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March 23, 2022

Delegate Kumar P. Barve, Chair  
House Environment and Transportation Committee  
House Office Building, Room 251  
Annapolis, Maryland 21401

Delegate C.T. Wilson, Chair  
House Economic Matters Committee  
House Office Building, Room 231  
Annapolis, Maryland 21401

Re: **FAVORABLE** – SB528 – Climate Solutions Now Act of 2022

Dear Chairmen Barve and Wilson and Members of the Committee:

On behalf of the Green & Healthy Homes Initiative, I offer this testimony in support of SB528. 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. The Green & Healthy Homes Initiative (GHHI) has been at the frontline of holistic healthy housing for over three decades. GHHI is a member of Energy Efficient Maryland and the Maryland Public Health Association Advisory Committee. In addition, I represent GHHI as a member of the EPA Children's Health Protection Advisory Committee and as Chair of the Maryland Lead Poisoning Prevention Commission.

Over its 30-year history, GHHI has developed the holistic energy efficiency, health and housing service delivery model that is implemented in our nationally recognized, Maryland-based direct services program. The model was adopted by the U.S. Department of Housing and Urban Development and is currently being advanced in partner jurisdictions nationally. In addition, GHHI helped to elevate Maryland as a national leader in healthy housing by reducing childhood lead poisoning by 99% in the state and helping design over 45 pieces of healthy housing legislation that became law in the State of Maryland and local jurisdictions. GHHI's preventive asthma programs in Baltimore City have produced a 66% reduction in client asthma related hospitalizations and 62% increase in asthma related perfect school attendance.

By delivering a standard of excellence, GHHI aims to eradicate the negative health impacts of unhealthy housing to ensure better health, economic, and social outcomes for children and



families with an emphasis on black and brown and low-income communities. Most recently, GHHI's programs and holistic approach was specifically cited by EPA and by HUD as a model for effective coordination of federal healthy homes and weatherization programs and resources.

Through our own research and evidence-based practice, GHHI has found that a healthy and energy efficient home yields a multitude of energy and non-energy benefits for Maryland 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 in our mission to advance racial and health equity, economic mobility and climate resiliency through efficiency standards, electrification, decarbonization for low-income housing. I write in support of SB528 which is critical in the effort to advance energy equity and reduce climate impacts as well as addressing home health and energy efficiency gaps for Maryland's low-income families and communities. Through improved indoor and outdoor air quality and other benefits of energy efficiency and climate change mitigation, this legislation will result in improved health outcomes including for asthma.

#### **Why is SB528 Needed?**

- SB528 presents an opportunity to place Maryland in a position of national leadership in advancing racial, health and energy equity and supporting economic mobility by moving the state to a net zero carbon emissions goal while meeting the critical housing and energy needs of Maryland's residents.
- State and local governments around the country are setting standards for building energy efficiency and electrification as part of broader emissions reductions goals, putting in place innovative funding mechanisms to support these standards and focusing on growing opportunities for employment in the green jobs sector. Maryland can realize these benefits for families, older adults, workers and our environment by passing the targeted commitments in SB528.
- These investments will strengthen our neighborhoods and provide underserved communities with access to electrification and renewable energy measures that is currently lacking.

Our decades of work providing whole-home interventions has shown us that there is a high need across the state, and that providing these services offers tremendous benefits to our most vulnerable families. The energy and non-energy benefits of investing in people's homes can transform lives for generations. This investment also strengthens our neighborhoods and our workforce.

The Climate Solutions Now bill presents specific opportunities and actions among others across a number of sectors that are important to mitigating climate change:

- Development of energy efficiency and electrification requirements for buildings
- Establishing the Climate Catalytic Capital Fund (Green Bank)

- Setting Building Emissions Standards
- Requiring state buildings, public schools and colleges to meet high performance building standards
- Providing personal property tax exemptions for solar equipment and shares in community solar
- Expanding EmPOWER and increasing weatherization and energy efficiency interventions in low-income homes
- Altering the duties of the Maryland Green Building Council
- Establishing the Building Energy Transition Implementation Task Force to study certain matters and develop a plan for funding the retrofit of certain buildings.

In Maryland, the building sector is responsible for about 90% of the energy consumption statewide. SB528 includes a broad array of policy solutions, innovative funding mechanisms and opportunities for alignment and collaboration that will advance racial equity and environmental justice and meet Maryland’s climate goals. The need for energy solutions for Maryland’s low-to-moderate income housing stock is also 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).

Low-income households 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, leaky roofs, poor indoor air quality and mold. These conditions often cause DHCD to defer energy efficiency service delivery until all health and safety hazards are addressed. Because there are not sufficient resources to help low-income households address the hazards themselves, increased funding is needed to increase weatherization program resources and to more holistically address housing conditions.

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

Energy efficiency, weatherization and decarbonization interventions provide not only energy benefits, related to reductions in energy usage and costs, but also non-energy benefits as well. Non-energy benefits are “the wider socio-economic outcomes that arise from energy efficiency improvement, aside from energy savings”. Studies have shown that energy efficiency and weatherization can improve housing conditions relating to thermal comfort, indoor air quality,

pest management, and fire safety. Furthermore, household energy efficiency upgrades can spur community benefits such as economic growth, neighborhood revitalization, and resilience. These investments can help to support and stimulate the local economy by providing families and individuals with greater disposable income, which can help alleviate poverty and increase purchasing power while generating more local jobs (Bell 2014; IEA 2014). One study found that between 9 and 13 gross jobs are generated per every \$1 million investment. By targeting energy efficiency upgrades at low-income households, all Marylanders will benefit.

The Climate Solutions Now Act 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 (Diana Hernández Yumiko Aratani Yang Jiang, 2014; Diana Hernández, Yang Jiang, Daniel Carrión, Douglas Phillips, and Yumiko Aratani, 2016). Disinvestment in low income communities, 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 (Ariel Dreihobl and Lauren Ross, 2016; Diana Hernández and Douglas Phillips, 2015; Tony Gerard 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 (Jamal Lewis, Diana Hernández & Arline T. Geronimus, 2019). In addition, data demonstrates that low income households are disproportionately subjected to trade-offs, for instance choosing between paying energy expenses or food and medicine. 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 (Arline T. Geronimus, 2000; Diana 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 project 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 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). 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). 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). Furthermore, 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 appliance 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?**

SB528 presents an opportunity to establish Maryland as a leader in mitigating climate change and advancing energy equity. Federal and local governments in the United States are moving toward setting clear, statewide standards for building energy efficiency and electrification.. 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 enacting the suite of innovative policies within the Climate Solutions Now Act. In addition, Maryland will follow states including Connecticut and New York, which have successfully established Green Banks to provide a mechanism for cross-sector private, public and philanthropic investment in clean energy solutions. In each of these states, Green Banks have generated millions in additional capital for building improvements, deep energy efficiency retrofits and clean energy retrofits. Through green jobs training and investments resulting from this legislation, residents of low income communities, which are disproportionately impacted by climate change, can be a greater part of the green jobs economy while mitigating climate change impacts locally. We request a favorable report on SB528.

Respectfully Submitted,



Ruth Ann Norton  
President and CEO