American Council for an Energy-Efficient Economy
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February 15, 2022

Testimony of Bryan Howard
Director, State Policy, American Council for an Energy-Efficient Economy
Before the Senate Education, Health, and Environmental Affairs Committee
RE: Support of Senate Bill 0528, the Climate Solutions Now Act

Honorable Members of the Committee:

On behalf of the American Council for an Energy-Efficient Economy (ACEEE), I write in support of Senate Bill 0528 (SB 528), the Climate Solutions Now Act. ACEEE is a nonprofit research organization based in Washington, D.C. that conducts research and analysis on energy efficiency policy and programs. We have been active on energy efficiency issues at the national, state, and local level for more than forty years, collecting extensive best-practice information on topics including energy efficiency programs. ACEEE has a long history of work in the state including recent participation in the Maryland Climate Change Commission (MCCC) Buildings Sub-Group (BSG) and Maryland Public Service Commission, Future Program Working Group (FPWG) related to the EmPOWER program.

SB 528 is vital legislation to achieve net-zero statewide greenhouse gas emissions in Maryland by 2045. There are important provisions of the legislation which are critical for economic development, energy affordability, and job creation in Maryland. We support the legislation but do recommend improvements to the bill that would help ensure that the proposed policies are done in a cost-effective manner while ensuring that policies are implemented equitably.

While there are many critical elements of the legislation, we focus our testimony on the on some of the provisions related to buildings and the energy efficiency and conservation goals for designated utilities.

Building Performance Standards:

Residential and commercial buildings in Maryland account for nearly 60 percent of energy consumption in the state.[1] Unfortunately, the energy being used to heat and cool these buildings is often wasted in inefficient equipment or in buildings that are poorly insulated and drafty. This passes unneeded costs onto consumers, many of whom are those who can least afford high utility bills.

In 2020 ACEEE released an updated analysis on household energy burdens (i.e. those that pay more than 6% of income on energy bills) and found that high energy burdens remain a persistent national challenge. This research specifically examined energy burdens in Baltimore, and the results are troubling. We found that in the Baltimore metro area (pre-pandemic), the median energy burden of low-income households was four times higher than non-low-income households, and Black households paid 34% more of their income on energy bills than non-Hispanic white households. In addition, at

[1] U.S. Energy Information Administration Maryland State Profile and Energy Estimates. https://www.eia.gov/state/?sid=MD#tabs-2

least one-quarter of low-income households had energy burdens above 18%, which nine times higher than the average U.S. household.[2]

Provisions of the bill to improve renovation standards for large buildings (including multifamily buildings) could help alleviate energy burdens in Maryland communities, support the state's emission reduction targets and provide additional benefits. Such standards have been adopted in Washington State, Colorado and by municipalities including the District of Columbia, New York City, St. Louis, Boston and Denver. These actions are buoyed by the recent launch of National Building Performance Standards Coalition, which is comprised of 33 state and local governments (including Montgomery, Prince Georges County and Annapolis) which have committed design and implement building performance policies and programs in their jurisdictions.[3]

Large savings are generally possible in existing buildings as shown by a federal deep retrofit program that reduced energy use an average of 38% as part of building renovations.[4] Often energy efficiency upgrades can make buildings more comfortable and healthier by improving indoor air quality and making buildings more comfortable. Our current public health crisis should serve as an important reminder of the need to improve the health and safety of buildings across the state.

While the bill provisions are important in reducing the consumption of inefficient buildings in Maryland there are some opportunities to improve it. Based on our research and experience with other programs ACEEE recommends incorporation of language to ensure these standards do not negatively impact residents of affordable housing. To that end we support amendment language included in the testimony of the National Housing Trust regarding tenant consultation and focused consideration of affordable housing in the implementation of the standard.

In addition, ACEEE recommends that the bill allow utilities to count savings from energy efficiency or other emissions reduction programs that help covered buildings comply. This should be focused on properties from economically distressed areas of the state or other factors that could make compliance challenging.

Building Codes:

The burning of fossil fuels in buildings accounts for 13% of total U.S. emissions.[5] Reducing these numbers through efficiency and electrification is a critical step toward reaching total decarbonization. The legislation would broadly update state building codes to electrify building operations (e.g. space

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[2] More information on Baltimore area energy burdens is available on the ACEEE website: https://www.aceee.org/sites/default/files/pdfs/aceee-01_energy_burden_-_baltimore.pdf

[3] About the National BPS Coalition https://nationalbpscoalition.org/

[4] Energy Savings from GSA's National Deep Energy Retrofit Program. Oak Ridge, Tennessee: Oak Ridge National Laboratory. https://www.gsa.gov/cdnstatic/NDEREnergySavingsReport5.pdf.

[5] Sources of Greenhouse Gas Emissions. U.S. Environmental Protection Agency, https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions#commercial-and-residential

and water heating), and imbed electric vehicle (EV) charging infrastructure. These provisions are consistent with recommendations from ACEEE research.[6]

ACEEE research also finds programs to promote the electrification of space heating, water heating, and other end uses of fossil fuels in buildings are expanding across the country. A recent update and expansion of a 2020 ACEEE report found 42 building electrification programs across state, local and utility levels.[7] The inclusion of EV charging infrastructure in building codes is becoming more common. Several states and localities in the region including Vermont, Massachusetts and the District of Columbia have implemented building code requirements for EV charging infrastructure. [8]

While electrifying buildings can have benefits ACEEE strongly encourages the inclusion of energy efficiency targets in these electric code provisions. While Maryland generally has a strong track record of energy efficiency in its code adoption process, the legislation should embed efficiency in these future codes, such as requiring at least 40% energy use reductions as of 2025.

Including efficiency in the process can have multiple advantages. Energy efficiency can reduce certain construction costs and total cost to homeowners and businesses which can ease the transition to all electric construction. Efficient new homes and commercial buildings are also more comfortable during temperature spikes such as extreme heat and cold while also reducing reliability concerns associated with broader electrification. This will also ensure that energy savings are locked in at the point of construction, which avoids unnecessary energy costs to consumers over the lifetime use of a building. It can also avoid the logistical challenges and higher costs that arise during a renovation process.

Utility Energy Efficiency and Conservation Goals:

ACEEE closely tracks efficiency policies including energy efficiency targets for utilities, often called energy efficiency resource standards (EERS). These targets are critical to encouraging savings over the near and long term, and our research[9] and research from the Brattle Group finds they are the number one policy driver of energy efficiency savings[10]. While Maryland has a quality EERS of 2 percent gross energy savings (or 1.6 percent net) the existing EERS falls below several states in the Northeast and others throughout the country.

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[6] Cohn, C., and N. W. Esram. 2022. Building Electrification: Programs and Best Practices. Washington, DC: American Council for an Energy-Efficient Economy. aceee.org/researchreport/b2201.

[7] IBID

[8] Howard, B., S. Vaidyanathan, C. Cohn, N. Henner, and B. Jennings. 2021. The State Transportation Electrification Scorecard. Washington, DC: ACEEE. https://www.aceee.org/sites/default/files/pdfs/t2101.pdf

[9] Policies Matter: Creating a Foundation for an Energy-Efficient Utility of the Future. Washington, DC: ACEEE. https://www.aceee.org/sites/default/files/policies-matter.pdf.

[10] Energy Efficiency Administrator Models: Relative Strengths and Impact on Energy Efficiency Program Success. Boston, MA: The Brattle Group. https://www.brattle.com/news-and-knowledge/news/report-by-brattle-economists-evaluates-effectiveness-of-energy-efficiency-administrator-models.

The proposed legislation would ramp up the savings goals to 2.25 percent and incrementally reach 2.75 percent gross energy -savings in 2027. The average of the proposed EERS goals from 2024 to 2027 is 2.57 percent gross savings (or 2.05 percent net) would place Maryland as a national leader, but still behind Massachusetts.

The table below is data taken from the ACEEE 2021 State Progress Report of states with an EERS and the five-year average electric target based on net savings.[11] It includes Maryland's current and projected EERS target for comparison. For purposes of comparison, for states reporting savings on a gross basis goals have been converted to net using a net-to-gross factor of 0.84.

State	% of electricity sales covered by EERS policy	Approximate average annual electric savings target for 2020–2025
Massachusetts*	85%	2.7%
Maryland Under SB 528	97%	2.05%
New York	100%	2.0%
Rhode Island	99%	2.0%
Illinois	89%	2.0%
Vermont	98%	1.7%
Colorado	56%	1.7%
New Jersey	100%	1.6%
Maryland Under Current Law	97%	1.6%
California	73%	1.5%
Minnesota	100%	1.4%
Hawaii	100%	1.4%
Virginia	87%	1.2%
Oregon	61%	1.2%
Arkansas	50%	1.2%
Connecticut	93%	1.1%
Nevada	88%	1.1%
Maine	100%	1.0%

[11] Berg, W., E. Cooper, and M. DiMascio. 2022. State Energy Efficiency Scorecard: 2021 Progress Report. Washington, DC: ACEEE. aceee.org/research-report/u2201.

Michigan	100%	1.0%
New Mexico	69%	1.0%
Iowa	75%	0.9%
District of Columbia	100%	0.8%
Wisconsin	100%	0.7%
Washington	83%	0.7%
Pennsylvania	96%	0.6%
Texas	74%	0.2%
North Carolina	100%	Combined EERS/RPS

***Massachusetts goals show Mass Save electric savings targets for 2019-21 as reported in ACEEE's State Energy Efficiency Scorecard: 2021 Progress Report (2022). New plans for 2022-24 programs approved by the Massachusetts DPU in February 2022 have set new targets aligned with recent legislative goals to reduce statewide GHG emissions 50% below 1990 levels by 2030, and achieve net zero statewide GHG emissions by 2050. The realignment includes a far greater investment in electrification to leverage the growing carbon benefits of parallel improvements to the state's Renewable Portfolio Standard under Next Generation Climate Roadmap legislation. ACEEE is working to update our EERS tracking in a way that accurately reflects the relative carbon benefits of these new goals, either on an MMBtu or avoided GHG basis.**

It's also important to note that Maryland is well positioned to meet the increased target. Based on reporting from 2019, the state is already documenting 2.6% gross savings which is well above the existing codified target and close to the proposed updated target for 2027.

Whether as a part of SB 528 or in complementary legislation, ACEEE recommends revisions to the EmPOWER program better support our climate goals and energy needs.

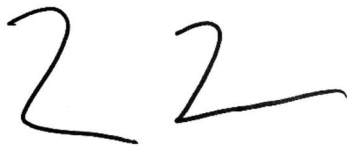
Reforms include:

- Requiring that the core objective of EmPOWER shift from focusing solely on reduced electricity consumption to emphasizing reduced/avoided greenhouse gas emissions,
- Update EmPOWER to allow for fuel switching, and
- Codifying benefits to low-income customers potentially through savings goals or spending targets.

There are ongoing deliberations within the FPWG to update the EmPOWER to better align with state climate policy and equity objectives along the lines of the above recommendations. While the Public Service Commission has yet to provide any recommendations to update the EmPOWER statue, the General Assembly should monitor progress closely as this valuable program will sunset in 2023 without legislative action.

We urge support of SB 528, which would put Maryland on an important path towards greater energy efficiency while reducing emissions.

Sincerely,



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