

Howard County Councilmembers:

Liz Walsh

Opel Jones

Christiana Rigby

David Yungmann

Deb Jung

Re: Small change needed to "Clean New Buildings Climate Act" (CB5-2023)

Dear Councilmembers:

The Alliance for Green Heat (AGH), a non-profit based out of Takoma Park, MD focused on advocating for green heating strategies, urges you to support the Clean New Buildings Climate Act (CB5-2023). Howard County has the opportunity to play a role in progressing the state towards a decarbonized future in the residential energy sector.

We also urge you to add language that would explicitly restrict installation of built-in electrical resistance heating as a primary source of heat. Built-in electrical resistance heating is not low carbon, not energy efficient, and could possibly strap low-to-moderate income (LMI) households with a higher energy cost burden. Electric resistance warm air furnaces or baseboard heat is the cheapest form of central heating to install, and the most expensive to run. Thus, developers of low-income housing use it to cut down construction costs, and pass the operational costs onto the tenants. This is an important equity concern as the energy transition moves forward.

We see that you have some language to promote lower carbon heating but it does not go far enough. The section, *(D) Considerations*, does ask to “the maximum degree possible” that energy efficiency and greenhouse gas emissions be prioritized when installing appliances, particularly in affordable housing, but this is not a hard enough line to keep developers in check. The promotion of low carbon heating, like heat pumps, and the restriction of electrical resistance heating must be made explicit. In 2022, Montgomery County failed to include these considerations in their Bill 13-22 “Comprehensive Building Decarbonization.” According to 2021 Census data, electricity is Howard County’s top heating fuel with over 59,000 residents relying on electric sources.¹ This makes it all the more important to guide users who are used to electricity towards the adoption of heat pumps when planning new homes.

The country is heading in the right direction, with heat pumps outpacing gas furnace sales in 2022², but we need all the policy language help we can get to keep heat pumps at the top of the list for new installations. Studies show that built-in electric resistance heating options should ideally only be used as auxiliary heating sources combined with heat pumps in order to deliver lower emissions and improve energy efficiency³. But now, colder climate heat pumps should not need any electric resistance back-up. There should be intense scrutiny on energy efficient heating appliance options in new builds and heat

¹ American Community Survey. 2021. B25040 House Heating Fuel.

[https://data.census.gov/table?q=Howard+County,+Maryland&t=Heating+and+Air+Conditioning+\(HVAC\)&g=050000US24027&tid=ACSDT1Y2021.B25040](https://data.census.gov/table?q=Howard+County,+Maryland&t=Heating+and+Air+Conditioning+(HVAC)&g=050000US24027&tid=ACSDT1Y2021.B25040).

² Olano, M.V. 2023. “Chart: Americans Bought More Heat Pumps Than Gas Furnaces Last Year.” Canary Media. https://www.canarymedia.com/articles/heat-pumps/chart-americans-bought-more-heat-pumps-than-gas-furnaces-last-year?utm_medium=email.

³ Pistochini, T., Dichter, M., Chakraborty, S., Dichter, N., & Aboud, A. (2022). Greenhouse gas emission forecasts for electrification of space heating in residential homes in the US. *Energy Policy*, 163, 112813. <https://doi.org/10.1016/j.enpol.2022.112813>.

pumps consistently deliver desirable results. (The coefficient of performance (COP), the ratio pertaining to useful heating/cooling to energy required, of heat pumps outside of the laboratory setting ranges from 1.4 to 3.5 or higher.⁴ This is compared to built-in electrical resistance heating's COP 1.0.)

We also ask that you keep wood and pellet stoves in mind as a viable bridge or backup fuel for households in Hartford County. For many people, a wood stove back-up provides the security to make the transition to heat pumps. If electricity does go out, they have a reliable, renewable, and locally sourced form of backup heat available. For perspective, in the last two weeks (February 8th - February 22nd), Howard County had a total of 6,839 customers that experienced a power outage.⁵ While we have hope that the energy grid will expand enough to support broad electrification plans,⁶ many are apprehensive that the energy grid will go through some growing pains, especially with the added weight of a changing climate.⁷ This is especially important for rural and low and middle income (LMI) households. The state of Maryland started a grant program for cleaner, higher efficiency wood and pellet stoves⁸ partially as an equity measure, to support a renewable technology favored by lower income rural families, and not just provide grants for solar and geothermal systems which are often out of reach for lower income families.

Lastly, we are a member of the Hearth, Patio & Barbecue Association (HPBA), which also includes manufacturers, retailers and advocates of renewable wood and pellet heating. Many of us support electrification policies and restrictions on new gas hook ups. HPBA also represents manufacturers of gas stoves, fireplaces and barbecues and that part of the association is threatened by restrictions on gas. Thus, the official position of HPBA is to fight restrictions on gas hook-ups, as in all large organizations, there is a diversity of opinion among rank and file members.

Supporting the Clean New Buildings Climate Act (CB5-2023) is a smart move for Howard County residents and a welcomed action that joins many others across the country to decarbonize residential heating.



John Ackerly, AGH President



Darian Dyer, AGH Policy Analyst

⁴ Carroll, P., Chesser, M., Lyons, P. (2020). Air Source Heat Pumps field studies: A systematic literature review. Renewable and Sustainable Energy Reviews, 134, 110275. <https://doi.org/10.1016/j.rser.2020.110275>.

⁵ Maryland Power Outages. 2023. <https://mdem.maryland.gov/Pages/Power-Outages-Data.aspx>.

⁶ "Electrification Won't Break The Grid, It Will Make It Smarter." 2022. Rewiring America. <https://www.rewiringamerica.org/newsletter/electrification-wont-break-the-grid-it-will-make-it-smarter>.

⁷ Marsh, R. 2022. "Energy Experts Sound Alarm About US Electric Grid: 'Not Designed to Withstand the Impacts of Climate Change.'" CNN. <https://www.cnn.com/2022/05/31/us/power-outages-electric-grid-climate-change/index.html>.

⁸ Maryland Energy Administration. "FY23 Clean Burning Wood and Pellet Stove Rebate Program." <https://energy.maryland.gov/residential/Pages/incentives/woodstoves.aspx>.