

DOCKETED

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TOWN OF WINDSOR AGENDA REPORT

Town Council Meeting Date: September 4, 2019

To: Mayor and Town Council
From: Kim Jordan, Planner III
Clif Castle, Building Official
Subject: Ordinance Adopting All-Electric Reach Code

Recommendation to Council:

1. By motion, determine that the all-electric measures being proposed by the Town under the proposed ordinance are cost effective as documented in the 2019 Cost-effectiveness Study for Low-Rise Residential New Construction.
2. Introduce and hold first reading, by title only, of an ordinance amending Windsor Municipal Code Title VII, "Building and Housing," to add Chapter 7, "All-Electric Residential Reach Code."
3. By motion, authorize the Town Manager to submit an application to the California Energy Commission for review and approval of the All-Electric Residential Reach Code as proposed under the proposed ordinance upon adoption by the Town Council.

Background:

Greenhouse gas emissions contribute to climate change, which can have a local and global effect on weather, air quality, and food production, leading to potentially significant impacts. The effects of global warming are being experienced locally, with increased frequency and intensity of wildfires, floods, droughts, heat waves, and other extreme weather. This includes the Nuns and Tubbs fires that occurred in October 2017, which burned more than 93,000 acres, resulted in the destruction of more than 5,000 homes and the deaths of 25 people, displaced thousands, and caused serious reductions in air quality.

In 2018, the Town of Windsor adopted policies as part of a comprehensive update to its General Plan (Town of Windsor 2040 General Plan) calling for the Town to strive to meet State goals for "Zero Net Energy" in all new residential construction by year 2020. One tool for achieving Zero Net Energy use is adoption of an "all-electric" energy code requirement as part of the Town's Building Code for new construction of homes and apartment units.

On April 17, 2019, the Town Council received a presentation from Sonoma Clean Power (SCP) on implementation of an all-electric "reach code" as part of the Town's adoption of the 2019 California Building Code. After the presentation, the Town Council took public comment and discussed whether the Town should pursue an all-electric code as part of the Town's 2019 California Building Code update. At the end of the meeting, the Town Council directed staff to provide information to and receive input from the community and local developers and design professionals regarding possible adoption of an all-electric reach code.

On June 11, 2019, a Town-sponsored community meeting was held to present the concept of an all-electric reach code to the public and local developers and design professionals. Notices for

this meeting were sent to: developers, builders, design professionals, and people on the interested parties list; posted on the Town's website on May 23, 2019; posted at the chamber of commerce and at Town Hall on May 23, 2019; and posted on Facebook on May 23, and June 5, 2019. At the meeting, Rachel Kuykendall from SCP provided a presentation that covered the following topics: (1) climate change overview, the State's GHG reduction goals and progress towards meeting the goals, and GHG reduction legislation and executive orders approved; (2) impacts and benefits of electric homes; (3) requirements and options for all-electric reach codes; (4) technologies and costs; and (5) the process for adoption of an all-electric code. The meeting was attended by approximately 15 people, comprised of a mix of developers, design professionals, and community members. The meeting included opportunity for questions, comments and discussion.

On August 14, 2019, the North Coast Builders Exchange (NCBE) held a workshop (independent of and not related to the Town's outreach efforts) on the 2019 Building Code update and all-electric reach codes for contractors, architects, and the mechanical, electrical and plumbing trades. The workshop was attended by approximately 50 people, including the Town Manager and staff from Building, Planning, and Public Works. The workshop covered the following topics: (1) 2019 Energy Code basics (effective January 1, 2020); (2) explanation of reach codes; (3) reach codes being considered in the North Bay; (4) costs of building all-electric homes; (5) installation and use of efficient electric technologies; and (6) marketing and sales of all-electric homes. The meeting included opportunity for questions, comments and discussion.

On August 21, 2019, the Town Council received a summary of the input received from the June 11th community meeting and comments made at the August 14th North Coast Builders Exchange meeting, considered options for implementation of an all-electric reach code, received public comment, and provide direction to staff. Notices for this meeting were sent to developers, builders, design professionals, and people on the interested parties list, which was updated to include the people that attended the June 11th meeting, and posted at Town Hall and at Safeway on August 13, 2019.

At the conclusion of the meeting, Town Council directed staff to move forward with an all-electric reach code that would apply to new low-rise residential development (single-family homes, detached accessory dwelling units, and multi-family buildings up to three-stories).

Discussion:

In California, Title 24 of the Code of Regulations (also more commonly referred to as the California Building Code) sets the building code standards for all jurisdictions statewide. The Energy Code is codified in Part 6 of the Building Code and regulates building energy efficiency such as building envelope, mechanical systems, and lighting. Although the state has legislation in place for energy efficiencies, the legislation has not yet translated to evaluating the building energy code based on its potential carbon emissions.

Local jurisdictions in California have the authority to adopt local energy ordinances, often called "reach codes," that are more restrictive than the minimum standards defined in the Energy Code's Building Energy Efficiency Standards. Local "reach codes" require local projects to exceed the minimum Building Energy Efficiency Standards.

The all-electric reach code would apply to the development of new single-family homes, detached accessory dwelling units, and multi-family buildings up to three stories (also referred to as “low-rise residential”); it would not apply to attached accessory dwelling units. New development would be required to use only electric appliances and mechanical systems. The use of gas appliances and mechanical systems would not be allowed. The all-electric code would *not* apply to: alterations or additions to single-family, multifamily, or commercial buildings; new construction of commercial buildings; or new construction of multi-family buildings of four or more stories.

Section 10-106-Locally Adopted Energy Standards of the Building Energy Efficiency Standards provides local jurisdictions with the authority to adopt local ordinances that exceed the minimum requirements of the Title 24 Building Energy Efficiency Standards. In order to adopt more local energy standards, the following are required:

1. Preparation of a cost effectiveness study

A cost-effectiveness study (Attachment 2) was prepared by the Statewide Codes and Standards Program, funded by PG&E and the other California investor owned utilities (“Study”) for low-rise residential development and submitted to the Energy Commission. Low rise residential development includes single-family homes, detached accessory dwelling units, and one- to three-story multi-family development. The Study includes cost-effectiveness analysis for all 16 California Climate Zones, making the Study usable by local jurisdictions throughout California.

Windsor is located in Climate Zone 2 (Attachment 3). Table 50 of the Study summarizes the results of the Study for single-family and multi-family buildings in Climate Zone 2 (Attachment 3). Single-family home all-electric construction is shown to cost, on average, \$6,171 dollars less than conventional construction using natural gas. The Study prepared by the Statewide Codes and Standards Program demonstrates that the all-electric requirement is cost effective in the Town of Windsor.

2. Adoption of a determination by the Town Council at a public meeting that the standards are cost effective.

The cost-effectiveness study prepared by the Statewide Codes and Standards Program determined that the all-electric standards included in the ordinance will meet the Study’s cost effectiveness standards. The draft ordinance (Attachment 1) includes the required determination that the all-electric 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.

3. Submittal of an application to the California Energy Commission (CEC) that includes the proposed standards, local jurisdiction’s findings and supporting analysis of the energy savings and cost effectiveness of the proposed standards, and environmental determination.

After two readings of the of the ordinance, an application is required to be submitted to the CEC for review and approval of the Town’s proposed all-electric reach code. The second recommendation 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.

4. Approval of the application by the California Energy Commission.

After approval by the CEC, the ordinance would become effective on January 1, 2020, at the same time as the 2019 California Building Code Update.

If the ordinance is adopted by the Town Council, it would become effective after it is approved by the CEC, and not sooner than January 1, 2020. The CEC approval process typically takes two to three months. Staff will be bringing the adoption of the 2019 California Building Code forward to Town Council later this year in order for the Code to become effective on January 1, 2020 and conform to the proposed ordinance.

General Plan Consistency

Adoption of an all-electric 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 as a whole, 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.

Fiscal Impact:

The recommended action of providing staff direction will not have any impact on the General Fund.

Environmental Review:

This project is exempt from the provisions of the California Environmental Quality Act ("CEQA"), pursuant to Section 15061 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.

Attachments:

1. Draft Ordinance
2. 2019 Cost-effectiveness Study for Low-Rise Residential New Construction prepared by Frontier Energy, Inc. and Misti Bruceri & Associated dated July 17, 2019 ("Study")
3. Study Excerpt – Climate Zone Map, Tables 49 and 50-Windsor Climate Zone (Zone 2), Table 6 - Cost Effectiveness

Prepared by:

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Planner III

Reviewed and Recommended by:

Ken MacNab
Town Manager