

Staff Response to Environmental Stewardship Advisory Board Electrification Petition

June 8, 2022

Petition

- Petition received and referred to staff in January
- Petition asks Council to adopt specific policies aimed at helping Chapel Hill transition to all-electric buildings
- As the electricity grid gets cleaner, so do our buildings (and vehicles)

Petition to the Chapel Hill Town Council on Increasing the Electrification of Chapel Hill
Environmental Stewardship Advisory Board
Offered by Tom Henkel
December 14, 2021

Whereas: The scientific consensus is that climate change is upon us caused primarily by the burning of fossil fuels; and

Whereas: The Town has a Climate Action and Response Plan to curb greenhouse gas emissions within Chapel Hill; and

Whereas: The carbon intensity of the electric grid has decreased to a point that the replacement of natural gas and other fossil fuel heating with various electric heating technologies will reduce GHG emissions; and

Whereas: Research into the association between residential gas stoves and childhood asthma found children in homes with gas stoves have a 42% increased risk of experiencing asthma symptoms (current asthma), a 24% increased risk of ever being diagnosed with asthma by a doctor (lifetime asthma) and an overall 32% increased risk of both current and lifetime asthma; and

Whereas: The Electric Power Research Institute (EPRI) found in an updated 2018 report comparing the cost of building an all-electric single-family home to a gas-fired home in seven cities around the US that all-electric homes saved money and reduced carbon pollution in every case, and the savings in running gas lines can be as much as \$24,000 per home; and

Whereas: the California Energy Commission on August 11, 2021, adopted energy efficiency standards for new construction and renovations, the country's first statewide building code that incentivizes all-electric construction; and

Whereas: Other states, notably Colorado, are embracing electrification, and many more are likely to take notice and pursue similar standards; and

Whereas: President Biden signed an executive order on August 5, 2021, that sets a target that half of all vehicles sold in the US be electric by 2030; and

Whereas: 60 California cities including Berkeley, Ojai, San Francisco, and San Jose have, or are considering, banning natural gas in future buildings based on health and safety reasons; and

Whereas: Chapel Hill currently requires that all new Town-owned construction and renovations shall meet the AIA-2030 energy performance standards and that all new private construction is incentivized to have energy performance 20% less than the current ASHRAE standard; and

Staff Recommendation

That the Council...

- Consider the options presented in the staff report
- Provide staff with additional direction, as appropriate

Draft



SUSTAINABILITY

Climate Action Plan



Mitigation ▼ emissions



ft
rc
o

Resiliency ▼ recovery time

Climate Action Goals

50%

Emissions reduction by
2030

80%

Clean, renewable
energy by 2030

Net-zero

Emissions reduction by
2050

100%

Clean, renewable
energy by 2050

Draft

Electrification Goals and Targets

40%

New buildings all-electric by 2025

7,500

Existing buildings converted to all-electric by 2030

100%

New buildings all-electric by 2030

15,000

Existing buildings converted to all-electric by 2050

Draft

Recommendation Details

- 3 tentative policy options for further evaluation
- Specific questions designed to help staff and Council evaluate the proposed policy
- Additional information about:
 - benefits of electrification
 - Town's legal authority to regulate energy sources
 - green hydrogen as a replacement for natural gas
 - challenges and emerging solutions for electrification

Draft

Staff Recommendation

That the Council...

- Consider the options presented in the staff report
- Provide staff with additional direction, as appropriate

Draft

Draft