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February 23, 2022

Sen. Kumar P. Barve, Chair  
House Environment & Transportation Committee  
House Office Building, Room 251  
6 Bladen St., Annapolis, MD 21401

Re: **SUPPORT** – HB831 – Reducing Greenhouse Gas Emissions – Commercial and Residential Buildings

Dear Chairman Barve and Members of the Committee:

On behalf of the Green & Healthy Homes Initiative (GHHI), I offer this testimony in support of HB831. GHHI is a member of Energy Efficient Maryland, the Maryland Public Health Association Advisory Committee, and the New York State Climate Action Council Housing and Energy Efficiency Advisory Panel. In addition, I represent GHHI as a member of the EPA Children's Health Protection Advisory Committee and the Maryland Lead Poisoning Prevention Commission. GHHI is dedicated to addressing the social determinants of health and the advancement of racial and health equity through the creation of healthy, safe and energy efficient homes. GHHI has been at the frontline of holistic healthy housing for over three decades.

Over its 30-year history, GHHI has developed the holistic energy efficiency, health and housing service delivery model adopted by the U.S. Department of Housing and Urban Development and implemented in our nationally recognized, Maryland-based direct services program. GHHI helped to elevate Maryland as a national leader in healthy housing and the reduction of childhood lead poisoning by 99% statewide through more than 45 pieces of state and local healthy housing legislation. Through our own research and evidence-based practices, GHHI has found that a healthy and energy efficient home yields a multitude of energy and non-energy benefits for residents, particularly low-income residents who can benefit the most from such energy efficiency improvements in terms of economic mobility, housing stability and wealth attainment over the long-term. We are deeply committed to advancing racial and health equity, economic mobility and climate resiliency through efficiency standards for low-income housing, and thus write in support of HB831. This legislation is a crucial lynchpin in the effort to advance energy equity and address home health and energy efficiency gaps for Maryland's low-income families and households while mitigating the impacts of climate change statewide.

**Why is HB831 Needed?**

Direct fuel use in residential, commercial, and industrial (RCI) buildings accounted for 18% of Maryland’s gross greenhouse gas emissions in 2017 and is projected to become the second largest source of emissions, behind transportation, within 10 years as emissions from electricity generation continue to decline.<sup>1</sup> HB831 will address the need to reduce emissions from existing buildings, and by prioritizing retrofits for low-income households, it will advance racial equity, environmental justice, and meet Maryland’s climate goals. Based on our decades of work serving families and improving housing conditions in Maryland, GHHI recognizes the important role of housing in achieving the state’s climate goals and improving health, economic and social outcomes for our most vulnerable families.

The need for energy solutions for Maryland’s low-to-moderate income housing stock is clear. Throughout our state, low-income residents face disproportionately higher utility bills. As a proportion of total income, low-income residents in the state of Maryland pay 550% more as a portion of income for energy than non-low-income residents in the state. Some low-income Marylanders devote such an extremely high share of their income to energy services that up to 42 cents out of every dollar is spent on energy bills (APRISE: Applied Public Policy Research Institute for Study and Evaluation, 2018). Every dollar that low-income residents allocate to costly utility bills is a dollar that cannot be used on other household essentials ranging from affording medical bills and school supplies to food (APRISE: Applied Public Policy Research Institute for Study and Evaluation, 2018).

Approximately 55% of Maryland’s low-income households include Asian, Hispanic or Black residents. These residents have less access to affordable, energy efficient and healthy homes (Lucy Laflamme, N.D.). These disparities persist across the state, characterized by energy inefficient homes and health hazards like lead-based paint, faulty roofs, poor indoor air quality and mold.

Specifically, GHHI is in support of the following proposed actions, in direct alignment with our mission and vision to create healthy, safe, energy efficient and decarbonized homes for Maryland families:

- Requirement for the Department of the Environment to establish building emissions standards for certain buildings
- Establishment of the Building Energy Transition Implementation Task Force to study certain matters and develop a plan for funding the retrofit of certain buildings.
- Requirement for the Maryland Department of Labor to update the Maryland Building Performance Standards

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<sup>1</sup> Maryland Commission on Climate Change; Buildings Subgroup Report to the Mitigation Work Group; September 21, 2020

- Setting of Building Performance Standards, including:
  - Setting a state goal that holistic retrofits, including weatherization measures and heat pump installations, be implemented in 100% of low-income households with minimal or no upfront costs for the resident by January 1, 2030.
  - Developing building emissions standards that achieve specific reductions in greenhouse gas emissions, including:
    - 20% reduction in net greenhouse gas emission before 2030
    - Net-zero before 2040

### **Benefits of providing low-income households with energy efficiency upgrades and building decarbonization**

The investment in low-income homes is not just a smart investment, but an urgent one. The market is moving towards electrification and renewable energy, and bills like this will rightly accelerate this process. As this necessary transition occurs, households depending on the gas infrastructure will see increases in the fixed costs of their utility expenses as they fund the maintenance of the remaining gas infrastructure. Without assistance to meet the initial costs of decarbonization and energy efficiency upgrades, low-income households will be left behind to pay for the stranded assets of the infrastructure. The Maryland Commission on Climate Change Building Report summarizes the state model of future residential gas prices as follows, “Gas rates remain flat through the 2020s but then climbs [approximately four to five times of current levels] to the \$40-50/MMBtu range by 2045. This Plan recommends transitioning 100 percent of low-income households to heat pumps by 2030 to reduce energy burden for the most vulnerable Marylanders.” Leading with meeting the needs of Maryland’s most vulnerable residents will provide compounding benefits to health, economics, and energy. We strongly urge the house to follow this guidance and prioritize holistic retrofits for low-income households by 2030.

Completing holistic retrofits also has tangible implications for racial equity. In the US, Black households have the greatest likelihood of residing in older homes with compromised energy systems, aging or ineffective appliances and other assorted structural deficiencies, all of which contribute to making the home energy inefficient (Hernández, Aratani, Jiang, 2014; Hernández, Jiang, Carrión, Phillips, and Aratani, 2016). Residential segregation, racist housing policies and intentional disinvestment in communities of color, including in Maryland, result in conditions that contribute to poor health and high energy burdens, including inadequately sustained and inefficient ventilation (HVAC), cooling and heating systems, drafts or air leaks, and poor insulation (Drehobl and Ross, 2016; Hernández and Phillips, 2015; Reames, 2016; United States Census Bureau, 2015). These structural conditions, coupled with a household’s inability to obtain energy – independent systems within higher quality homes, all contribute to increased costs for fundamental home utilities such as cooling and heating systems and lighting, through inefficient household energy usage (Lewis, Hernández & Geronimus, 2019).

In addition, data demonstrates that Black households are disproportionately subjected to trade-offs, for instance choosing between paying energy expenses or food and medicine, with 28% of Black households reporting having waived food and medicine monthly in order to pay for energy, (James Berry, Independent Statistics & Analysis: U. S. Energy Information Administration, 2018). Investigations have revealed how challenges central to energy insecurity, including difficulties paying energy bills or experiencing reduced thermal comfort, were connected to raised stress levels, known to be damaging to long term health when chronically sustained (Geronimus, 2000; Hernández, 2016).

Decarbonization slows the pace of climate change which affects the health, safety, and economy of the entire population. As a coastal state, Maryland is on the front lines of many of the dangers of climate change, and within the state these impacts are projected to affect the most vulnerable populations disproportionately (Maryland 2030 GGRA Plan 2021). Over the next 30 years, the increased flood risk from climate change is modelled to disproportionately affect low- income Black communities in Maryland and across the country (Wing et al. 2022). Furthermore, extreme heat and weather events are projected to have the most severe health impacts (e.g., increased hospitalizations from asthma and heart attacks) in the low-income and minority population centers of the state such as Baltimore City (Maryland Climate and Health Profile Report 2016).

Buildings are significant emitters of greenhouse gases that contribute to global climate change as well as particulates that have significant effects on local health. In 2017, buildings accounted for 18% of direct greenhouse gas emissions in Maryland (The 2030 GGRA Plan 2021). Numerous studies have demonstrated a link between particulate (PM<sub>2.5</sub>) levels and premature loss of life. Decarbonization is an essential step to reducing this burden because both nationally and within Maryland, gas emissions have passed coal as the energy source with the largest impact on human health from pollutant emissions (Buonocore et al. 2021). Because buildings emit pollution where people live and work, humans are acutely affected. In a major 2012 paper, researchers looked at 35 years of data collected across six US cities and found a statistically significant 14% increase in all-cause mortality for a 10-µg/m<sup>3</sup> annual increase in local PM<sub>2.5</sub> measures, confirming the findings of previous studies (Lepeule et al. 2012; Dockery et al. 1993; Laden et al. 2006). Thankfully, researchers find that community health improves quickly with reductions in PM<sub>2.5</sub>. On the other hand, energy infrastructure is often a long-term investment for both buildings and for municipalities. Beginning the process of decarbonization immediately is the best way to reduce total harm caused to residents' health.

Finally, recent studies have highlighted the health impacts of indoor air pollution from gas appliances. A team of researchers at Stanford University found that stoves emit significantly more methane emissions than previously understood because most of their emissions occur when in their steady state off position (Lebel et al 2022). Families who do not use their range hoods

or who have poor ventilation can surpass the 1-h national standard of acute NO<sub>2</sub> (100 ppb) within a few minutes of stove usage, particularly in smaller kitchens. Because many people live in small, older housing, and most appliances remain in use for long periods of time, both the contributions to greenhouse gas emissions and unhealthy levels of indoor air pollution point to a need to prioritize gas-free appliances in most buildings. Preparing buildings for a gas-free operation promotes improvements in indoor and outdoor air quality, as well as allowing a transition off the gas infrastructure which will reduce costs both for energy and gas system maintenance.

**How Does Maryland Compare with Other States and Federal Actions?**

HB831 presents an opportunity to place Maryland in a position of national leadership in advancing racial, health and energy equity and supporting economic mobility by meeting the critical housing and energy needs of Maryland’s most vulnerable families and seniors. State and local governments around the country are moving toward setting clear, statewide standards for building energy efficiency and electrification, and putting in place innovative funding mechanisms to support these standards. In January, 2022 the federal government launched a Coalition of State and Local Governments to Strengthen Building Performance Standards, with the understanding that:

“When building performance standards are designed in partnership with frontline communities and key stakeholders, innovative and equitable solutions can address multiple needs in a community. Energy efficiency improvements and electrification in multifamily buildings improve indoor air quality, eliminate drafts, and protect residents from extreme heat—delivering health benefits and lower health care costs. For businesses, high-performing buildings are not only good for the world, they are good for the bottom line – attracting higher occupancy rates and generating more revenue.”

Maryland can realize these benefits for families, older adults, workers and our environment by passing the targeted commitments in the Reducing Greenhouse Gas Emissions – Commercial and Residential Buildings Act. We request a Favorable report on HB831.

Respectfully Submitted,



Ruth Ann Norton  
President and CEO