ENERGY AFFORDABILITY IN MARYLAND

Integrating Public Health, Equity, and Climate

BACKGROUND

Almost 400,000 Maryland households pay more than six percent of their income on home energy bills; tens of thousands pay 30 percent or more (Figure 1). Such high energy cost burdens force families to make impossible choices between paying utility bills and other essentials such as rent, food, or medicine. Bill assistance helps, but is inadequate, since it does not reach the vast majority of eligible households. Further, without targeted action, the transition to a decarbonized energy system—required by the 2022 Climate Solutions Now Act—will likely aggravate the energy affordability problem significantly.

Energy policy in Maryland has historically treated energy affordability, public health, and climate change as separate issues. Yet, they are deeply intertwined: patterns in fuel use affect how much people pay, which pollutants they are exposed to, and what their climate impact is.

Policies that address climate, affordability, equity, and public health goals simultaneously can save billions of dollars compared to siloed energy policies that rely on energy bill assistance alone.

Through targeted investments in weatherization, electrification, community solar, and demand response, Maryland could achieve affordability for 400,000 energy-burdened households. Under this approach, only about 60 percent of households below federal poverty level would continue to need assistance (Figure 2).

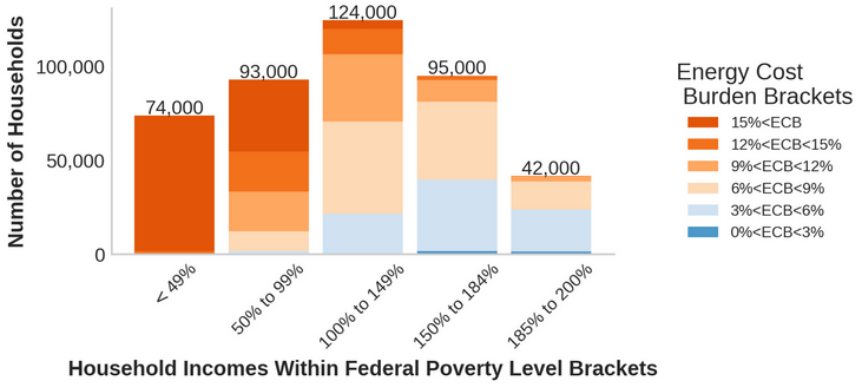

Figure 1: Energy cost burdens (ECB) of households with incomes below 200 percent of the federal poverty level (FPL). About 50,000 households with burdens >6 percent and income >200 percent FPL not shown.

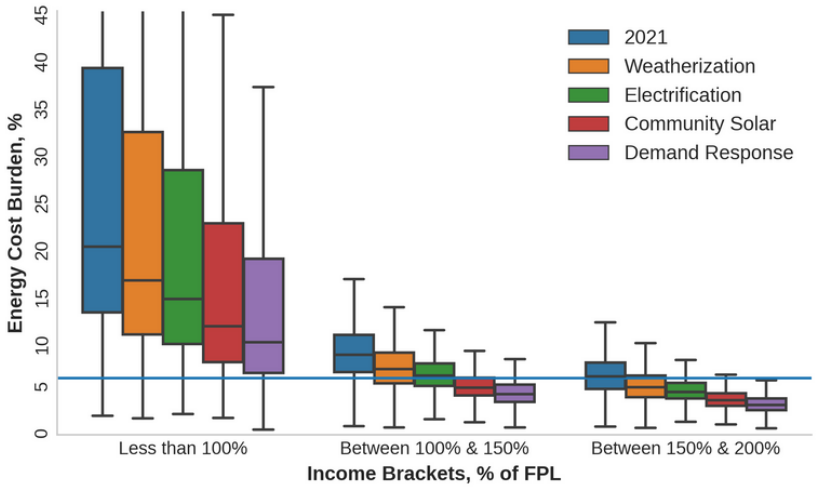

Figure 2: Bill impacts on energy cost burden of weatherization, electrification, discounted community solar, and demand response participation.

IMPLEMENTATION PROCESS

Implementation will take time. **In the short run, affordability means increasing assistance with universal enrollment**. A Percentage of Income Payment Plan would, via bill credits, reduce utility bills to six percent of income. To be effective, enrollment must be universal; it must be an early, urgent step. Third-party supply above standard offer rates should be ended for all low- and moderate-income households; this prohibition would save $40 million a year or more in assistance funding requirements. With that, about $240 million above currently available assistance funds will be needed initially. As energy investments are made, bills will decline, as will the need for assistance. Full implementation by 2038 would reduce assistance needs to about $80 million per year, which is $40 million below presently available annual funds.

The 2023 present value of savings to the year 2100 of achieving affordability with full integration compared to assistance alone is roughly $8 billion (three percent discount rate). (Figures 3(a) and 3(b)). Current Maryland bill assistance programs have low participation; the obstacles to participation start with burdensome documentation requirements that are a deterrent rather than an invitation to apply.

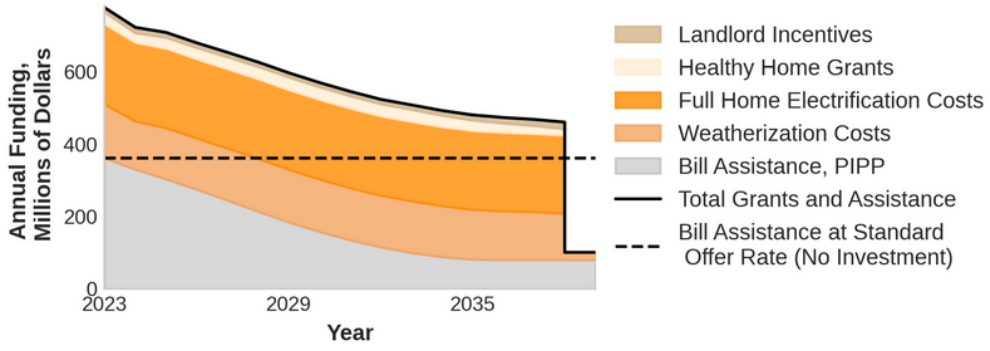

Figure 3(a): Uses of funds for universal affordability and energy transition integration

In other places, self-attestation of income and a simple application process have been shown to be very effective at increasing enrollment and should be replicated in Maryland. The Baltimore non-profit Civic Works has successfully employed these methods for over a decade—and has not found a single instance of fraud in retrospective random checks of income declarations.

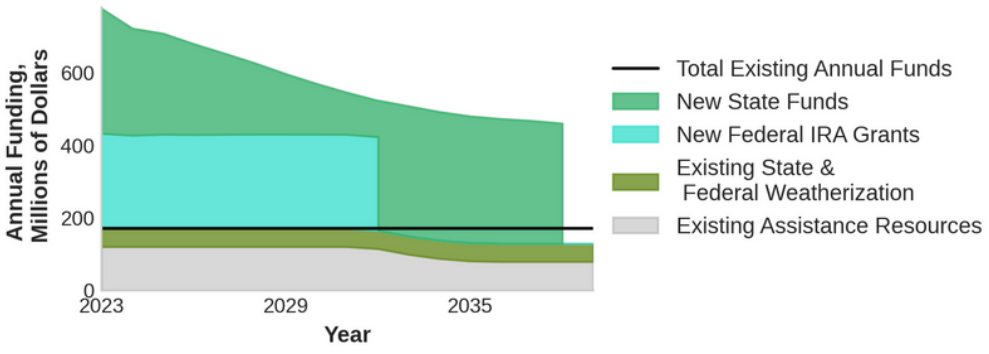

Figure 3(b): sources of funds for achieving that goal

RECOMMENDATIONS: ACHIEVING CLEAN AND SAFE ENERGY FOR ALL

- **Percentage of Income Payment Plan:** Easy universal enrollment with income self-attestation.
- **Weatherization with Grants:** Greatly increase the rate and scope of weatherization, and implementation capacity.
- **Electrification with Efficient Heat Pumps and Ventilation:** Grants for low- and moderate-income households, incentives for landlords.
- **End STRIDE and Increase Safety:** Targeted safety improvements with neighborhood electrification; focus on documented safety needs with attention to recent patterns of serious accidents.
- **Discounted Community Solar:** Contract support, rebates, and consolidated billing to ensure universal enrollment in community solar; a discount of at least 20 percent below utility rates.
- **Demand Response:** Broadband access and smart appliances to enable low-income households to earn bill discounts with demand response participation.
- **Funding:** Federal resources (e.g., Inflation Reduction Act) and progressive state taxation, such as a small wealth tax on the top 0.1 percent for dedicated resources. Need for state taxes will decline over time.

BREAKING POLICY SILOS

The public health, affordability, and climate impacts of our energy system are deeply linked. Indoor air pollution from fossil fuel appliances, such as natural gas stoves, exacts significant health costs, especially among children.

High carbon monoxide levels and nitrogen dioxide levels have been documented in Maryland households using gas appliances.

Roughly one-eighth of childhood asthma in the United States is attributable to the use of gas stoves. The risk is higher when gas ovens and stoves are used for space heating, which occurs much more in low-income homes (Figure 4 for asthma rates).

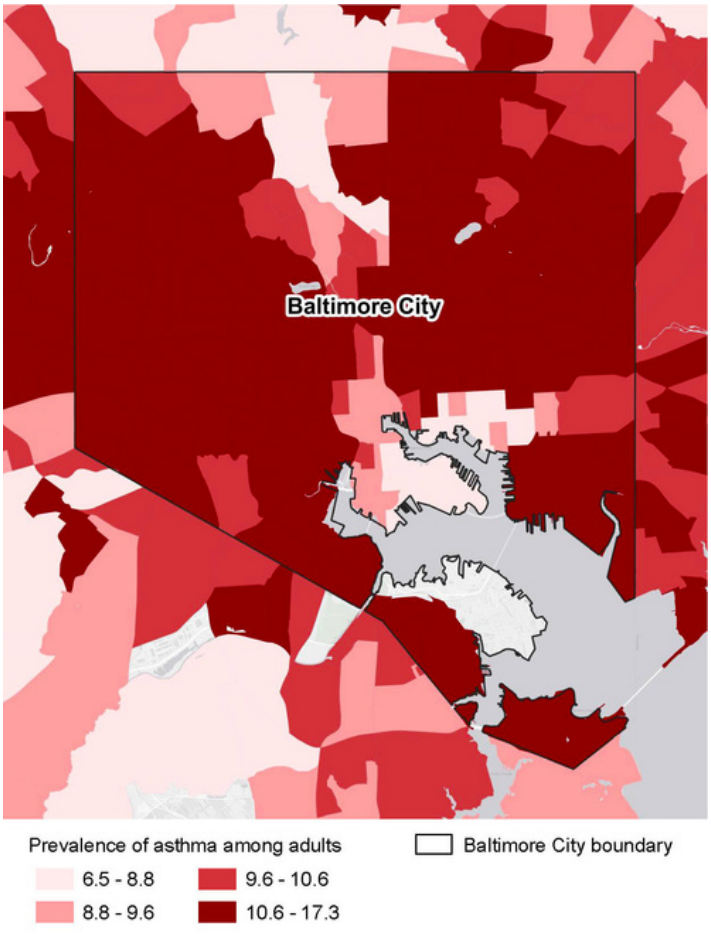

Figure 4: Adult asthma rates iModel-based estimate for crude prevalence (%) of current asthma among adults aged ≥18 years, 2020, Baltimore City, Maryland.

BREAKING POLICY SILOS, CONTINUED

The severe medical-rent-food-utility bill conflicts create deep distress for low- and moderate-income families and high costs for the rest of society. Utility bills are often part of rental contracts; failure to pay is often a trigger for evictions.

Available evidence, while sparse, indicates that the financial benefit to society resulting from better health, housing security, and universal access to affordable clean energy would be on the same order of magnitude as the investment needed to accomplish those goals.

The Climate Solutions Now Act should drive essential parts of the process of joining public health, affordability, climate, and equity. A key element is electrification of heating and cooking.

The 2013 Strategic Infrastructure Development and Enhancement (STRIDE) law is an obstacle to that. The law encourages investments to replace existing natural gas pipelines which, if permitted, would require almost seven decades to recover costs from ratepayers and would likely entrench gas use. With gas rates likely to skyrocket in the 2030s, as better-off households electrify and STRIDE charges increase, **low-income households will be left to cover the cost of the gas system.**

Moreover, the evidence indicates that STRIDE has not delivered on its central purpose to materially reduce serious pipeline accidents. The vast majority of fatalities and serious injuries since 2005 have occurred in apartment building explosions. Early and priority electrification of neighborhoods with leaky gas infrastructure, whether in pipelines or buildings, provides a more targeted approach to increase public safety and achieve Maryland's climate goals.

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PSE Healthy Energy is a nonprofit research institute dedicated to supplying evidence-based scientific and technical information on the public health, environmental, and climate dimensions of energy production and use.

This report was funded by the Town Creek Foundation and Abell Foundation. A detailed report is available at: ***https://www.psehealthyenergy.org/our-work/publications/archive/energy-affordability-in-maryland/***