 2017 wildfires, which while not caused by climate change were made more extreme by the effects of climate change. Climate change is expected to shift from "normal" years toward more extreme weather events, which could result in years of reduced precipitation. Climate change also results in warmer temperatures, decreased precipitation, and increases in drought conditions, which is likely to increase wildfires. The Town has actively supported and participated in efforts to reduce GHG in order to affect climate change.

Adoption of an all-electric reach code would advance the objective of the following General Plan Climate Change Adaptation policy:
Policy PHS-7.2: Reduce Impacts of Climate Change

The Town shall support plans, standards, regulation, incentives, and investments to reduce the impacts of climate change on those populations most vulnerable to the impacts of climate change.

Community Outreach

From April through August of 2019, the Town held several meetings to provide information and receive input from the community and local developers and design professionals regarding possible adoption of an all-electric reach code. Attachment 3, September 4, 2019, Staff Report includes the details of these meetings.

Fiscal Impact:
The recommended action will have no direct fiscal impacts on the Town's general fund.

Environmental Review:
This project is exempt from the provisions of the California Environmental Quality Act ("CEQA"), pursuant to Section 15061(b)(3) of the CEQA Guidelines, because these standards are more protective of the environment than the State Standards, and there are no reasonably foreseeable adverse impacts. Consequently, there is no possibility that the activity in question may have a significant effect on the environment. This ordinance is also exempt under Section 15308 of the CEQA Guidelines—Actions by Regulatory Agencies for Protection of the Environment, because it is an action taken by local ordinance to assure the maintenance, restoration, enhancement, or protection of the environment.

Attachment(s):
1. Ordinance
2. 2022 Cost-Effectiveness Study - Single Family New Construction
3. 2022 Cost-Effectiveness Study - Multifamily New Construction
4. Planning Commission Staff Report
13.1 Energy Reach Code PowerPoint (Distributed 2023-10-03)
13.1 Correspondence Received (Distributed 2023-10-04)

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Recommended by:
Jon Davis
Town Manager