December 16, 2020

Pasadena Planning Commission
c/o Tim Molinar (tmolinar@cityofpasadena.net)
175 N. Garfield Ave.
Pasadena, CA 91101

RE: Planned Development #37 (PLN2018-00408) 740-790 E. Green Street, 118 S. Oak Knoll Avenue and 111 S. Hudson Avenue

As a place-based organization dedicated to realizing a more sustainable, equitable, and livable San Gabriel Valley, ActiveSGV is pleased to submit this comment in support of the proposed all-electric, mixed-use, infill development in the heart of Pasadena's walkable, transit-friendly downtown.

In 2019 ActiveSGV supported UCLA and the Energy Coalition in conducting a study of indoor air quality within older homes and apartments in the San Gabriel Valley. Homes were outfitted with both indoor and outdoor air quality monitors, for a period of two weeks in Summer and Winter 2019 (4 weeks total). The study found that in homes with gas appliances air pollution (PM2.5 and NO2) inside homes was commonly worse than outdoors, particularly during the colder months of the year and within homes that used gas stoves and ovens for preparing food.[1]

The health impacts of indoor air pollution are devastating. Gas stoves and furnaces produce a range of pollutants, including particulate matter (PM), nitrogen dioxide (NO2), carbon monoxide (CO), and formaldehyde. Over the past four decades public health researchers have compiled a growing body of evidence linking the use of such gas appliances, especially for cooking, with increased risk of negative health outcomes, including asthma and other respiratory illnesses, cognitive impairments, and some cancers.

A 2013 meta-analysis of 41 studies found that children living in homes with gas stoves had a 42 percent higher risk of experiencing asthma symptoms, and a 24 percent increase in the risk of being diagnosed with asthma over their lifetime.[2] More recently, a 2018 study from the University of Queensland found that more than 12 percent of the total burden of childhood asthma in Australia was attributable to the use of gas stoves, which 38 percent of households rely on for cooking.[3]

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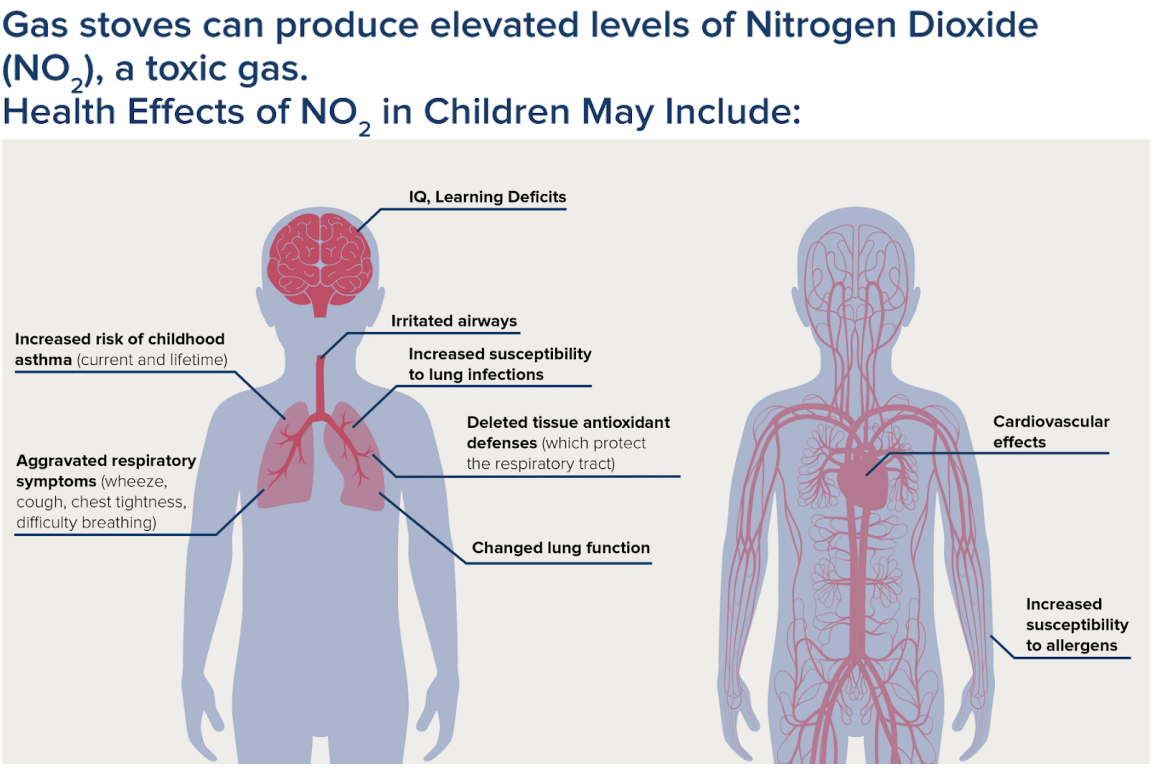
[1] Healthy Home Study (2019), www.activesgv.org/healthy-home-study.html
[2] International Journal of Epidemiology, Volume 42, Issue 6, December 2013, Pages 1724–1737, https://doi.org/10.1093/ije/dyt150
[3] Knibbs, Luke D., Woldeyohannes, Solomon, Marks, Guy B., and Cowie, Christine T. (2018). *Damp housing, gas stoves, and the burden of childhood asthma in Australia. Medical Journal of Australia 208* (7) 299-302. https://doi.org/10.5694/mja17.00469

In 2020 Harvard researchers also found that the risk of dying from COVID-19 goes up 8% for each increase of 1 µg/m3 of PM2.5.[4]



Source: Rocky Mountain Institute - https://rmi.org/insight/gas-stoves-pollution-health

The growing evidence of the dangers of gas stoves prompted the New England Journal of Medicine to publish an editorial recommending that "new gas appliances be **removed from the market**."[5]

The impacts of poor indoor air quality are further compounded by declining outdoor air quality in the region. After decades of steady improvements, air quality in the South Coast Air Basin has been on the decline over the past decade; climate change is expected to further exacerbate air pollution. Currently, the San Gabriel Valley averages 32 days per year where daytime temperatures exceed 95°F. According to UCLA researchers, this number could skyrocket to an average of 74 days per year by 2050, and an average of 117 days annually -- *a full five months above 95°F* -- by 2100. A hotter future with less rain will make it harder to clean our air and protect public health inside and outside our homes.

The economic costs of long-term, chronic illnesses such as asthma associated with air pollution is billions in healthcare fees and diminished productivity to LA County.[6] These costs directly impact working families who have to bear the associated burdens of juggling additional doctor's visits, medication, missed school and work days. Lower-income families who are more likely to reside in

[4] Wu, X., Nethery, R. C., Sabath, M. B., Braun, D. and Dominici, F., 2020. Air pollution and COVID-19 mortality in the United States: Strengths and limitations of an ecological regression analysis. *Science advances,* 6(45), p.eabd4049. https://projects.iq.harvard.edu/covid-pm

[5] Philip J. Landrigan, M.D., Howard Frumkin, M.D., Dr.P.H., and Brita E. Lundberg, M.D.,The False Promise of Natural Gas, New England Journal of Medicine, www.nejm.org/doi/pdf/10.1056/NEJMp1913663?articleTools=true

[6] Zhu, Yifang et al, Effects of Residential Gas Appliances on Indoor and Outdoor Air Quality and Public Health in California, UCLA Fielding School of Public Health, April 2020, https://ucla.app.box.com/s/xyzt8jc1ixnetiv0269qe704wu0ihif7

older units and homes with leaky gas appliances (and the inability to upgrade them) are at particular risk and least able to shoulder the associated costs. This impacts families and the agencies and public services they rely on, including local schools left to accommodate more asthmatic children.

Building Electrification

As of December 2020, 40 communities across California, including the cities of Ojai and Santa Monica, have adopted an all-electric building code for new construction, recognizing the benefits for the climate, air quality, public health, public safety, and housing affordability.

Electrification of new buildings is a cost-effective and socially equitable way cities around the world are reducing GHG emissions and protecting public health. In communities that have yet to adopt a "REACH" code, ActiveSGV applauds housing developers who are willing to do the right thing for public health and the environment by voluntarily making their buildings all-electric.

This is particularly important in the face of concerted industry obfuscation about the science and facts of gas in homes. Over the past decade plus Sempra / SoCalGas have invested significant resources to confuse the public and policymakers. These tactics have received increasing coverage by the press in recent years, highlighting industry misuse of ratepayer funds[7] and efforts to convince local City Councils to formally support "balanced energy solutions"[8]. In 2021 Sempra / SoCalGas is expected to face a considerable fine from the California Energy Commission -- potentially on the order of $380 million[9] -- for charging ratepayers, rather than shareholders, for some of its contributions to gas industry advocacy groups that lobby to preserve and promote the use of methane gas, and forestall climate and energy efficiency policies.

SoCalGas shouldn't be using customer money to undermine state climate goals, critics say

Tera Lecuona of Porter Ranch holds a protest sign during a hearing in Granada Hills over a methane leak at Southern California Gas Co.'s Aliso Canyon Storage Facility. (Richard Vogel / Associated Press)

[7] Roth, Sammy, "SoCalGas shouldn't be using customer money to undermine state climate goals, critics say," *Los Angeles Times*, November 22, 2019, www.latimes.com/environment/story/2019-11-22/socalgas-climate-change-customer-funds

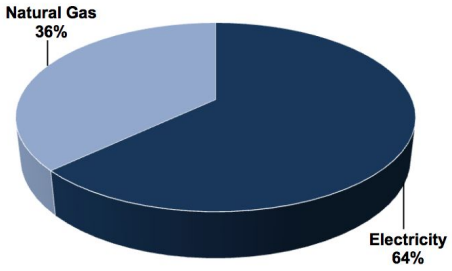
[8] Roth, Sammy, "California ditched coal. The gas company is worried it's next," *Los Angeles Times*, October 22, 2019, www.latimes.com/environment/story/2019-10-22/southern-california-gas-climate-change

[9] Chediak, Mark, "California Watchdog Wants SoCalGas to Pay Bigger Lobby Fine", *Bloomberg*, December 11, 2020, www.bloomberg.com/news/articles/2020-12-12/california-watchdog-wants-socalgas-to-pay-bigger-lobbying-fine

Pasadena Climate Action Plan (2018)

In March 2018 the City of Pasadena adopted a local Climate Action Plan, which outlined primary sources of GHG emissions in the community and strategies to reduce our reliance on gas and fossil fuels. As the City moves forward with "greening" its sources of electricity to 100% renewable energy, per the requirements of SB 100, it will become increasingly important that new construction be all-electric. Per the City's baseline data, gas accounts for a considerable 36% of emissions within Pasadena residences.[10] Encouraging and supporting new projects to voluntarily reduce the use of gas in their design will support implementation of the City's adopted plan and provide healthier, more sustainable homes to future residents.

Figure 4.4 Residential Emissions by Source



Source: Pasadena GHG Inventory (2009)[11]

Mass Timber - An Opportunity to Further Reduce Climate Impact

A further opportunity for the developer -- and the City of Pasadena -- to reduce the inherent impacts associated with the proposed and future projects would be to adopt mass timber construction techniques. Mass timber construction is a carbon-removal and sequestration technique that utilizes specialized wood products to construct new buildings, including high-rise buildings. Products such as cross-laminated timber (CLT), laminated veneer lumber (LVL), and glue laminated timber ("glulam") are generally utilized to create wood panels and beams that can replace concrete, steel, and masonry as building materials. Unlike steel and concrete -- the production of which produces a significant amount of hard to abate GHG emissions -- wood stores carbon dioxide (CO2) captured from the atmosphere. The key is procuring wood that has been sustainably farmed or harvested. Other benefits of this increasingly popular building technology include:

- **Cost** - generally a more cost-effective (or at least cost-neutral) form of construction for mid- and high-rise buildings due in part to schedule savings -- prefabricated panels are faster to install and produce less site waste.
- **Aesthetics and Value** - warmth of wood provides immediate benefits to the interior environment and design, especially for mixed-use / residential projects.
- **Safety** - fire-resistant and more earthquake safe than less resilient materials such as concrete.

[10] City of Pasadena Greenhouse Gas Emissions Inventory, pg 27, www.cityofpasadena.net/wp-content/uploads/sites/30/2009-GHG-Emissions-Inventory.pdf?v=1608156978487

[11] Ibid, pg 27

5-story, Mass Timber Building in Spokane, Washington - Image courtesy of New York Times: (www.nytimes.com/2020/09/22/business/mass-timber-wood-buildings.html

As a community-based organization committed to improving the health and well-being of residents of San Gabriel Valley, ActiveSGV strongly supports sustainable infill development that utilizes evidence-based public health strategies and places new homes and buildings near transit, jobs, and essential services where people can easily accomplish short trips by foot or transit. As the project moves towards final design and construction, we encourage the project team and City to embrace new techniques and best practices to realize a project that will serve as a model for more sustainable development in the City of Pasadena and beyond.

If you have any questions regarding our support for healthier housing, please contact me at 626-602-5064 or via email at david@activeSGV.org.

Thank you for your time and consideration,

David Diaz, MPH
Executive Director

CA Communities with REACH Codes[12]

As of December 2020, forty CA cities (listed with the most recent city first) have adopted building codes to reduce their reliance on gas.

40. Oakland- Requires all newly constructed buildings to be all-electric.
39. Ojai- Requires all-electric new construction for buildings with some exceptions.
38. Sunnyvale- Requires newly constructed residential and commercial buildings to be all-electric with an exemption for gas fuel cells. Restaurants may apply for an exemption.
37. Millbrae- Requires all-electric residential and commercial buildings with exemptions for laboratories, restaurants and gas cooking/fireplaces.
36. Los Altos- Requires all newly constructed buildings to be all-electric with exemptions for gas cooking/fireplaces in residential buildings with 9 units or less, laboratories and restaurants.
35. East Palo Alto- Requires that new residential and commercial buildings be all-electric, with exceptions for affordable housing, and commercial kitchens.
34. Redwood City- Adopted a reach code requiring all-electric new construction for commercial and residential buildings, with exceptions for multiple specific building types such as laboratories.
33. Piedmont- Promotes all-electric new construction for low-rise residential buildings and incentives electrification for renovations of low-rise residences.
32. San Anselmo- Promotes all electric housing by requiring higher energy efficiency requirements for mixed fuel projects and prewiring for all electric kitchens.
31. Burlingame- Requires all electric new construction for projects with exemptions for single-family and commercial projects for gas cooking and fireplaces.
30. Santa Cruz- Requires all electric new construction with exemptions for projects that are deemed to be in the public interest and for restaurant cooking.
29. Hayward- All new residential buildings are required to be all-electric and nonresidential and high-rise residential buildings are electric preferred. Mixed-fuel buildings must install solar panels, and the energy budget must be 10 percent better than code.
28. Richmond- Requires new residential buildings over three stories to have prewiring for electric readiness and to support all-electric clothes dryers and space and water heating. Allows gas to power stoves and fireplaces. Requires all buildings under three stories to build all-electric and install a minimum amount of on-site solar based on square footage.
27. San Mateo County- Requires that no gas or propane plumbing is installed in new buildings, and that electricity be used as the energy source for water and space heating and cooking and clothes drying appliances.
26. Campbell- Requires all-electric space and water heating in new residential buildings, accessory dwelling units, and major remodels.
25. San Francisco recently expanded on their building electrification ordinance, now requiring that all new construction be all electric starting June 1st 2021
24. Los Altos Hills- Requires electric space and water heating in new low-rise residential buildings.
23. Cupertino- Requires all buildings, including accessory dwelling units, to be all-electric. Also requires outdoor pools, spas, and barbeques to be included within the definition of an all-electric building.
22. Los Gatos- Requires all newly constructed single-family and low-rise multifamily buildings to be all-electric.
21. Healdsburg- Requires electrification for most appliances but grants an exemption for gas cooking and fireplaces.

[12] Sierra Club, "CA Cities Lead the Way to a Gas Free Future." Accessed on 12/10/2020: www.sierraclub.org/articles/2020/12/californias-cities-lead-way-gas-free-future

20. Brisbane- Requires all newly constructed single-family homes and low-rise multifamily buildings to be all-electric. Allows exemptions for cooking appliances but requires pre-wiring for electric readiness.
16. Santa Rosa- Requires all newly constructed low-rise residential buildings to be all-electric.
15. Milpitas- Limits gas infrastructure for newly constructed buildings on city-owned property.
14. Alameda- Limits gas infrastructure for new residential construction on city-owned property.
13. Palo Alto- Requires all newly constructed low-rise residential buildings to be all-electric, plus higher energy-efficiency standards and electrification readiness in mixed-fuel non-residential buildings. Will revisit all-electric requirement for non-residential new construction in 2021.
12. Morgan Hill- Phases out gas hookups in all newly constructed residential buildings and most nonresidential buildings.
11. Mountain View- Requires electrification for new residential and nonresidential buildings. Does not exempt gas stoves, fireplaces, or firepits in residential buildings.
10. Marin County- Offered three compliance pathways for newly constructed buildings in unincorporated buildings: one for all-electric construction, one for limited mixed-fuel construction that has fewer efficiency requirements because it uses less gas but allows gas stoves, and one for mixed-fuel construction that requires the most strict compliance with Cal Green Tier 1 and electrification-readiness requirements.
9. Davis- Requires higher energy-efficiency standards and electrification readiness in mixed-fuel buildings.
8. San Jose- San Jose passed a natural gas prohibition for all new building types, with limited temporary exemptions, becoming the largest city in the nation to do so.
7. Menlo Park- Requires all-electric new construction for residential buildings as well as new nonresidential buildings but allows an exemption for cooking appliances in low-rise residential buildings.
6. Santa Monica- Requires additional energy-efficiency measures for new residential and nonresidential buildings that use gas.
5. San Mateo- Requires new residential buildings and buildings with office-use to be all-electric. Adds additional requirements for rooftop solar and electric vehicle charging.
4. San Luis Obispo- Requires additional energy efficiency and electrification readiness for all newly constructed buildings and adds a small fee for new mixed-fuel buildings based on expected gas consumption.
3. Windsor- Mandates all-electric new construction for low-rise residential buildings, including single-family homes, multifamily homes with fewer than four stories, and detached accessory dwelling units (but attached ones are exempt).
2. Berkeley- Phases out gas hookups in all newly constructed residential buildings and most nonresidential buildings.
1.Carlsbad- Requires heat pump water heaters or solar thermal water heating in new residential buildings that have fewer than four stories.