Green & Healthy Homes Initiative®

Recommendations to Advance and Scale Healthy, Energy Efficient Housing in Maryland

Climate and Environment Executive Policy Committee Transition Team Memorandum for the Maryland Energy Administration (MEA)

Executive Summary

The Green & Healthy Homes Initiative (GHHI) is providing recommendations for actions that can be undertaken by the Governor, the Maryland Energy Administration, and partnering state departments, agencies and stakeholders, to scale efforts that promote energy efficiency and climate mitigation, and improve the energy efficiency and quality of housing. This Memorandum is organized around current problems observed by GHHI and our partners around the state and the nation and solutions for those identified problems in Maryland.

Recommendations

Problem: The Maryland Energy Administration's (MEA) role in climate mitigation efforts, clean energy development, and energy efficiency programs is substantial and must increase. MEA is currently a Maryland agency and is not a full department level entity.

Solution: MEA must become a full Maryland Department with the commensurate authority and resources necessary to meet its current responsibilities and an expanded state leadership position.

1. **Restructure the Maryland Energy Administration into a full Maryland Department and Immediately Restablish the Agency's Leadership on Climate and Energy Efficiency Policies and Programs**

The Governor and legislature must establish MEA as a Maryland Department with full authority to set and implement energy policy, develop and foster greater clean energy initiatives, and expand other climate mitigation and energy efficiency programs statewide. The Governor must name a high level agency head appointment with the ability to reestablish MEA as the point for climate and energy efficiency projects and funding. This Secretary level appointment is an urgent hire and one of the most critical early appointments the new administration must make. MEA has a substantial role to play in Maryland's climate mitigation strategies and achieving greater energy equity and it must have the necessary resources and the strong leadership to implement those policies. The goals of the Climate Solutions Now Act and the substantial federal investments coming to Maryland from the Inflation Reduction Act (IRA), the Bipartisan Infrastructure Law (BIL) and other federal funding, requires strong direction and coordination from MEA to advance climate goals and maximize federal funding opportunities. MEA must revamp its structure to be able to meet this expanded role by increasing the size of the Department and filling and rehiring all open positions in the Department on an emergency basis. MEA must be prepared to assist the Governor and the Legislature in meeting the state's commitments to electrification, decarbonization,

and resiliency in Maryland. MEA must also assume a strong leadership role as the epicenter for supporting clean energy technology development and implementation in Maryland.

Problem: The benefits of energy efficiency and weatherization are not delivered equitably. Although weatherization is a low-income program, targeting households making below 200% Federal Poverty Level, many low-income households are still unable to receive services from the program. Funding through the weatherization and energy efficiency programs primarily covers energy-saving measures, such as insulation, boiler replacement, and air sealing with a limited budget of about 20% of the program budget to address health and safety hazards. Unfortunately, for Maryland households living in substandard housing that contains extensive structural defects and health and safety hazards, weatherization programs often opts to defer service delivery since the energy retrofits can exacerbate the impact of existing environmental health hazards. For example, installing insulation and performing air sealing in homes with mold or high levels of radon can exacerbate the impact of mold and radon on occupant health unless remediated prior to the weatherization. Though residential energy efficiency programs have a small per-unit budget to address minor health and safety hazards, the budget is not large enough to address more substantial hazards that many low-income households have in their homes because of deferred maintenance and lack of resources. Therefore, the households that can benefit the most from energy efficiency and weatherization are often deferred and often never receive services. A 2010 study conducted by GHHI found that the deferral rate due to health and safety for locally administered DOE WAP Program applicants can be as high as 64%.[1]

Solution: Increase the per unit allowance for health safety measures that can cause deferral and develop more integrated program models that incorporate other cross sector housing resources.

2. **MEA should increase the per unit allowance for health and safety measures in MEA energy efficiency programs. MEA must promote the improvement of housing conditions and the addressing of health and safety hazards to increase access to energy efficiency programs among low-income households and maximize the benefits that can accrue to households through weatherization.**

MEA can achieve this by increasing the percentage or amount per unit of MEA energy efficiency program funds that are allowed to address health and safety issues that result in client deferrals. MEA should support the greater allocation of state resources for weatherization agencies to improve the coordination with state and HUD funded lead and healthy homes programs. MEA should support the creation of a $10 million supplemental grant program from the Strategic Energy Investment Fund to help address healthy homes hazards. Similar to HUD Lead Hazard Reduction Grants, where jurisdictions can apply to receive additional supplemental Healthy Homes funds, community action agencies could apply for the supplemental Healthy Homes funding that support pre-weatherization measures to reduce deferrals and

[1] Ruth Ann Norton. Identified Barriers and Opportunities to Make Housing Green and Healthy Through Weatherization: A Report from Green and Healthy Homes Initiative Sites. 2010. https://www.greenandhealthyhomes.org/wp-content/uploads/GHHI-Weatherization-Health-and-Safety-Report1.pdf

ensure families that are most in need of weatherization receive those benefits. Michigan created a Weatherization Deferral Reduction Program that could be used as a model.[i]

Through improved coordination of weatherization funding with other housing resources and increased state and federal funding for healthy housing interventions, clients participating in state energy efficiency programs will experience reduced deferral rates for weatherization programs and improved indoor air quality and home safety. These comprehensive interventions will benefit residents and the state through reductions in energy consumption and also asthma related ED visits and hospitalizations, lead poisoning, household injury and radon and asbestos exposures.

Problem: Weatherization helps households afford necessities like heat and electrical power and reduces energy consumption and costs by installing energy efficient measures. Some of the materials currently used for weatherization, however, can also pose health risks to occupants. For instance, isocyanate substances like spray polyurethane foam insulation can be used in weatherization projects. These chemicals are respiratory irritants and sensitizers. Exposure to them can lead to hypersensitivity of the airways and eventually exacerbate or contribute to diseases like asthma, rhinitis, alveolitis and other allergic respiratory diseases.

Solution: MEA should create a list of restricted, unhealthy building materials that are not permitted to be used by energy efficiency and weatherization programs funded by MEA, DHCD or other state entities.

3. MEA should ensure that healthy building materials are used in energy retrofits

Effective and affordable insulation materials and other air sealing materials without harmful chemicals are available and can be used today as alternatives to unhealthy building materials. Examples of healthy insulation material include expanded cork board, loose-fill fiber glass, dense-pack fiber glass, and spray-applied fiber glass.[2] GHHI recommends that MEA ban the use of materials containing formaldehyde or other respiratory sensitizers. By discouraging the use of unhealthy building materials such as isocyanate insulation materials, MEA can protect workers and occupant health of homes receiving weatherization from unnecessary risk and harmful exposures.

Problem: MEA presently does not account for non-energy benefits, which include health impacts, in the determination of which weatherization measures can be conducted in a home. As a result, replacement of windows to more efficient versions often are not included as a covered measure as the total energy return on investment often does not meet the allowable threshold.[3]

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[2] Energy Efficiency for All. Making Affordable Multifamily Housing More Energy Efficiency: A Guide to Healthier Upgrade Materials. https://assets.ctfassets.net/ntcn17ss10w9/3Bw3JFqYHgI7xWcvb7unwN/ec90d476bc2fd1315fb018eeeb467978/NRDC-3084_Guide_to_Healthier_Retrofit_Hi-res_smaller.pdf

[3] Norton, R. A., Brown, B. W., Lee, C., Malomo-Paris, K., & Lewis, J. (2018). *Achieving Health and Social Equity: Understanding the Impact of Non Energy Benefits in the United States* (p. 176). Green & Healthy Homes Initiative. Retrieved from http://www.greenandhealthyhomes.org/sites/default/files/AchievingHealth%26SocialEquity_final-lo_0.pdf

Solution: Allow for health and other non-energy benefits to be accounted for in calculating allowable energy efficiency measures under the savings to investment ratios (SIR).

4. **MEA should allow non-energy benefits to be used as part of the determination of which energy efficiency measures are allowed under the savings to investment ratio for weatherization programs**

Replacing leaded windows with lead free, Energy Star windows can not only help save energy but can also have significant health benefits as well. Windows have "the highest levels of interior lead paint and dust compared to other building components," posing a substantial risk for sensitive populations that are particularly vulnerable to the damaging health impacts lead exposures can produce .[4] Studies have shown that replacing windows containing lead-based paint results in significant and sustained decreases in dust lead levels.[5]

A 2012 study evaluating the impacts of window replacements in primarily low-income households enrolled in the HUD Lead Hazard Control Grant Program, determined that homes which either replaced all or some of their windows saw decreased interior floor dust lead and lower window sill dust lead levels when compared to homes with no replacement.[6] These reductions are especially significant when considering surfaces, such as floors, that children encounter more often. Given their frequent hand to mouth contact, children have the potential to transfer and digest hazardous materials, like lead dust, that they may encounter in their homes.[7] Childhood lead exposures emerge as the most common housing condition connected to a raised risk of learning disabilities and behavior disorders.[8] Childhood lead exposure can increase the risk of hyperactivity, reduce IQ over time, create difficulties with reading and writing, complicate one's ability to retain attention while antisocial behaviors have also been connected to childhood lead exposures in addition to other assorted altered physical and psychological conditions (Ibid.).[9]

[4] Rick Nevin, David E. Jacobs, Michael Berg, Jonathan Cohen. (2008). Monetary benefits of preventing childhood lead poisoning with lead-safe window replacement. Environmental Research, 106(3), 410-419. Retrieved from https://doi.org/10.1016/j.envres.2007.09.003

[5] Jacobs DE, Tobin M, Targos L, Clarkson D, Dixon SL, Breysse J, Pratap P, Cali S. (2016). Replacing windows reduces childhood lead exposure: Results from a state-funded program. Public Health Management Practice, 22(5), 482-491. Retrieved from 10.1097/PHH.0000000000000389

[6] Sherry L. Dixon, David E. Jacobs, Jonathan W. Wilson, Judith Y. Akoto, Rick Nevin, C. Scott Clark. (2012). Window replacement and residential lead paint hazard control 12 years later. Environmental Research, 113, 14-20. Retrieved from https://doi.org/10.1016/j.envres.2012.01.005

[7] Jacobs DE, Tobin M, Targos L, Clarkson D, Dixon SL, Breysse J, Pratap P, Cali S. (2016). Replacing windows reduces childhood lead exposure: Results from a state-funded program. Public Health Management Practice, 22(5), 482-491. Retrieved from 10.1097/PHH.0000000000000389

[8] Norton, R. A., Brown, B. W., Lee, C., Malomo-Paris, K., & Lewis, J. (2018). Achieving Health and Social Equity: Understanding the Impact of Non Energy Benefits in the United States (p. 176). Green & Healthy Homes Initiative. Retrieved from http://www.greenandhealthyhomes.org/sites/default/files/AchievingHealth%26SocialEquity_final-lo_0.pdf

[9] Norton, R. A., Brown, B. W., Lee, C., Malomo-Paris, K., & Lewis, J. (2018). Achieving Health and Social Equity: Understanding the Impact of Non Energy Benefits in the United States (p. 176). Green & Healthy Homes Initiative. Retrieved from http://www.greenandhealthyhomes.org/sites/default/files/AchievingHealth%26SocialEquity_final-lo_0.pdf

Gould's 2009 publication on the economic benefits of lead poisoning prevention determined that for each dollar invested in lead paint hazard control yields a return of $17-$221.[10] Moreover, the Green & Healthy Homes Initiative (GHHI) completed an analysis examining the societal benefits of lead poisoning prevention that accrue over an individual's lifetime. They calculated the total value of lead poisoning prevention to be $40,815 per home, with average remediation cost of $15,829. The resulting savings-to-investment ratio for this analysis is 2.58. In decreasing order, the value from prevention per person as a percent of total value was first earning potential (42%) then energy savings (23.1%), crime (15%), long term medical (9%), tax revenue (8.4%), short term medical (1.1%), ADHD (1%) and special education (0.1%). Therefore, when accounting for non-energy benefits, particularly health impacts, window replacement can exceed the required SIR of 1 and should by MEA in calculating SIR and approving specific weatherization measures.

Problem: A large portion of Maryland's housing stock is aging and deteriorated and possess poorly functioning and inefficient energy systems.

Solution: In addition to increasing energy efficiency retrofit grant programs, MEA should help to increase private sector investment by advocating for the adoption of model energy codes and building performance standards.

5. **MEA should work with the MD legislature to 1) adopt model energy codes, building performance standards and maximum emissions targets by building type, 2) establish benchmarking to track progress towards these goals, and 3) incentivize adoption of these codes, standards, and targets in Maryland**

Washington, D.C. and New York City serve as two examples where energy building performance standards have been implemented. Washington, DC now requires building owners to improve the energy efficiency of their buildings if they fall below a specific energy performance threshold based on median building Energy Star scores.[11] In New York City, Local Law 97 established carbon emission caps for energy use in buildings over 25,000 square feet.[12] Beginning in 2024, the emissions limits will affect the 20% most carbon-intensive buildings, and in 2030, the limits will become more stringent, affecting the 75% most carbon-intensive buildings.[13] In both examples, there is flexibility in achieving compliance with the requirements. In DC, buildings can meet the requirement through a performance pathway, documenting a 20% energy reduction over the five-year compliance period, or through a prescriptive list of cost-effective energy efficiency measures.[14] In New York City, renewable energy credits and emissions

[10] Elise Gould. (2009). Childhood lead poisoning: Conservative estimates of the social and economic benefits of lead hazard control. Environmental Health Perspectives, 117(7), 1162-1167. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2717145/pdf/ehp-117-1162.pdf

[11] D.C. Department of Energy and Environment, "Building Energy Performance Standards," https://doee.dc.gov/service/building-energy-performance-standards. Accessed June 2020.

[12] Urban Green Council, "Groundbreaking New Emissions Law Cuts Carbon from Buildings," Press Release, April 18, 2019, https://www.urbangreencouncil.org/sites/default/files/19.04.18_new_building_emissions_law_-_urban_green_council.pdf. Accessed June 2020.

[13] Urban Green Council, "NYC Building Emissions Law Summary," https://www.urbangreencouncil.org/sites/default/files/urban_green_building_emissions_law_summary_2020.02.19.pdf. Accessed June 2020.

[14] D.C. Department of Energy and Environment, "Building Energy Performance Standards," https://doee.dc.gov/service/building-energy-performance-standards. Accessed June 2020.

offsets were included as compliance pathways in addition to building energy efficiency measures and onsite clean energy generation.[15]

Problem: Communities of color, low-income communities and tribal and indigenous communities are most directly and disproportionately impacted by the effects of climate change. These environmental justice and disadvantaged communities are more vulnerable, in part, because of the history and legacy of racial segregation and historical disinvestment that has occurred in these communities that make their housing less resilient. These factors have also contributed to inequities in housing burden, energy burden, preparedness to respond to extreme weather and climate impacts, and gentrification and displacement.

Solution: Maryland should spend a greater portion of energy efficiency program funding in disadvantaged communities.

6. **MEA should invest at least 40% of their total budget for programmatic grants in disadvantaged communities to make up for the legacy of government sponsored disinvestment and to ensure that these communities are able to take part in and benefit from the global energy transition**

Maryland has a long history of environmental injustice, and while this is not unique to our state, we have a responsibility to address past injustices like redlining, decisions to place polluting industries in communities of color, and generations of disinvestment. Maryland must act to prevent further harm through robust investments to advance environmental and economic justice and to address inequities in energy burdens. MEA must work with environmental and energy justice experts to define the disadvantaged communities that should be targeted for clean energy-related investments. For example, the Center for Community Engagement, Environmental Justice, and Health at the University of Maryland School of Public Health created the state's MD-EJscreen mapping tool to identify disadvantaged communities. Critically, MEA must engage in a robust process of engagement with disadvantaged communities to ensure the agency is developing programs that meet their needs and priorities and improving access for residents to utilize the programs energy efficiency retrofit services.

Problem: Distributed energy resources in Maryland are not fully accessible for low-income households. As a result, these households are missing out on the opportunity for durable energy burden reduction, opportunities for job training and wealth building, and full participation in a clean energy future.

Solution: MEA needs to develop program metrics, assess its programs and make sure that that program resources are equitably reaching disadvantaged communities in the state.

7. **In line with the recommendation above, MEA must fully engage in a process designed to ensure the benefits of distributed energy resources like onsite solar, community solar, energy storage, etc., are equitably reaching disadvantaged communities across Maryland.**

[15] City of New York, Local Law No. 97 (2019).

Benefits must include energy bill savings, as well as access to job training and business development support. It is crucial for MEA to develop a robust program of community engagement, feedback, and education and to establish metrics and tracking mechanisms to improve equity accountability. MEA should support making the State's community solar program permanent, and target funding and technical assistance resources toward ensuring the program is widely accessed by disadvantaged communities across the State where access to renewable technologies has been very limited.

Problem: The Maryland Energy Administration operates programs to incentivize natural gas infrastructure. As Maryland pursues increasing clean energy and greenhouse gas reduction targets, incentives for natural gas risk stranding public investment.

Solution: MEA must reduce its natural gas investments.

8. **MEA must stop investing in natural gas infrastructure and technology.**

MEA must analyze its investments and turn them toward smart, forward-looking programs that will help achieve Maryland aggressive greenhouse gas reduction goals. Specifically, MEA must turn its investments toward decarbonization and electrification for low-income residents across the state. As Maryland pursues its GHG reduction targets in the Climate Solutions Now Act, residents in disadvantaged communities are at risk for bearing the costs of an increasingly expensive gas system if planning does not intentionally include them in the transition away from fossil fuels and to electric appliances and other electric utilization. MEA must develop programming to support robust decarbonization and electrification for low-income households.

9. **MEA must also support a repeal of the STRIDE program, which allows gas utilities to circumvent traditional ratemaking protocols and receive front-loaded ratepayer funding for accelerated gas system infrastructure investments.**

The Maryland gas utilities' plans for accelerated infrastructure buildout and investment are contrary to the State's GHG emissions reductions goals, and risk stranding billions of dollars in investment in what will be obsolete infrastructure as Maryland cleans and electrifies its energy systems. As electrification proceeds and customers migrate away from using and paying for the gas distribution system, a smaller number of customers will be left paying the increasingly expensive costs of investment into gas infrastructure. These customers are more likely to be low-income customers. MEA should support efforts to ensure these outcomes do not occur.

Problem: Currently, the EmPOWER Maryland Energy Efficiency Program is paid for by low-income Maryland households (nearly $50 million per year), but these households realize a disproportionately small share of the benefits ($28 million per year). Each year, more than 98% percent of income-eligible households in the State contribute to the program, but do not receive program services and benefits.[16]

[16] Maryland Public Service Commission, Future Programming Work Group Report, 2021-2023 EmPOWER Maryland Program, Case No. 9648 (April 15, 2022).

Solution: Maryland must set a low income energy savings goal and improve its usage of EmPOWER funds to make sure that the Program is meeting the critical energy needs of Maryland's most vulnerable families and seniors.

10. **MEA should be a champion for a host of improvements to the EmPOWER Maryland program, specifically improvements to achieve equity in program resource and benefits distribution.**

MEA has the opportunity in the near future to help design programming that could blend EmPOWER funds with federal funds stemming from the Inflation Reduction Act. MEA must ensure that a whole-home approach is centered in this work for disadvantaged communities. EmPOWER must be adjusted to ensure low-income residents receive real benefits from the program. At least 40% of EmPOWER funds should be spent on homes – rental homes included – occupied by low-income residents. EmPOWER and other energy efficiency programs in Maryland must develop and implement as set specific energy equity metrics to monitor and measure progress in reaching energy equity in Maryland.

Improvements to EmPOWER Maryland that MEA can help champion include:

- Measuring all EmPOWER programs according to their GHG reductions, energy savings, lowering monthly bills, and achievement of energy equity;
- Supporting the 1% energy savings goal legislation as one mechanism to foster greater energy equity within the program;
- Including fuel switching of appliances as part of the program;
- Eliminate current subsidies under the program for GHG emitting equipment such as gas furnaces, boilers, stoves, and hot water heaters;
- Incorporate electrification readiness into all home energy audits and checkups
- Fund electrification readiness such as breaker box and wiring upgrades for income-eligible households;
- Develop energy equity measurements that track and hold agencies and programs accountable for the equitable distribution and utilization of energy efficiency program funding in disadvantaged, low income communities and communities of color.

11. **MEA should advocate for and support the Public Service Commission in advancing an agenda that includes a reduction in reliance on fossil fuels for energy usage, and has a greater commitment to new energy technologies and enhanced programs that improve the strength of the grid, lower carbon emissions in homes and buildings, and achieve demonstrated improvements in energy equity in low income communities of color in the state.**

Relevant Legislation

Low-Income Energy Efficiency Legislation (2022 HB 108/SB 524)
GHHI strongly supports the passage of Low Income Energy Efficiency legislation, introduced in last year's Maryland General Assembly as House Bill 108/Senate Bill 524, that would increase the proportion of EmPOWER funds that are invested in improving energy efficiency in low-income homes. MEA should support a reintroduction of HB108/SB 524 of 2022, which sought to improve the efficacy of EmPOWER Maryland in reaching low-income households. GHHI anticipates this legislation will be reintroduced in 2023. Currently, the funds that are invested into low-income homes are disproportionately used on other commercial and residential properties despite low-income homes paying into the program as utility ratepayers. The Bill would establish a savings target in low-income homes requiring investment in the energy consumption and energy bill cost saving measures that other Marylanders have been benefiting from through life of the EmPOWER program. The bill will require the MD Department of Health and Community Development to achieve energy consumption savings equal to 1% of annual low-income electricity demand in the state. This will ease energy burden for vulnerable residents of the State, revitalize aging affordable housing units, mitigate health risks low-income residents face because of poor air quality, and help protect residents from extreme heat and cold.

Climate Solutions Now Act (2022 SB528)
MEA has an important role to plan in the implementation of the Climate Solutions Now Act passed in 2022. MEA should engage deeply with stakeholders and partner agencies to develop a strong plan by June 2023 for reducing statewide greenhouse gas emissions 60% by 2031, as required by the law. Additionally, MEA should work with the Department of Environment and Public Service Commission to invest in the state electrical distribution system to ensure that increased electrification is reliable and affordable for residents throughout the state. MEA should work with utilities and the Public Service Commission to reach a goal of 75% of procured energy in the state being renewable energy by 2030.

Inflation Reduction Act (IRA)
With the federal funds and programs from the federal Inflation Reduction Act, MEA should work with state agencies such as DHCD to ensure that investments in electrification and energy efficiency lead to sustainable, affordable, and healthy housing the in the state. MEA will need to undertake outreach and education to ensure that messaging and program information reaches homeowners, tenants, and contractors about the opportunities to invest in and improve housing conditions with support of federal rebates and grants. MEA should also be part of the efforts to utilize IRA funds to support the development and growth of the Maryland housing rehabilitation, energy efficiency, and green jobs workforces, especially for women and in environmental justice communities with higher proportions of vulnerable, low-income, and/or BIPOC populations.

About the Green & Healthy Homes Initiative (GHHI)

GHHI was founded in 1986 in Baltimore City as Parents Against Lead and is today the nation's leading organization dedicated to healthy housing. GHHI's leadership and voice for creating healthy and energy efficient homes for families living in low income communities has led to changes in federal policy and increased public and private investments in the integration of energy, lead hazard reduction and safety in housing. GHHI has helped lead Maryland's 99% reduction in childhood lead poisoning as well as the nation's reduction in childhood lead poisoning and the expansion of more holistic healthy housing models to improve social determinants of health, economic and social outcomes. In Maryland, GHHI provides direct services that include: in-home resident education, case management, environmental assessments, energy audits and housing inspections, housing interventions (lead and safety hazard remediation, asthma trigger reduction, Aging in Place, energy efficiency and housing rehabilitation), legal services, outreach and training, and advocacy. GHHI works in and provides technical assistance in over 75 cities, counties states and healthcare systems in the US. GHHI is dedicated to addressing the social determinants of health, opportunity and equity through the creation of healthy, safe and energy efficient homes. By delivering a standard of excellence in its work, GHHI aims to eradicate the negative health impacts of unhealthy housing and unjust policies for children, seniors and families to ensure better health, economic and social outcomes in historically disinvested communities with an emphasis on communities of color. In 2022, GHHI worked with the New Jersey Board of Public Utilities to launch the Whole House Pilot. The 100 home Pilot is groundbreaking, as it is the first program of its kind to be sponsored by a utility regulatory agency. The Pilot will deliver a holistic approach to healthy housing, incorporating and coordinating energy efficiency improvements while remediating health and safety hazards that pose a threat to human health and often cause efficiency upgrade work to be deferred or delayed.

Ruth Ann Norton serves as President & CEO of the Green & Healthy Homes Initiative and has led its development into one of the nation's most effective organizations and foremost authorities on healthy housing and its impact on the social determinants of health and racial equity. An expert on lead poisoning prevention, healthy homes and the intersection of climate, energy and health, Ruth Ann directs GHHI's national strategy, policy framework and services to integrate climate, healthcare and healthy housing as a platform for improved health, economic, educational and social outcomes for low-income communities. Among other memberships, Ms. Norton serves as: Chair of the Maryland Lead Poisoning Prevention Commission, a federally appointed liaison to the CDC's Advisory Committee on Childhood Lead Poisoning Prevention, a member of the EPA's Children's Health Protection Advisory Committee, the National Leadership Academy for the Public's Health, the National Council of State Housing Agencies' National Advisory Group, the Ohio Asthma Council, and the Johns Hopkins Bloomberg School of Public Health Center For Population Health Information Technology Advisory Board.

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[i] https://www.michigan.gov/mdhhs/-/media/Project/Websites/mdhhs/Folder1/Folder101/CSPM-1501-Updated-Deferral-Reduction-Policy-4-25-2022.pdf?rev=c9ff70b9fde44c7d8f8ccc750406bceb&hash=4474B622594686B98E238DF3529E13A7#:~:text=The%20Deferral%20Reduction%20allo.