



P.O. Box 278
Riverdale, MD 20738

Committee: Economic Matters

Testimony on: HB904 “Public Utilities - Energy Efficiency and Greenhouse Gas Emissions Reductions - Alterations and Requirements (Energy Savings Act)”

Position: Support

Hearing Date: March 2, 2023

The Maryland Chapter of the Sierra Club urges a favorable report for HB904, one of the Sierra Club’s five priority bills for this session.¹

This bill updates and reforms Maryland’s EmPOWER energy efficiency program – which has significantly improved the energy efficiency of Maryland homes and commercial buildings – in order for it to more directly mitigate climate change by reducing carbon emissions from Maryland buildings. To do this, the bill provides incentives for households and businesses to electrify their buildings, and ends rebates for fossil fuel appliances and furnaces for homes. It also facilitates the coordination of both federal and state programs to deliver energy efficiency and electrification for low-income households, supports efforts to prepare homes for cleaner heating and hot water heating, and requires the Public Service Commission (PSC) to provide incentives for utilities to meet cost effectiveness and greenhouse gas emissions.

It is important to note several things that this legislation will not do. It will not ban new gas stoves, will not require anyone to install an efficient electric appliance, and will not require new buildings to be all-electric. Instead, consistent with the longstanding approach followed by the EmPOWER program, the legislation modifies State incentives and rebates for specified electrification actions that ratepayers themselves choose to undertake.

Historical and Legislative Background

The EmPOWER program, overall, has been effective at delivering energy efficiency in a cost-effective manner over the last 15 years. It has resulted in about \$12.7 billion in energy savings for utility customers at a cost of \$3.5 billion.² One problem, however, is that it has fallen short in providing benefits to low-income households. This concern is addressed by provisions included in HB904, and provisions in a separate bill this session (SB144/HB169) which sets increased energy efficiency goals for low-income families under the EmPOWER program. The Sierra Club is supporting that bill as well.

To address the climate crisis and meet Maryland’s climate goals, it is essential that EmPOWER and its annual budget (now close to \$379 million) work to reduce Maryland’s greenhouse gas (GHG) emissions. The Climate Solutions Now Act, enacted last year, set a goal of reducing carbon emissions by 60% from 2006 levels by 2031. It also called for EmPOWER to take on “mutually reinforcing goals,” including “greenhouse gas emissions reduction, energy savings, net customer benefits and reaching underserved

¹ This testimony discusses the substance of the bill as contemplated by sponsor amendments to be introduced. The bill came out of legislative drafting with several errors but, in order to have it introduced by the Senate Bill Introduction Date (February 6), it was decided that the bill would be introduced in that form rather than return it to the Department of Legislative Services for corrections.

² PSC, “The EmPOWER Maryland Energy Efficiency Act Report of 2022,” at 2 (hereafter, “PSC 2022 EmPOWER Report”) <https://www.psc.state.md.us/wp-content/uploads/2022-EmPOWER-Maryland-Energy-Efficiency-Act-Standard-Report.pdf>.

Founded in 1892, the Sierra Club is America’s oldest and largest grassroots environmental organization. The Maryland Chapter has over 70,000 members and supporters, and the Sierra Club nationwide has over 800,000 members and nearly four million supporters.

customers.” In July 2022, the PSC recommended that the General Assembly adopt greenhouse gas emissions goals for EmPOWER, measured on a gross lifecycle basis for the 2024 to 2026 cycle.³

HB904 calls for a 1.8% annual reduction in lifecycle greenhouse gas emissions from our buildings, achieved through the EmPOWER program. The bill needs to be passed in this legislative session for the new EmPOWER GHG goals to be effective for the next EmPOWER operating cycle.

Using Gas in Buildings Contributes to Climate Change and Adverse Health Results

Fuels burned in buildings generate about 13% of GHG emissions in Maryland.⁴ To meet Maryland’s climate goals and keep energy affordable for all Maryland residents, we need to reduce greenhouse gas emissions from burning fossil fuels in our buildings.

Efficient electric cold-climate heat pumps can be up to three times as efficient as gas-fired or electric-resistance heat, lowering operating costs for Maryland residents and lowering greenhouse gas emissions. As Maryland installs more solar and wind energy, emissions associated with electric heat pumps will fall even further.

Gas and other fossil fuels delivered about half of Maryland’s home heating as of 2020.⁵ Natural gas, made mostly of methane, leaks both in our streets and in our homes and businesses, and is a powerful greenhouse gas, 84-87 times as powerful as carbon dioxide over a 20-year period.⁶ Inside our homes, it also increases the likelihood that children will develop asthma. One study showed that about 13% of childhood asthma is attributed to gas appliances in homes.⁷

Reforming EmPOWER to Support Building Electrification

The EmPOWER rebates provided by this bill – along with rebates, credits and deductions available through the federal Inflation Reduction Act and the federal Infrastructure Investment and Jobs Act – will make the transition to clean, all-electric heating, electric cooking, hot water heating, and clothes drying affordable for a large number of Maryland residents. This financial support is particularly important for heat pumps, which typically have a higher upfront cost than gas furnaces or electric resistance heat, but lower operating costs.

EmPOWER currently offers rebates for gas-fired appliances.⁸ Continuing to invest in gas-fired heating, hot water heating, and clothes dryers commits us to higher greenhouse gas emissions for the life of these

³ PSC, “Recommendations on the Future of EmPOWER Maryland” (July 1, 2022). https://www.psc.state.md.us/wp-content/uploads/EmPOWER-Recommendations-to-General-Assembly_Final.pdf.

⁴ Including the electricity consumed by buildings, not all of which is yet generated from clean sources, the building sector accounts for about 40% of Maryland’s GHG emissions. Maryland Building Decarbonization Study, Energy and Environmental Economics (October 2021), at 5, https://mde.maryland.gov/programs/Air/ClimateChange/MCCC/Documents/MWG_Buildings%20Ad%20Hoc%20Group/E3%20Maryland%20Building%20Decarbonization%20Study%20-%20Final%20Report.pdf.

⁵ U.S. Energy Information Administration, “Residential Energy Consumption Survey” (2020), <https://www.eia.gov/consumption/residential/data/2020/index.php?view=state>.

⁶ International Energy Agency, <https://www.iea.org/reports/methane-tracker-2021/methane-and-climate-change>

⁷ Talor Gruenwald, Brady A. Seals, Luke D. Knibbs, and H. Dean Hosgood III, “Population Attributable Fraction of Gas Stoves and Childhood Asthma in the United States,” <https://www.mdpi.com/1660-4601/20/1/75>.

⁸ Washington Gas, https://www.washingtongas.com/home-owners/savings/rebates?utm_campaign=ee_brand&utm_source=google&utm_medium=cpc&utm_content=english&

appliances, typically 15-18 years. It also impairs the health of our children. This bill will end these rebates, and instead encourage homeowners and businesses to transition to electric heat pumps as their heating equipment reaches the end of its life.

It is important to plan ahead for Maryland homes to be ready for the installation of electric heat pumps and appliances. If a fossil-fuel furnace breaks down during winter and the home does not have the necessary wiring and breaker box, the furnace likely will be replaced by another fossil-fuel furnace because of the need for a replacement to be installed quickly.

EmPOWER's audit program, as provided in this bill, offers a solution. During an EmPOWER home energy audit, which is done before major efficiency and appliance rebates are authorized, the auditor will evaluate the home to see whether it is ready for heat pumps and other efficient electric appliances. Should the home need electrical upgrades, the bill will provide rebates to upgrade wiring and breaker boxes if the Inflation Reduction Act does not cover the upgrade.

Replacing electric resistance heat with heat pumps also will be important in managing the load on the electric grid and lowering bills for Maryland households, especially low-income households. As noted above, electric heat pumps can be as much as three times as efficient as electric resistance heat for the 27% of Maryland homes that use electric resistance heat.⁹ By replacing electric resistance heat with heat pumps, these homes will have much smaller electric bills and a significantly lower impact on the electricity load at peak times. As with those replacing a gas furnace with a heat pump, the incentives from EmPOWER and the Inflation Reduction Act will support this transition.

To support utilities in this transition from GHG-intensive appliances and furnaces to efficient electric ones, the bill provides for EmPOWER to offer utilities incentives for achieving the greenhouse gas and other EmPOWER goals. It also includes penalties for failure to achieve those goals. The proposed changes to EmPOWER in this bill continue to require investments made by EmPOWER to be cost effective for EmPOWER programs delivered by the utilities.

Another important reason why EmPOWER needs to support the ability of low-income households to electrify their residences is to avoid burdening them with a potential increase in the price of gas. The Office of the People's Counsel estimates that gas bills could rise by more than 100% by 2035 if gas utilities continue to invest in gas infrastructure when, at the same time, fewer utility customers pay the bills for this infrastructure because they have switched from gas to electric homes.¹⁰ EmPOWER incentives along with Inflation Reduction Act incentives will enable a significant portion of low-income families to have efficient, safe homes heated by heat pumps.

Braiding together the incentives available to low-income families can be challenging. This bill will provide community outreach specialists to help with this. Along with SB144/HB169 (noted above), which sets increased energy efficiency goals for low-income families under the EmPOWER program, HB904 will help assure that low-income families benefit from electrification and get a fair shake from EmPOWER.

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⁹ U.S. Energy Information Administration, "Renewable Energy Consumption Survey, 2020," <https://www.eia.gov/consumption/residential/data/2020/index.php?view=state>.

¹⁰ Office of the People's Counsel, "Climate Policy for Maryland's Gas Utilities, Financial Implications," at 19, (November 2022), <https://opc.maryland.gov/Gas-Rates-Climate-Report>.

Lastly, HB904 calls for 85% of utility savings to take place in the impacted buildings, behind the meter. This is important because EmPOWER, from its inception, has been financed by a small surcharge on ratepayers' bills, and thus ratepayers should be the beneficiaries of savings paid for by these charges.

In last year's debate on the Climate Solutions Now Act, a number of utility representatives questioned whether building electrification would stress our electric grid. The Building Energy Transition Plan, prepared for the Maryland Climate Commission by consultant E3, shows that, with an all-electric building system, peak winter electric loads in 2045 would be less than 20% higher than 2021 loads and that costs would be lower than costs for a system that relied more heavily on fossil fuels.¹¹

Conclusion

The Maryland Sierra Club strongly supports HB904. We urge a favorable report with the sponsor amendments.

Chris Stix
Maryland Sierra Club Clean Energy Team
stixchris@gmail.com

Josh Tulkin
Chapter Director
Josh.Tulkin@MDSierra.org

¹¹ Maryland Commission on Climate Change, "Building Energy Transition Plan, at 12, 15 (November 2021), <https://opc.maryland.gov/Portals/0/Files/2021%20Annual%20Report%20Appendices%20FINAL.pdf> The policy proposal by the Commission's Mitigation Working Group policy did allow for mixed fuels in commercial buildings. A recently released report from BG&E for their territory came to different conclusions, but it relied on a number of dubious assumptions concerning continued investment in the gas system and changes in the electricity load shape.