

November 5, 2019

Dear Members of the City Council:

Mayor Marilyn Ezzy Ashcraft
Vice Mayor John Knox White
Councilmember Tony Daysog
Councilmember Jim Oddie
Councilmember Malia Vella

RE: Support for Limiting Natural Gas Infrastructure for New Residential Construction on City Owned Property – Item 5-H on the November 5, 2019 Regular Meeting of the City Council

On behalf of Community Action for a Sustainable Alameda (CASA) we are writing to express our support for: Limiting Natural Gas Infrastructure for New Residential Construction on City Owned Property.

Beginning in January 2020, energy purchased by Alameda Municipal Power will be 100% non-carbon, providing Alameda with the opportunity to significantly reduce greenhouse gas emissions. Natural gas used in buildings accounts for 49% of Alameda's greenhouse gas emissions. Converting buildings from natural gas to clean electricity is a key strategy included in the City's Climate Action and Resiliency Plan.

The Plan calls for future consideration of "fuel switching" in existing buildings and electrification of new residential construction citywide. An important issue to address in the citywide ordinance will be the need to ensure that electric furnaces, water heaters and appliances provided in new developments are energy efficient. Wasting energy through installation of inefficient equipment and appliances will undermine the benefits of converting to all electric buildings.

Limiting natural gas use in new residential development on city owned property is a good first step in moving forward to reduce the impacts of natural gas citywide. We support passage of the resolution before you tonight.

Sincerely,



Ruth Abbe, Steering Committee
Community Action for a Sustainable Alameda



Serving Alameda, Contra Costa, Marin and San Francisco counties

November 4, 2019

Councilmember Jim Oddie
Councilmember Tony Daysog
Mayor Marilyn Ezzy Ashcraft
Councilmember Malia Vella
Vice Mayor John Knox White

City of Alameda
2263 Santa Clara Ave,
Alameda, CA 94501

RE: Sierra Club supports agenda item 5-H: Adoption Resolution Limiting Natural Gas Infrastructure for New Residential Construction on City Owned Property

Dear Councilmembers,

The Sierra Club submits this letter in support of the proposed resolution to limit natural gas infrastructure for new residential construction on city owned property.

We support the resolution because it is an appropriate and timely response, among other necessary measures, to mitigate the climate, health, safety, and housing affordability crisis in Alameda, and across the state.

First, by adopting this resolution, the City of Alameda will join a wave of cities and counties across California in declaring that fossil fuels have no place in our homes, commercial buildings, or communities, and that we have a right to clean, safe, and affordable energy. Alameda will not be alone in deciding to phase out gas in new construction. Currently, twelve cities and counties in the Bay Area, Central Valley, Central Coast, and Southern California are pursuing reach codes and gas bans to shift to all-electric new construction. Currently, 5% of Californians live in cities that have restricted gas expansion and/or are encouraging all-electric buildings. By the end of 2020, we estimate these local policies will reach nearly 40% of Californians. As we have witnessed with rooftop solar and zero-net energy policy, city and county leadership is key to raising the ambition of state policymakers. Change starts at the local level, and climate leadership is desperately needed if we are to reduce emissions to comply with climate science.

The resolution will improve air quality and public health for Alameda residents. All-electric new construction will immediately improve indoor air quality for Alameda residents. On average, Californians spend 68 percent of their time indoors, making indoor air quality a key determinant of human health.¹ The combustion of gas inside our homes produces harmful indoor air pollution, specifically nitrogen dioxide,

¹ Klepeis, N. E.; Nelson, W. C.; Ott, W. R.; Robinson, J. P.; Tsang, A. M.; Switzer, P.; Behar, J. V.; Hern, S. C.; Engelmann, W. H. The National Human Activity Pattern Survey (NHAPS): a resource for assessing exposure to environmental pollutants. *J. Expo. Anal. Environ. Epidemiol.* 2001, 11 (3), 231–252.

carbon monoxide, nitric oxide, formaldehyde, acetaldehyde, and ultrafine particles.² These odorless and undetectable gas combustion pollutants can cause respiratory diseases, as well as more serious conditions, including death.³ Lawrence Berkeley National Laboratory recently found that air pollution levels in the 35-70 percent of homes with gas stoves exceed EPA's definition of clean air, i.e. air pollution levels indoors in these homes would be illegal if found outdoors.⁴ A recent study found that gas stoves may be responsible for up to 12 percent of childhood asthma cases.⁵

All-electric new construction will also be key to mitigating outdoor air pollution in Alameda. Hazardous air pollution is a particularly acute issue for low-income communities and people of color, who are exposed to higher incidences of particulate matter (PM 2.5) and other harmful pollutants.⁶ While most think of trucks, power plants and industry as the major culprits of air pollution, buildings have for too long gotten a free pass. Gas combustion appliances lack modern-day pollution controls and are a major source of air pollution, particularly in the winter from gas heating. Gas appliances in residential and commercial produce nearly nine times more nitrogen oxide (NOx) emissions than gas power plants.⁷ Nitrogen oxide is a precursor to ozone and PM 2.5, two pollutants that cause asthma, lung cancer, respiratory diseases, and premature death.⁸ All-electric new construction is an essential step to improving air quality in Alameda and the greater Bay Area.

The resolution will lower the cost of new construction and support affordable housing. All-electric homes can be cheaper to build⁹ than gas-heated buildings — and they can lower monthly utility bills for Alameda residents and businesses.¹⁰ Ensuring all new construction is built without gas hookups will help Alameda developers build more quickly and affordably as there will be no need for new costly gas infrastructure. A recent analysis by the Statewide Utility Codes and Standards Team found that building all-electric reduced construction costs on average \$5,000 for single-family homes and over \$2,000 per unit in a multi-family building.

Building all-electric will also save costs for Alameda residents and businesses in the long-term as we transition to a carbon-neutral economy. Gas distribution pipeline extensions to new homes are expected to become stranded assets¹¹ well before the end of their useful life as more buildings electrify over the coming years. Stopping investments in new gas infrastructure is a fiscally prudent strategy to avoid saddling ratepayers and taxpayers with the costs of maintaining and ultimately decommissioning stranded gas

2 See, Jennifer Logue et al., "Pollutant Exposures from Natural Gas Cooking Burners: A Simulation-Based Assessment for Southern California" *Environmental Health Perspectives* Vol. 122 No. 1 pp. 43-50, (2013); Victoria Klug and Brett Singer, "Cooking Appliance Use in California Homes—Data Collected from a Web-based Survey," Lawrence Berkeley National Laboratory (August 2011); John Manuel, "A Healthy Home Environment?" *Environmental Health Perspectives*, Vol. 107, No. 7 1999, pp. 352–357; Nasim Mullen et al., "Impact of Natural Gas Appliances on Pollutant Levels in California Homes" Lawrence Berkeley National Laboratory, 2012.

3 California Air Resources Board, "Combustion Pollutants" (reviewed Jan. 19, 2017). Available at <https://www.arb.ca.gov/research/indoor/combustion.htm>

4 "Pollution in the Home: Kitchens Can Produce Hazardous Levels of Indoor Pollutants" <https://newscenter.lbl.gov/2013/07/23/kitchens-can-produce-hazardous-levels-of-indoor-pollutants/>

5 "Cooking with gas, damp housing may cause childhood asthma: study" <https://www.brisbanetimes.com.au/national/queensland/cooking-with-gas-damp-housing-may-cause-childhood-asthma-study-20180415-p4-z9pz.html>

6 "Inequity in consumption of goods and services adds to racial-ethnic disparities in air pollution exposure" <https://www.pnas.org/content/116/13/6001>

7 "Emission Inventory Data" <https://www.arb.ca.gov/ei/emissiondata.htm>

8 "Health Effects of Ozone and Particle Pollution" <https://www.lung.org/our-initiatives/healthy-air/sota/health-risks/>

9 "Decarbonization of Heating Energy Use in California Buildings" <https://www.synapse-energy.com/sites/default/files/Decarbonization-Heating-CA-Buildings-17-092-1.pdf>

10 "The Economics of Electrifying Buildings" <https://rmi.org/insight/the-economics-of-electrifying-buildings/>

11 "The 'Rush To Gas' Will Strand Billions As Renewables Get Cheaper, Study Says" <https://www.forbes.com/sites/jeffmcmahon/2018/05/21/the-rush-to-gas-will-cost-billions-in-stranded-assets-as-renewables-get-cheaper-institute-says/#52a7065c3a0d>

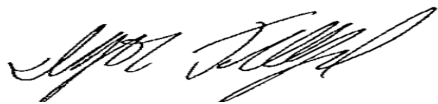
infrastructure.

The resolution will make Alameda's homes and businesses safer and more resilient in the face of climate change. California is experiencing an increasing occurrence of extreme heat waves, with practically each summer breaking previously held record temperatures.¹² Most Alameda residents, particularly low-income families, do not have air conditioning and are not prepared to adapt to these heat waves, posing new health and safety risks. Air conditioning is an important bonus from replacing gas furnaces with electric heat pump space heaters, as the heat pumps can operate in reverse and provide high efficiency cooling when needed. Electrification offers greater comfort, safety, and climate resiliency when temperatures peak.

Lastly, gas pipelines are vulnerable to methane leakage, over-pressurization, and earthquakes. Aliso Canyon (2015/16), Bakersfield (2015), Carmel (2014), San Bruno (2010), and Rancho Cordova (2008), and the recent fires in North Carolina, Massachusetts, and San Francisco are but a few of the important and unfortunate reminders of the gas system's inherent risks. Given the earthquake faults in Alameda's proximity, fires exacerbated by gas pipelines after earthquakes are of significant concern. Communities with gas pipelines in earthquake-prone areas of Alameda face increased risks of fires since vibration and changes in pipeline tension during seismic events can result in leaking gas that fuels fires. Aging pipelines and associated equipment, and inflexible pipeline materials are vulnerable to shifts in the earth and buildings that put additional stress on pipelines, causing cracks and methane leaks.

The prohibition of new Natural Gas Infrastructure is a crucial part of Alameda's future. By mandating gas-free construction for new buildings, Alameda will protect the health of its residents and the affordability of its housing, while implementing the critical climate protections necessary for dramatic greenhouse gas reductions.

Sincerely,

A handwritten signature in black ink, appearing to read 'Igor Tregub', written in a cursive style.

Igor Tregub

¹² "2017 hottest summer in California history" <http://www.climatesignals.org/headlines/2017-hottest-summer-california-history>