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Objection to Reach Code Approval - Part 4 of 5 pdf (Town of Windsor)

Letter to California Energy Commission with attachments re Town of Windsor Ordinance No. 2019-338.
Part 4 of 5 .pdf

Additional submitted attachment is included below.

Tom Micheletti
Windsor Jensen Land Company, LLC
256 West MacArthur Street
Sonoma, CA 95476

Mr. Ken MacNab
City Manager
Town of Windsor
9291 Old Redwood Highway
Windsor, California 95492

September 3, 2019

Re: Town Ordinance Adopting All-Electric Reach Code

Dear Mr. MacNab:

As members of the building industry and citizens of the State of California, we are concerned that the Town of Windsor's implementation of an All-Electric code will result in significant negative impacts to the environment and result in added threats to the health and safety of the community.

In addition, the implementation of the code will have substantial negative impacts to the economic viability constructing new homes which will further exacerbate the current housing crisis.

Accordingly, we do not believe this ordinance is exempt under Section 15308 of the CEQA Guidelines and requires further review and study.

Negative Impacts to the Environment and a Threat to Public Safety

People looking to move to Windsor do so with the foremost intention of creating a safe home for their family. Second, they envision turning their homes into a welcoming space to gather and entertain, which in many instances, will include sharing a meal together that, weather permitting, can be prepared on an outdoor grill.

Needless to say, denying new residents of Windsor with the ability to connect their grills to natural gas will not dissuade these families from gathering and cooking outdoors on an open flame. Therefore, as a direct result of the implementation of the all-electric code, families will be forced to turn to less safe and higher CO2 emitting fuel sources such as wood, charcoal and propane.

According to the Environmental Protection Agency, the pounds of CO2 emitted per million British thermal unit of energy (the "CO2 Factor") for natural gas is 53.06 (US Environmental Protection Agency, 2018). By comparison, the CO2 Factor for Wood and Wood Residuals is 93.80 (77% higher than natural gas), and the CO2 factor for Propane Gas is 61.46 (16% higher than natural gas).

Furthermore, Propane grills pose a substantially higher risk of causing home fires. According to the National Fire Protection Association (Ahrens, 2019), annually there are 10,200 home fires caused by grilling of which 7,500 (74%) involve grills fueled by liquid propane gas. By comparison, only 1,000 home

fires (9%) involve grills fueled by natural gas. Propane tanks also pose a safety risk to fire fighters as the tanks can leak or rupture during a wildfire and result in explosions.

In addition to outdoor cooking, many families seek to enjoy outdoor living by including either an outdoor fireplace and/or an outdoor fire pit in their backyard landscaping. With an all-electric code, the environmentally superior option of a natural gas fixture will be eliminated, leaving homeowners with the choice of a wood burning fireplace or firepit. According to the EPA one, wood burning stove can emit as much air pollution as five diesel trucks. The United Nations also recently issued a report that concluded that the two biggest culprits in the developed world in generating black carbon are wood burning and diesel vehicles. Black carbon is a problem because it absorbs heat, which, repeated on a global scale, is a major cause of short-term climate change.

Finally, reliance on a single energy source puts the health and safety of families at risk in the event of a wildfire, earthquake or other natural disaster. PG & E has stated that electricity may be shut off, for several days, when gusty winds and dry conditions, combined with heightened fire risk, are forecasted. Accordingly, families in an all-electric home may be denied access to heat or method to purify water during a natural disaster. In addition, families without power will be reliant on gasoline or diesel powered generates, a significant source of GHG emissions, whose impacts to the environment should also be reviewed.

Practical Impact to the Environment

According to the EPA (US Environmental Protection Agency, 2017), 5.2% of GHG emitted in 2017 by the United States was from the residential sectors of which 89.0% of GHG was emitted from the burning of fossil fuels, primarily for heating. There are 127,590,000 households in the United States, in 2018 permits were issued for 1,328,800 new housing units (or 1.03% of the existing households).

If all new homes built in the Unites States in 2018 were all-electric, the total estimated reduction in the US Annual GHG emission would only be 0.0536%.

However, we must also consider that the vast majority of residential GHG emissions from fossil fuels in the United States is due to the combustion of heating oil and propane in cold weather states. Due to its Mediterranean climate, the use of fossil fuels to heat homes in Windsor is a fraction of that of States with cold winters.

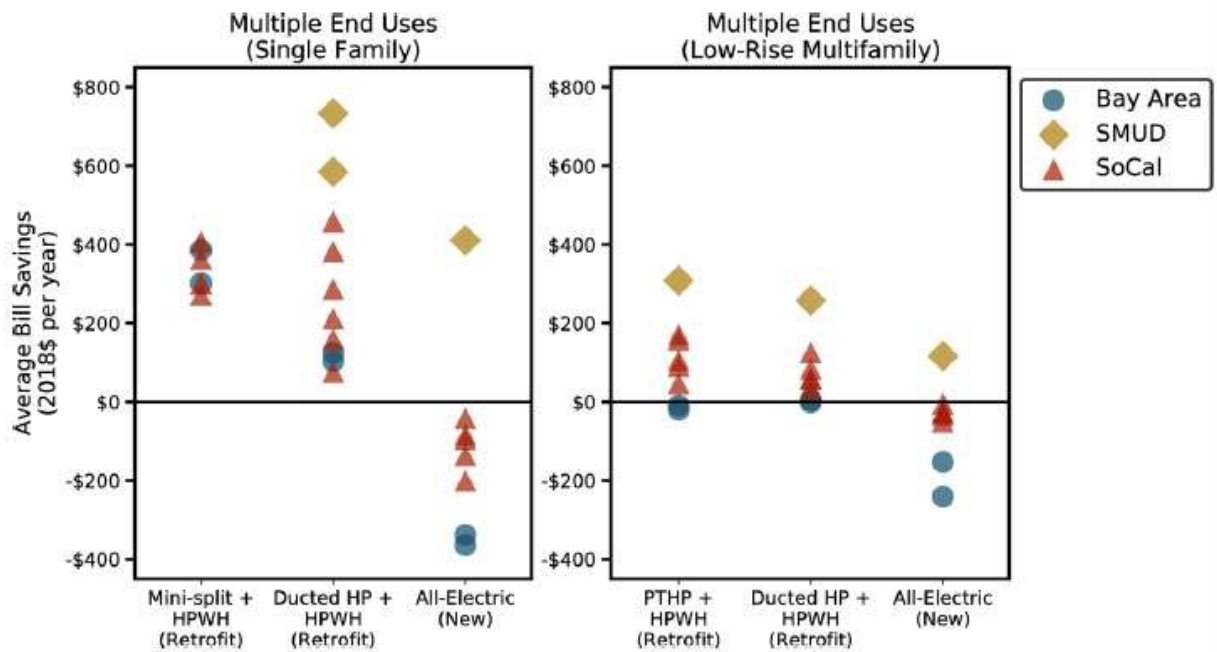
Therefore, the reduction of GHG through the implementation of an all-electric code, even if it were applied to all municipalities in the United States with mild winters, will have an extremely limited positive impact, if any at all, to climate change. After factoring in the unintended consequences, an all-electric code might actually increase greenhouse gas emissions.

Economic Justification: Consumer Bill Impacts and Lifecycle Costs and Savings

Frontier Energy, Inc., the co-author of the “2019 Cost-effectiveness Study: Low-Rise residential New Construction” (the “**July 2019 Study**”), also authored and published a study on their website in April 2019 entitled “Residential Building Electrification in California” (the “**April 2019 Study**”).

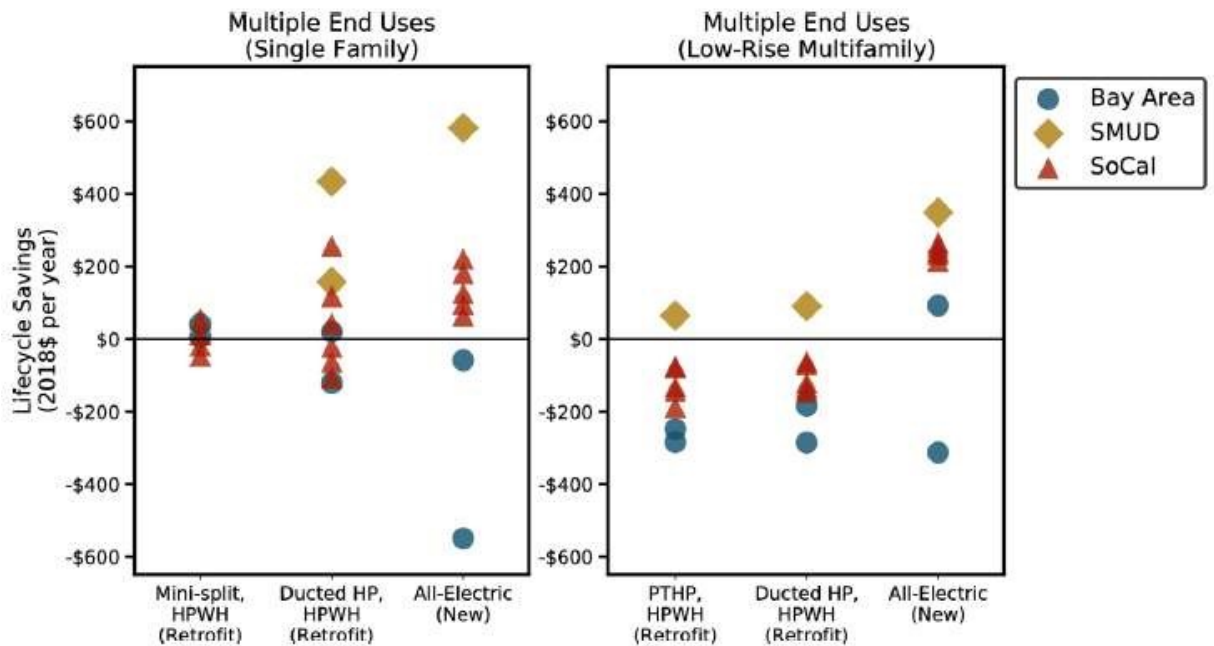
Although, the July 2019 Study indicated a cost savings with respect to consumer bills and lifecycle costs, the April 2019 Study clearly shows an increase in costs for “Bay Area” consumers purchasing new homes (see tables below).

Figure 3-19. Average consumer bill impacts of electrifying multiple end uses, electric rate sensitivity



The multiple data points for each color represent the different climate zones in each area. Colors of the dots show the location of the modeled homes: the San Francisco Bay Area including CZ03 and CZ04 (Bay Area), Sacramento including CZ12 (SMUD), and Southern California including CZ06, CZ09 and CZ10 (SoCal). Savings are relative to gas end uses. For retrofit homes, bill impacts reflect electrifying both HVAC and water heating systems. For new construction homes, bill impacts of electrifying an entire home are shown including electric air source heat pump, heat pump water heater, cookstove and clothes dryer.

Figure 3-28. Lifecycle savings of electrifying multiple end uses, electric rate sensitivity



The multiple data points for each color represent the different climate zones in each area. Colors of the dots show the location of the modeled homes: the San Francisco Bay Area including CZ03 and CZ04 (Bay Area), Sacramento including CZ12 (SMUD), and Southern California including CZ06, CZ09 and CZ10 (SoCal). Electrification of HVAC and water heating only is assumed for retrofit homes, and electrification of all end uses is assumed for new construction homes. Savings are relative to gas alternatives. Single family new construction homes have electric induction stoves and electric heat pump clothes dryers in addition to HVAC heat pumps and HPWHs. LRMF new construction homes have electric resistance cookstoves and electric resistance clothes dryers in addition to HVAC heat pumps and HPWHs. Positive values represent savings in both capital and operating costs throughout the lifetime of all appliances over the gas counterpart; negative values indicate lifecycle costs. Heat pump technologies here are the same as modeled for individual appliances above. The new construction blue dot (Bay Area) is an outlier here because in the gas baseline there is no air conditioning assumed.

Further, Frontier also states in the April 2019 study that:

"PG&E's electric rates are assumed to increase faster than the natural gas rates due to wildfire risk and liability, while SCE's, SMUD and LADWP's rates are assumed to increase at the same pace at the gas utility in their service territory."

However, the July 2019 Study assumed a "Statewide Electric Residential Average Rate" of 2% per year from 2020 to 2025 and 1% thereafter. It appears that Frontier used a lower rate escalation in their July 2019 Study versus their own, publicly available April 2019 Study. Therefore, we believe the positive cost benefits of the implementation of an all-electric code in Windsor are misstated.

Table 24: Real Utility Rate Escalation Rate Assumptions

	Statewide Electric Residential Average Rate (%/year, real)	Natural Gas Residential Core Rate (%/yr escalation, real)		
		PG&E	SoCalGas	SDG&E
2020	2.0%	1.48%	6.37%	5.00%
2021	2.0%	5.69%	4.12%	3.14%
2022	2.0%	1.11%	4.12%	2.94%
2023	2.0%	4.0%	4.0%	4.0%
2024	2.0%	4.0%	4.0%	4.0%
2025	2.0%	4.0%	4.0%	4.0%
2026	1.0%	1.0%	1.0%	1.0%
2027	1.0%	1.0%	1.0%	1.0%
2028	1.0%	1.0%	1.0%	1.0%
2029	1.0%	1.0%	1.0%	1.0%
2030	1.0%	1.0%	1.0%	1.0%
2031	1.0%	1.0%	1.0%	1.0%

Marketability of New Homes

Based on surveys conducted by the California Building Industry Association (California Building Industry Association, 2018):

- less than 10% of voters would choose an all-electric home;
- 80% of voters prefer homes with both electricity and gas, especially for cooking;
- 80% of voters oppose prohibiting the use of gas appliance; and
- 66% of voters oppose eliminating natural gas.

The idea of entertaining and cooking on a gas range or on a grill in the backyard is a critical part of the vision and emotional draw families have when looking to purchase a home. Eliminating a family's option to use gas creates a significant marketing disadvantage against resale homes, accordingly home builders will be substantially disincentivized from building new, for sale homes.

Closing

Climate change is a real threat to our society, and we all need to do our part to combat global warming. However, the solutions to climate change are multi-faceted and complex, and we all have to carefully consider and study whether some of the proposed solutions, such as an all-electric code, will have any long-term effect on climate change or may even have a negative impact on the environment. If the goal is to provide the greatest reduction in greenhouse gas emissions, then there are better ways of achieving

such a goal as it relates to new home development. For example, building a more energy efficient home, with a tighter building envelope, increased insulation, better performing windows/doors and/or ultra-efficient appliances will do far more to reduce greenhouse gas emissions than replacing a tankless natural gas water heater and cooktop with electric versions.

Meanwhile, we cannot ignore the other problems we face as a society such as delivering quality health care to our residents, ending homelessness, and addressing the housing crisis. Implementation of the all-electric code is, at best, a marginal positive impact against climate change, while a substantially negative impediment to delivering new homes to families and keeping home prices affordable for future generations.

Regards,

WINDSOR-JENSEN LAND COMPANY, LLC

A handwritten signature in black ink, reading "Tom Micheletti". The signature is written in a cursive style and is positioned above a horizontal line.

Tom Micheletti, Managing Member

References

Ahrens, M. (2019, April). *Home Grill Fires*. Retrieved from National Fire Protection Association: <https://www.nfpa.org/News-and-Research/Data-research-and-tools/US-Fire-Problem/Home-Grill-Fires>

California Building Industry Association. (2018, January). California Natural Gas Poll.

US Environmental Protection Agency. (2017). *Sources of Greenhouse Gas Emissions*. Retrieved from EAP.GOV: <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions>

US Environmental Protection Agency. (2018, March 9). *Emission Factors for Greenhouse Gas Inventories*. Retrieved from epa.gov: https://www.epa.gov/sites/production/files/2018-03/documents/emission-factors_mar_2018_0.pdf