BBA_testimony_AaronOldenburg.pdf
Uploaded by: Aaron Oldenburg
Position: FAV

My partner and I bought a 100-year-old house in northeast Baltimore city back in 2017, so I can tell you from experience how important it is for homes to be all electric from the beginning. Our house uses gas for heating, drying clothes and cooking, and we are on a slow, expensive path toward converting to electric-only. Simply upgrading our panel to allow for 220v outlets will be $5000, and that's just the beginning (not to mention the sewage pipe we need to reroute to allow for the upgrade).

Any new constructions of houses that use gas will have fossil gas (a better term than "natural" gas) usage baked into them for years. This will derail our goal of bringing down emissions in Maryland, as fossil gas extraction and transport leaks the potent greenhouse gas methane into the atmosphere.

The conversion of all homes, new and old, to electric-only is how we move the powering and heating of homes to green energy. However, converting older houses is a bigger challenge than making them electric from the beginning. The most obvious next step is to make sure all new homes are already only using electricity to ensure that homeowners don't need to go through costly conversions in the future, and to make sure that our state stays on track for our emissions goals.

Thanks you,
Aaron Oldenburg
Baltimore, 21214

2024 Testimony - SB 1023 - Better Buildings Act -

Uploaded by: Ashley Egan

Position: FAV

Unitarian Universalist Legislative Ministry of Maryland

Testimony in Support
SB 1023 - Maryland Building Performance Standards -
Fossil Fuel Use, Energy Conservation, and Electric- and Solar-Ready Standards
(Better Buildings Act of 2024)

To: Chair Feldman and Members of the
Education, Energy and Environment Committee
From: Phil Webster, PhD
Lead Advocate, Climate Change
Unitarian Universalist Legislative Ministry of Maryland.
Date: March 1, 2024

The Unitarian Universalist Legislative Ministry of Maryland (UULM-MD) strongly supports **SB 1023 - Maryland Building Performance Standards - Fossil Fuel Use, Energy Conservation, and Electric- and Solar-Ready Standards (Better Buildings Act of 2024)** and urges a FAVORABLE report by the committee.

The UULM-MD is a statewide faith-based advocacy organization, with over 1,200 members, based on the Principles of Unitarian Universalism. Unitarian Universalists believe in *"justice and equity in human relations"* and "*respect for the interconnected web of all existence of which we are a part."*

The Better Buildings Act meets several very important goals in the effort to protect Maryland from the ravages of climate change and environmental injustice.

The Climate Solutions Now (CSN) Act of 2022 set very ambitious goals for reduction in emissions of greenhouse gasses. The original bill included language to decarbonize construction—both in new buildings and substantial modifications. This language was stripped from the bill and replaced with a study of the capabilities of the electrical grid. That study, known as the Brattle Report, has been completed and clearly states that the grid can handle the anticipated growth.

The Better Buildings Act reintroduces the requirements that were removed from the Climate Solutions Now Act of 2022.

The Better Buildings Act would be the most cost effective legislative action that Maryland could take. The direct cost to the state budget is practically zero and the impacts would be significant for the climate.

Analysis from RMI.org shows that all-electric, single-family homes cost $350-$400 less to construct in Maryland than mixed-fuel homes, which use both gas and electricity. All-electric houses utilize heat pumps—which are 2–4 times more efficient than comparable gas appliances—for space heating and water heating. Consequently, a typical all-electric home in Maryland will save its owners $510 on utilities each year. That's 20% less than the annual utility bills for a Baltimore household living in a new home with gas. However, imagine what it will be when gas prices are expected to increase as much as 130% as we approach 2030!

Leakage of methane gas from an aging—and poorly maintained—infrastructure is also a significant problem. The IPCC (Intergovernmental Panel on Climate Change) estimates the fossil fuel sector accounts for about 35% of anthropogenic methane emissions. Methane gas is an extremely potent greenhouse gas, over 80 times more potent than CO_2. However, its atmospheric lifetime is approximately 10 years, as compared between 300 to 1000 years for CO_2, which means we would get more immediate benefits from stopping the use of methane.

Decarbonization of all new buildings and substantial renovations is required to meet the legally mandated requirements of the Climate Solutions Now Act.

All-electric buildings are a health priority for Maryland. Burning fossil fuels for heating and hot water produces pollution that harms Marylanders, especially children, the elderly, people of color, and low-income households. Maryland can prioritize health by helping residents and businesses make the switch to all-electric appliances.

Adoption of the Better Buildings Act would:

- Save Marylanders money for both construction and utilities,
- Have negligible impact on the state budget
- Help meet the greenhouse gas emissions goals
- Provide healthier homes and safer workplaces

We strongly support this bill and urge a FAVORABLE report in committee.

Phil Webster

Phil Webster, PhD
Lead Advocate, Climate Change UULM-MD

SB1023 Written Testimony.docx.pdf
Uploaded by: Brahnan Greben
Position: FAV

LETTERHEAD

TESTIMONY IN SUPPORT OF SB1023
Maryland Building Performance Standards – Fossil Fuel Use, Energy Conservation, and Electric – and Solar – Ready Standards
(Better Buildings Act of 2024)

The Electrify Our Future organization strongly encourages the Committee to recommend the favorable reporting of SB1023, also known as the Better Buildings Act of 2024, introduced by Senator Brooks, Young, and Lam.

Electrify Our Future (EOF) is a student-led organization, advocating for electrification throughout the state of Maryland. Electrify Our Future, consists of two branches, one composed of Baltimore County students, and the other of Howard County students. As an organization, we work to educate Maryland residents and communities about the benefits of electrification, whilst staying politically active to support legislative action favoring electrification. Electrify Our Future commends the Maryland General Assembly for its prior work in combat climate change. However, Electrify Our Future recognizes that more legislation needs to be passed to further the fight against the pressing issue of global warming and pollution. The Better Building Act of 2024 greatly aligns with the perspectives of our organization, as we believe this bill will progress the future of electrification, allowing future Maryland generations to live sustainable lives.

Senate Bill 1023, addresses two striking issues regarding Marylanders; air pollution and overly expensive electrical billing.

Climate change and global warming have caused many of the environmental problems our state, nation, and planet face today. The state of Maryland is home to the beauties of nature, yet the overuse of fossil fuels is rapidly deteriorating our glorious state. From 2017 to 2023, Maryland residential, commercial, and institutional buildings recorded a 3.7% increase in fossil fuel pollution. Maryland's Climate Change Program emphasized a goal in which the state of Maryland would record a net zero carbon pollution by 2045. However, based on current trends, Maryland's infrastructure is putting a halt to achieving this task. SB1023 states "a requirement that new buildings meet all water and space heating demands of the building without the use of fossil fuels." (Section 12-503.1(B)(1)(i)) Additionally, the Better Buildings Act of 2024, encourages the use of electric, non-fossil-fuel-dependent vehicles, by demanding greater implementation of electric vehicle charging stations. Overall, this bill establishes guidelines and provisions for making a more sustainable Maryland.

Augmented rates of pollution are being linked to thousands of cases in which Maryland citizens endured negative health effects, as a result of pollution and smog production. Smog and dense air pollution are proven to cause severe respiratory problems, which may result in premature death. Individuals living in highly polluted urban environments are the most susceptible to these conditions. Oftentimes, those living in poorer socioeconomic communities have the highest exposure to pollution, as many of their households rely upon older machinery,

requiring more fossil fuel input. For example, residents in Baltimore City, on average pay $2,556 per year for electricity and energy alone. In comparison, to the average salary of a Baltimore resident, according to the United States Census, $2,556 equates to approximately 4.38% of their yearly income. If the Maryland General Assembly were to pass the Better Buildings Act of 2024, Maryland citizens would feel assured that their government is taking action that meets the people's medical and financial needs.

Climate change is a matter that needs to be met with a sense of urgency. Passing SB1023 will build upon Maryland's basis for a cleaner future, by outlining new requirements for Maryland infrastructure and transportation. As a state, we must all fulfill our respective responsibilities to make Maryland, a better environment for our children and grandchildren, to come.

For these reasons, the Electrify Our Future organization asks for a FAVORABLE REPORT on SB1023.

Testimony on Better Buildings Act - Senate.pdf
Uploaded by: Bruce Davis
Position: FAV

Testimony Concerning Senate Bill 1023
Better Buildings Act of 2024

Position: Support

Hearing date: March 4, 2024

Committee: Education, Energy, and the Environment

Personal Testimony by Bruce Davis
701 King Farm Blvd, Apt 307
Rockville, MD 20850
Bdavis39@comcast.net
(240) 477-5324

Dear Committee Members. I write as a former science educator, retired lawyer, amateur nature photographer, nature lover, Unitarian Universalist, Climate Reality leader, grandfather, and concerned citizen. I've been around long enough to get some first-hand views of the effects of climate change – a close call from a flash flood near my former house, the absence of monarch butterflies in our pollinator garden, the ghost forests at Assateague Island, and the sunny day flooding in Annapolis. And I've read enough scientific and popular literature to appreciate the vast misery and suffering that climate change has caused elsewhere (one-third of Pakistan under water, for example) and will certainly cause here, unless we do something about it. And we know what we must do – stop burning fossil fuels for energy. This is why I urge you to issue a favorable report on the Better Buildings Act.

The General Assembly can be justly proud of the Climate Solutions Now Act (CSNA), passed in 2022 without the Governor's signature. The CSNA set goals of reducing Maryland's greenhouse gas (GHG) emissions by 60% (from 2006 levels) by 2031 and to net zero by 2045. In furtherance of those goals, the CSNA required (among other things) that the Maryland Department of the Environment (MDE) study how to achieve these goals. MDE responded with Maryland's Climate Pollution Reduction Plan, published in December 2023.

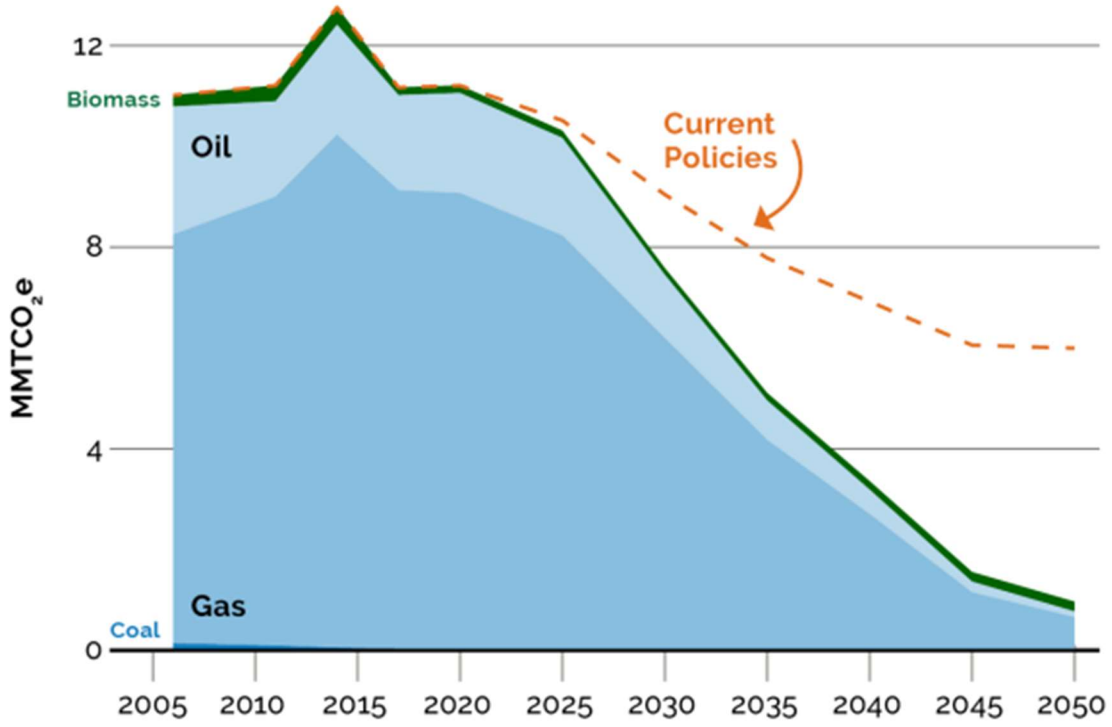
The Climate Pollution Reduction Plan proposes policies for reducing greenhouse gas (GHG) pollution attributable to the building sector. Direct fuel used in this sector accounted for 16% of Maryland's GHG pollution in 2020. The new or modified policies include:

- Strengthen EV-Ready Standards for New Buildings.
- Establish Zero-Emission Heating Equipment Standard (new) - Requires new space and water heating systems to produce zero direct emissions starting later this decade.
- Zero-Emission Heating Equipment Standard (new) - Requires new space and water heating systems to produce zero direct emissions starting later this decade.
- Clean Heat Standard (new) - Requires clean heat measures to be deployed in buildings at the pace required to achieve the state's GHG reduction requirements.

The Better Buildings Act puts these policies into action and augments them with policies to make certain buildings "solar-ready" – i.e. capable of accepting the installation of solar panels on roof areas. Key elements of the legislation are for new buildings to meet water and space heading demands without relying on fossil fuels, conservation of energy, and requiring certain buildings to meet electric- and solar-ready standards. The net effect of these provisions will be to reduce carbon pollution emissions both directly (through onsite combustion) and indirectly (through electric generation), improve air quality, and substantially lower utility costs for building owners, homeowners, renters, and tenants.

Enacting the Bill and related legislation to reform EmPOWER Maryland is essential to meeting Maryland's climate goals established by the CSNA. This is illustrated in the chart below from Maryland's Climate Pollution Reduction Plan:

Figure 5: **Direct GHG emissions from fuel use in Maryland's building sector**, historical and projected, from 2006 to 2050 based on current and new policies



As shown by the chart, current policies are inadequate to achieve Maryland's GHG reduction goals. The Better Buildings Act, coupled with separate legislation to reform EmPOWER Maryland, is necessary to accomplish Maryland's goals.

I urge the Committee to report the Bill favorably.

SB 1023 Maryland Building Performance Standards –
Uploaded by: Cait Kerr
Position: FAV

The Nature Conservancy
Protecting nature. Preserving life.

The Nature Conservancy
Maryland/DC Chapter
425 Barlow Pl., Ste 100
Bethesda, MD 20814

tel (301) 897-8570
fax (301) 897-0858
nature.org

Monday, March 4, 2024

TO: Brian Feldman, Chair of the Senate Education, Energy, and the Environment Committee, and Committee Members
FROM: Cait Kerr, The Nature Conservancy, State Policy Manager; Mariana Rosales, The Nature Conservancy, Director of Climate
POSITION: Support SB 1023 Maryland Building Performance Standards – Fossil Fuel Use, Energy Conservation, and Electric– and Solar–Ready Standards (Better Buildings Act of 2024)

The Nature Conservancy (TNC) supports SB 1023 offered by Senators Brooks, Lewis Young, and Lam. SB 1023 will require new homes and buildings to incorporate the most energy-efficient equipment, safety standards, clean air equipment, and effective insulation. It aims to provide lasting cost savings, health benefits, and climate resilience to generations of residents without increasing the cost to build. This bill is consistent with Maryland's Building Energy Transition Plan developed by the Maryland Commission on Climate Change (MCCC). One of the four core recommendations in this plan is that, "The General Assembly should require the Maryland Building Code Administration to adopt a code that ensures that new buildings meet all water and space heating demand without the use of fossil fuels," and further states that these requirements should include that all new buildings "are ready for solar, electric vehicle charging, and building-grid interaction. This code shall apply to all new residential, commercial, and state-funded buildings beginning as early as possible but no later than 2024."

TNC, as a member of the Mitigation Working Group and the Buildings Sub-Group, provided funding for the Maryland Building Decarbonization Study, which supported the MCCC's Building Energy Transition Plan. This study modeled three potential building decarbonization scenarios and made recommendations for Maryland to achieve deep decarbonization of building end-uses by mid-century, while also analyzing the costs and benefits of each potential pathway. One conclusion from this study was that "All-electric new construction is found to be less expensive considering both equipment and fuel costs than those connecting to gas grid and using fuels for heating."

According to the state's Greenhouse Gas Emissions Inventory, buildings sector emissions accounted for approximately 16.6 percent of the state's total greenhouse gas emissions in 2020. This is the third largest emissions source in our state. The Building Energy Transition Plan is intended to serve as a roadmap for reaching net-zero emissions from residential and commercial buildings by 2045, consistent with the state's commitments under the Climate Solutions Now Act of 2022. SB 1023 offers a cost-effective method to put the MCCC's recommendations into action in order to set Maryland on a clear path toward significant buildings sector emissions reductions that aligns with our commitments.

TNC commends Senators Brooks, Lewis Young, and Lam on putting forward this bill, which aims to implement the MCCC's building decarbonization recommendations in order to achieve our climate goals, while also reducing consumers' costs, providing long-term health benefits, and promoting new construction that is resilient to extreme weather and increasing energy demands.

Therefore, we urge a favorable report on SB 1023.

SB1023_LWVMD_FAV_2024.pdf
Uploaded by: Casey Hunter
Position: FAV

Testimony to the SENATE EDUCATION, ENERGY, AND THE ENVIRONMENT COMMITTEE

SB 1023 - Maryland Building Performance Standards – Fossil Fuel Use, Energy Conservation, and Electric– and Solar–Ready Standards (Better Buildings Act of 2024)

POSITION: Support

By: Linda T. Kohn, President

Date: March 4, 2024

Since the emergence of the environmental movement in the 1970's, the League of Women Voters has advocated for policies that protect our planet and promote public health. The League believes in advancing comprehensive legislation to mitigate the climate crisis, and accelerate the transition to predominant reliance on renewable energy.

The League of Women Voters of Maryland **supports SB 1023, the Better Buildings Act,** which would protect our health from indoor air pollution, reduce our dependence on expensive methane gas, and move us closer to a fossil-free energy system. **SB 1023** would enact key Building Performance Standards requiring new buildings to meet energy demands without using fossil fuels.

The Better Buildings Act would ensure that Maryland is a part of the new green future. Residential and commercial buildings that powered *without* fossil fuels are cheaper to build, cheaper to operate, and minimize both indoor and outdoor air pollution. In 2020, buildings in Maryland contributed nearly a third of greenhouse gas emissions statewide.[1] This makes building electrification a top priority for Maryland to reach its goals of reducing emissions 60% by 2031 and achieving net-zero emissions by 2045.

So much is at stake as we approach the deadlines for Maryland's climate targets. There is no more time to delay meaningful climate action.

The League of Women Voters of Maryland **strongly urges a favorable report on SB 1023.**

[1] Building Energy Performance Standards: What You Need to Know, Maryland Department of the Environment, 31 Oct. 2023.

SB1023_Better_Buildings_Act_MLC_FAV.pdf
Uploaded by: Cecilia Plante
Position: FAV

TESTIMONY FOR SB1023
Maryland Building Performance Standards – Fossil Fuel Use, Energy Conservation, and Electric– and Solar–Ready Standards (Better Buildings Act of 2024)

Bill Sponsor: Senator Brooks
Committee: Education, Energy, and the Environment
Organization Submitting: Maryland Legislative Coalition
Person Submitting: Cecilia Plante, co-chair
Position: FAVORABLE WITH AMENDMENTS

I am submitting this testimony in favor of SB1023 on behalf of the Maryland Legislative Coalition. The Maryland Legislative Coalition is an association of activists - individuals and grassroots groups in every district in the state. We are unpaid citizen lobbyists and our Coalition supports well over 30,000 members.

The buildings sector is the most complicated facet of the electrification process that Maryland has embarked on. In order to meet the state's statutory goal of zero greenhouse gas emissions by 2045, we will have to electrify the entire buildings sector, including existing as well as new buildings. We cannot achieve this goal if we continue to build new buildings that rely on fossil fuel usage. We MUST cut that off immediately in order to control the size of the problem. We also need a plan for existing buildings to get rid of the fossil fuel infrastructure that they were built to use.

This bill, if enacted, would provide a partial solution to the problem. For new buildings, and any additions to existing buildings that increase heat loads by 30% or more, as well as any other significant improvements to use only electric energy, beginning October 1, 2026. It also requires EV-readiness, and solar readiness.

However, there is not a plan to get rid of fossil fuel appliances in existing homes, including gas stoves although energy efficient heat pumps and heat pump water heaters are cleaner, greener, and less costly than those using fossil fuels. Our members would like to see the legislature take this hard, but necessary step to making our lives cleaner and healthier and less costly. We support this bill and recommend a **FAVORABLE WITH AMENDMENTS** report in committee.

Testimony in favor of SB1023, the Better Buildings

Uploaded by: Cheryl Arney

Position: FAV

To Members of the Education, Energy and Environment Committee,

I would like to submit FAVORABLE testimony for SB1023, the Better Buildings Act of 2024.

As the Baltimore Sun said in its editorial on January 25 (**Climate change must be on top of the General Assembly agenda this year)**, "...it's simply irresponsible to plan for greatly expanded consumption of natural gas". I agree. If Maryland is to eliminate greenhouse gas emissions from our building stock, we must act to begin that process. This bill does that by requiring new buildings to generate heat and hot water without using fossil fuels.

And that's totally possible. When I bought my new home in 1980, there were no gas lines in my new development. My house was heated and cooled by an electric heat pump, and its water was heated by an electric hot water heater. All of the homes in this new neighborhood were quickly sold. My family was quite satisfied with our all electric home. I submit that it's time we go "back to the future" and require new buildings in Maryland to be all electric for heat and hot water. Heat pumps are now more effective at providing heat at much lower temperatures and much more efficient than they were in 1980. And they have always been much more efficient when compared to natural gas.

At a time of greater budget constraints in Maryland, it's noteworthy that this bill will require very little state money to implement. But at the same time, it gives Maryland a lot of bang for its buck in mitigating climate change by gradually but steadily converting our building stock to be fossil fuel free.

At the same time it will save future building owners money because of the other energy conservation requirements in this bill. Those same efficiency requirements will mean less electricity is required from the grid.

Getting rid of gas furnaces in new buildings also makes them safer. If a gas furnace is not operating properly, it can release carbon monoxide into the air. If undetected and not remedied, that can be a killer.

For all these reasons, I ask that you return a FAVORABLE vote on SB1023. Thank you.

Cheryl Arney
4361 Wild Filly Ct.
Ellicott City MD 21042

SB1023 Better Buildings Act - AIA Maryland Support

Uploaded by: Chris Parts

Position: FAV

AIA Maryland

29 February 2024

The Honorable Senator Brian Feldman
Chair of the Education, Energy, and the Environment Committee
2 West
Miller Senate Office Building
Annapolis, Maryland 21401

Re: Letter of Support for SB 1023
Maryland Building Performance Standards – Fossil Fuel Use, Energy Conservation, and Electric- and Solar-Ready Standards (Better Buildings Act of 2024)

Dear Chair Feldman and members of the Education, Energy, and the Environment Committee:

I am writing to voice AIA Maryland's support for Senate Bill 01023 – The Better Buildings Act of 2024. AIA Maryland represents nearly 2,000 architects in the state of Maryland and advocates for the profession and the quality of the built environment. We are architects and we have an important role in project planning, design, and systems implementation.

The key points of this legislation are:

- Establishing a standard that requires new buildings to meet all water and space heating demands without the use of fossil fuels
- Buildings that receive a waiver from this standard, shall be electric-ready.
- New buildings will be solar-ready if they meet certain parameters (20,000 sf or more of continuous roof area and 2 stories or less above grade plane).
- Buildings meet the electric vehicle charging infrastructure requirements.

We believe it is reasonable for the waivers permitted through this legislation that enables certain functions to operate with fossil fuel sources, but requires the buildings to be electric-ready, having adequate panel capacity and space to accommodate future install of High-efficiency electric appliances.

This bill aligns with building performance standards that calculates Site Energy Use Intensity, effectively energy consumed per sf of building area. This sets performance requirements for buildings to meet, progressing toward a net zero energy balance on or after October 1, 2035

As architects, we are happy to report that many of our projects are already being designed to meet water and space heating demands without the use of fossil fuels. This includes schools, commercial buildings, multifamily residences and many other types of projects. EV charging is certainly on the rise, and standards help in providing predictable guidelines to follow.

As identified in Maryland's climate pathway report, in the building sector, we need electrification and efficiency measures to be a priority to achieve our goals. The easiest piece of this is working with new buildings and those buildings that are being substantially renovated. Integrating renewable energy sources or capacity into building electrification helps to provide added grid stability and the opportunity to reduce peak loads. The grid study identified sufficient electric capacity without a need for capacity growth through 2031.

AIA Maryland
86 Maryland Avenue
Annapolis, MD 21401

T (410) 263-0916

aiamd.org

These guidelines establish performance targets, that are achievable and on some projects are already being met. It helps us move toward our statewide carbon reduction goals and, it provides a healthier environment in which to live or work. We ask for your support to sets Maryland up for success moving forward and we encourage you to issue a favorable report on SB1023.

Sincerely,

Chris Parts, AIA
Director, Past President, AIA Maryland

Takoma Park 2024 - SB 1023 FAV - Building Performa

Uploaded by: Cindy Dyballa

Position: FAV

CITY TAKOMA OF PARK MARYLAND

<u>Support Senate Bill 1023</u> – Maryland Building Performance Standards – Fossil Fuel Use, Energy Conservation, and Electric– and Solar–Ready Standards (Better Buildings Act of 2024)
Senate Education, Energy and the Environment Committee
March 4, 2024

The City of Takoma Park supports and urges favorable consideration of this bill, which requires that the Maryland Building Performance Standards for new buildings include: 1) meeting all their water and space heating demands without the use of fossil fuels, 2) electric- and solar-ready standards for certain new buildings including EV charging requirements, and 3) energy use intensity targets for new construction of 25,000 sf or more.

The City of Takoma Park is a densely developed, largely residential municipality of almost 18,000 people and 2.4 square miles in Montgomery County. About half our residents are homeowners and half renters, with a wide range of incomes, backgrounds and ethnicities, and a significant number of energy cost-burdened homeowners and renters. The City relies on State and Montgomery County building codes and permits, and anticipates both new mixed-use construction and significant renovation of larger multifamily buildings in the future.

Like communities across Maryland, Takoma Park is keenly aware that we must move ahead rapidly to meet our state, county and local climate goals. Throughout Maryland, we have seen our climate dramatically and rapidly change, with devastating local consequences. Buildings are one of the largest sources of greenhouse gas (GHG) emissions statewide, and both new and renovated buildings provide an opportunity to literally build in measures that help achieve these goals. It's imperative that buildings, especially housing, be as efficient as possible and prepared for the necessary transition away fossil fuels, as well as reducing the energy cost burden many of our most vulnerable residents face. It's also critical that we expand our elective vehicle charging infrastructure to accommodate the growing demand for electrified vehicles.

Takoma Park has been a leader among Maryland communities in responding to the challenges of climate change and in reducing GHG emissions through our many local policies and actions. But we need strong state leadership and action to support us and communities across the state. This bill will help us meet our city climate, as well as housing and equity goals and priorities.

In sum, the City of Takoma Park supports the intent of Senate Bill 1023 and urges a favorable committee vote.

High Performance Heat Pump Testimony SB1023 1Mar20
Uploaded by: Daniel Helfrich
Position: FAV

Testimony in favor of SB1023 The Better Buildings Act of 2024

Daniel Helfrich
4420 Manor Lane
Ellicott City, Maryland
Howard County District 9A Homeowner
Retired Mechanical Systems Engineer

March 1, 2024

For several years now, my wife Mary and I have been incrementally renovating our modest rancher located on a rural residential lane in Ellicott City. One of the key improvements was adding a high performance electric heat pump for both heating and cooling the house. Previously we had been heating with a basement woodstove and electric baseboard heaters. Cooling was only possible via a whole house fan or window air conditioners. As one may imagine, we were struggling with maintaining a comfortable interior for quite a few years. The high performance Mitsubishi heat pump we installed does it all now, and performs amazingly, without any backup equipment needed, and without any need for fossil fuel.

Our new heat pump is built around a very modern variable speed compressor system quite unlike the compressors found in the heat pumps I have had in all my prior homes heated with electric-only systems (all 5 of them). We require no backup electric resistance heating elements inside the house because we simply will never need them. Our new heat pump has proven to be fully capable of heating our home with outdoor temperatures in the single digits, and is rated to work well even in negative temperatures. For example, in December of 2022, when we had a 5 deg F nighttime low, it delivered all the heat we needed all night long. I read the temperature coming out of the indoor air handlers and it was over 100 degrees, despite the extremely cold air outdoors.

My decision to take the electric heat pump route, and forego a fossil fuel system like propane or oil for heating, was mostly practical, but also morally right. To install a propane system–we don't have gas service on our lane–would have been a big investment in the fuel storage and supply equipment. Further, I would have had to tear up our walls and floors and use up valuable volume in our house, and headroom in the basement, running ductwork and installing a furnace. On top of all that, I would have to worry about the price swings of fossil fuels. Even without a state grant or BGE-sponsored price reduction, the choice to go purely electric wasn't even worth a detailed cost comparison. And the system went in without any drastic changes needed in my 50 yr old electric panel. As for the moral aspect of our decision, as the saying goes, "When you find yourself in a hole, stop digging."

In summary, I am very glad that our modern electric heat pump has for almost two years now fully met our expectations for providing us a very comfortable home year round. Having recently learned of the pollution dangers of heating and cooking with propane and natural gas, I am even more satisfied with my decision to avoid investing in fossil fuel equipment in my home.
Anyone who claims otherwise is not to be believed–modern electric heat pumps are fully adequate for all of Maryland's weather, as well as being healthier, less expensive to own and operate, and energy efficient. I firmly believe that the State of Maryland will be moving in the right direction by passage of the Better Building Act of 2024.

Sincerely,
Daniel Helfrich

Joint Testimony on BBA.pdf
Uploaded by: Doug Siglin
Position: FAV

Joint testimony on SB 1023, The Better Buildings Act of 2024
Senate Committee on Education, Energy and the Environment
March 4th, 2024
Position: Strongly Support

These 34 groups and coalitions, representing tens of thousands of Marylanders, urge the Committee to favorably report SB1023, the Better Buildings Act of 2024, introduced by Senator Benjamin Brooks and other Senators.

Each of the last ten years has ranked among the globally hottest ten years ever recorded. Compared to the magnitude of the climate crisis that humans face, **SB1023 is a modest climate and health policy bill that really should not engender a lot of controversy.** Maryland has statutorily committed to reaching net zero carbon pollution by 2045 – just 21 years from now. The Governor has recently advanced a comprehensive plan to make those required reductions with a necessary but quite large price tag. **It makes no sense to make our challenge worse by allowing new buildings to burn fossil fuels that directly spew carbon pollution into the air beyond the statutory net zero date. Similarly, it makes no sense to allow buildings to waste electric energy that must be generated for the foreseeable future with at least some percentage of carbon-emitting fuels.**

SB1023 addresses both of those areas. After a reasonable transition period, the bill would disallow direct burning of fossil fuels for heat and hot water energy in most new buildings. It would also speed up the slow and uncertain model energy codes adoption process to make new buildings more energy efficient, giving Maryland a better shot at reaching its statutory 2045 carbon pollution reduction targets.

We want to strongly emphasize that passing the Better Buildings Act would bring significant climate, health, and cost-savings benefits to Marylanders with very little additional cost to the state. Perhaps it would require a small addition to the budget of the Building Codes Administration over time, although national energy codes experts who have analyzed the Better Buildings Act have concluded that almost no additional work would be needed, and there are ample federal and private resources available for technical assistance to the BCA staff. In fact the legislation explicitly authorizes the BCA to seek advice from the Department of Energy or the national energy labs.

Much of the text of SB1023 is similar to the Climate Solutions Now Act as originally introduced in 2021 and passed in 2022. The 2022 Climate Solutions Now Act's requirement that "new buildings meet all water and space heating demand without the use of fossil fuel" was dropped out of the bill in favor of a grid capacity study, which has shown that Maryland's utilities have plenty of capacity to accommodate new building electrification, and far more in addition. The General Assembly did, however, make a promise at that time that the Better Buildings Act manifests:

> *(1) the General Assembly supports moving toward broader electrification of both existing buildings and new construction as a component of decarbonization; and*
>
> *(2) it is the intent of the General Assembly that the State move toward broader electrification of both existing buildings and new construction on completion of the study required under subsection (b) of this section*.

SB1023 would restore the language dropped out of the Climate Solutions Now Act in 2022 and add reasonable energy conservation, EV charging readiness, and solar

readiness provisions that would move us more rapidly towards a 100% clean energy future.

Requiring new buildings to be largely fossil free has corollary benefits for Marylanders as well, in at least three ways:

1) Avoiding fossil fuel heat and hot water appliances that vent to the outside **would reduce outdoor air pollution, which is a serious health problem in densely populated areas and has significant environmental justice implications.**
2) New homes and buildings that avoid fossil fuel lines and appliances for cooking, while not required by the bill, **would be much better indoor environments for the respiratory health of children and adults.**
3) Owners and tenants in new homes and buildings that avoid the enormous cost increases projected for the delivery of methane gas **would enjoy significant savings on their ongoing fuel bills.**

Architects, engineers, and energy policy experts will testify at the Committee's bill hearing that the electrification and energy saving policy steps required by SB1023 are cost-effective and achievable, despite what well-funded groups desperate to maintain the status quo would have you believe. Others will testify that electric heat pump technology has advanced rapidly and, with more than 25,000 models in the marketplace, is entirely capable of keeping people comfortable during the coldest parts of Maryland's winter and the hottest parts of Maryland's summer, with significantly reduced fuel costs and carbon emissions.

We are very grateful that the General Assembly has set high statutory climate goals and has required public and private plans to meet them. With a handful of other states and DC, Maryland stands out as a model and inspiration for other states and localities. **There is no policy that makes more sense to achieve Maryland's climate goals while providing significant public health and economic benefits to consumers than electrifying and conserving energy in newly built buildings.** We implore the Committee to stand up to the naysayers and do everything possible to allow SB1023 to become law this year.

SB1023 Better Buildings FAV 2024.pdf
Uploaded by: Elizabeth Singer
Position: FAV

JCRC JEWISH COMMUNITY RELATIONS COUNCIL
JEWISH FEDERATION OF HOWARD COUNTY

Committee:	**Education, Energy and the Environment**
Testimony on:	**SB 1023 – Maryland Building Performance Standards-Fossil Fuel Use, Energy Conservation, and Electric and Solar-Ready Standards (Better Buildings Act of 2024)**
Organization:	**The Jewish Community Relations Council, (JCRC) Howard County, MD**
Submitting:	**Betsy Singer and Laura Salganik, Co-chairs**
Position:	**FAVORABLE**
Hearing Date:	**March 4, 2024**

Dear Chair and Committee Members:

Repair of the world (*tikkun olam*) is a guiding tenant of our Jewish faith. We are compelled to act to prevent massive changes to Earth's climate as we face rising temperatures due to burning fossil fuels that trap greenhouse gases in the Earth's atmosphere.

Fossil fuel furnaces and water heaters cause 17% of Maryland's greenhouse gases. An efficient and affordable way to lower heat-trapping emissions is to switch from burning fossil fuels to heat and cool buildings and homes and instead use clean energy sources. We can do that through features of The Better Buildings Act, which carries no additional costs for the Maryland state government.

The bill requires that the state Building Code Administration adopt codes that require all **new** buildings, additions that increase heat loads by 30 % or more and significant improvements meet all energy demands of the building without the use of fossil fuels. Local jurisdictions could grant limited waivers including for cooking appliances and for backup power systems as well as for restaurants, labs, hospitals, and crematoriums. Buildings granted waivers would be required to be built electric-ready and must include automatic ventilation to maintain healthful indoor air quality.

Costs to build buildings to save energy and avoid fossil fuel combustion range from less expensive to slightly more. However, costs are falling and there are also generous new federal subsidies available to developers for high-efficiency buildings. Owners and tenants in new all-electric homes and buildings will also avoid the substantial cost increases projected for the delivery of methane gas in future years. Electric heat pump technology has advanced rapidly and has significantly reduced fuel costs and carbon emissions.

For these reasons, we strongly support SB 1023 and urge a FAVORABLE report in committee.

RMI MD BBA Testimony - Written - Final - Digital.p
Uploaded by: Erin Sherman
Position: FAV

RMI
1850 M St NW, Suite 280
Washington, DC 20036

Committee:	**Education, Energy & the Environment Committee**
Testimony on:	**SB1023, "Maryland Building Performance Standards – Fossil Fuel Use, Energy Conservation, and Electric– and Solar–Ready Standards (Better Buildings Act of 2024)"**
Position:	**Support**
Hearing Date:	**March 4, 2024**

Members of the Committee,

RMI is a nonpartisan, nonprofit organization working to transform global energy systems and secure a clean, prosperous, zero-carbon future for all. RMI supports SB1023/HB1279, the Better Buildings Act, and requests a favorable report from the committee.

Passing this bill will help Maryland to achieve its climate goals and advance other key outcomes, including improved health, lower energy bills, and increased resiliency. As described further below, this bill will advance and align with the following factors:

1. Maryland's ambitious climate goals and the public interest
2. The state's current and future budgetary realities
3. A feasible energy transition for the electric grid
4. Maryland's Building Energy Performance Standards (BEPS)
5. The expertise and authority of the Building Codes Administration (BCA)

First: The BBA aligns with **Maryland policy goals and the well-being of Marylanders.** Through the Climate Solutions Now Act of 2022, Maryland has committed to a 60% reduction in emissions by 2031 and a net-zero economy by 2045. Maryland's Climate Pathway Report outlines how to achieve these goals, including through an additional reduction of 1.6 MMTCO_2e from buildings by 2031. The least-cost, easiest step to decarbonize new construction is to stop meeting energy needs with methane, whether fossil or biogenic. The Maryland Building Decarbonization Study of 2021 found that across all three scenarios analyzed, all-electric construction would be the least-cost option for new single-family home decarbonization. RMI analysis of the Maryland construction landscape suggests that all-electric new homes are already less costly to build than homes with gas infrastructure. Maryland policy roadmaps, including the Pathway Report and the Maryland Commission on Climate Change's 2021 Building Energy Transition Plan, reflect these findings. The BBA would take a major step toward fulfilling a key recommendation from these roadmaps: an all-electric, or zero-emission, construction code.

The benefits do not end with fulfillment of Maryland climate goals. Strong energy codes are a win across the board: they reduce bills, protect our health, keep people safe in extreme weather, and improve equity in outcomes.

- **Reducing bills:** Decades of analysis from the US Department of Energy (DOE) and National Laboratories shows that energy codes cost-effectively reduce energy bills. According to the US Energy Information Administration, more than 1 in 4 Americans—and nearly 1 in 2 low-income Americans—struggle to pay their energy bills, and 1 in 5 Americans forego basic necessities like food or medicine to pay their energy bills.
- **Protecting health:** Burning fossil fuels creates pollution that harms human health. Outdoor air pollution from combustion inside buildings led to the early deaths of over 600 Marylanders and over $7 billion in statewide health impacts in 2017 alone. Communities of color bear an alarming and disproportionate share of the health and pollution burdens from fossil fuels in buildings. A recent study found that people of color in Maryland are exposed to 60% more outdoor $PM_{2.5}$ pollution from residential gas combustion as white people.
- **Keeping people safe in extreme weather:** There is a growing body of evidence that efficient, low-emission buildings are not only critical climate solutions: they also increase resilience to current and future climate change-fueled extreme weather. A joint study of US DOE and three National Laboratories found that more efficient buildings extend how long people can remain safely inside buildings during extreme heat and cold. Energy efficiency literally saves lives thanks to this benefit. National Ocean and Atmospheric Administration data shows that Maryland's average temperatures have already increased about 2°C or nearly 4°F from pre-industrial temperatures. The frequency and danger of heat waves has also increased across the US. High-efficiency buildings will protect Marylanders from these escalating risks in coming decades.
- **Improving equity:** In addition to reducing the inequitable outcomes described above, energy codes differ from voluntary programs such as LEED certification, utility rebates, and tax incentives because they set requirements applying to *all* new construction—including buildings in disadvantaged communities and affordable housing. The benefits of energy efficiency should be ensured for all Marylanders, not reserved for a lucky or privileged few.

Second: The BBA would deliver these benefits while posing **no or minimal direct costs to the state government and avoiding larger mid- to long-term costs**. While

Should the BCA require additional resources to implement BBA's later efficiency targets or its requirement for efficiency levels to be unbiased with respect to fuel type, two federal funding streams collectively worth over $1.2 billion are available for large grants: the Resilient and Efficient Codes Implementation program under the Infrastructure Investment and Jobs Act and the Technical Assistance for the Adoption of Energy Codes program under the Inflation Reduction Act. Additionally, in-kind assistance is available through the US DOE's Energy Codes Technical Assistance Network and the National Energy Codes Collaborative.

Third: The BBA would keep a lid on both infrastructure costs for utilities and energy bills for Maryland ratepayers because, as report prepared for the Maryland Public Service Commission and General Assembly recently found, efficient all-electric new construction will result in **lower peak electricity demand** than business-as-usual new construction. High peak demand can cause utilities to maintain or build new "peaker plants," often methane gas-fired rapid-cycling power plants that are particularly costly to ratepayers. Peak demand is a key factor driving the structure and function of Maryland's economy, and reducing it produces win-win-wins for utilities, developers, and ratepayers. If new construction were highly efficient, utilities would be less likely to become a bottleneck to project

timelines due to difficulties building infrastructure to support large new loads. In turn, new developments would be more likely to be built on time and fixed charges on ratepayer bills would be lower.

Fourth: The BBA aligns with the proposed **Building Energy Performance Standard (BEPS)** rule. Building owners deserve clear guidance on how to align new buildings with BEPS. In current law and rule, there is no relationship between BEPS and Maryland's energy code, so an owner runs the risk of purchasing a brand-new building that will need costly retrofits to comply with BEPS in just a handful of years. The BBA would help buildings permitted in 2026 comply with the 2040 final standards of BEPS from day one. Not only would the BBA ensure new buildings do not emit greenhouse gas emissions: it would also ensure that energy codes require site energy use intensity (site EUI) outcomes in line with BEPS starting in 2026. RMI would be happy to provide a memorandum detailing how the BBA is aligned with and supports BEPS upon request.

Fifth: The BBA aligns with **the mandate and authority of the Building Codes Administration:** it sets requirements for new construction. Site energy use intensity, or EUI, is a commonly used metric for setting efficiency goals and its meaning is simple: it is the annual energy used per square foot in a building. In other words, regulating site EUI is regulating efficiency: it is what state and federal law expressly authorize the BCA to do. By following the mandates of the Maryland Public Safety article and case law relevant to Maryland, BCA can exercise its authority to implement the BBA lawfully and in alignment with Maryland policy goals.

All told, the BBA is necessary, commonsense policy to keep Marylanders safe, healthy, and comfortable in their homes and workplaces while addressing the immediate threat of climate change. RMI looks forward to the bill's passage and swift implementation, and requests a favorable report from the committee.

Signed,

Erin Sherman
Senior Associate
RMI

Testimony by Evelyn Jacob for Better Buildings Act

Uploaded by: Evelyn Jacob

Position: FAV

Testimony Concerning Senate Bill 1023
Better Buildings Act of 2024

Position: Support

Hearing date: March 4, 2024

Committee: Education, Energy, and the Environment

Personal Testimony by Evelyn Jacob
701 King Farm Boulevard, Apt 307
Rockville, MD 20850
evelynjacob@comcast.net
(240) 477-5324

Dear Committee Members,

I am writing to support SB 1023 (Better Buildings Act of 2024) as a concerned citizen, Unitarian Universalist, grandparent, nature enthusiast, and amateur nature photographer. I have seen first-hand many of the effects of climate change – a close call from a flash flood near my former house, the reduction in numbers and kinds of butterflies in my pollinator garden, and the ghost forests at Assateague Island. And I've read enough news reports and books to appreciate the vast misery and suffering that climate change has caused elsewhere and will certainly cause here, unless we do something about it NOW. And we know what we must do – stop burning fossil fuels, remediate damage already done, and plan for the worst. This is why I urge you to issue a favorable report on the Better Buildings Act.

The General Assembly can be justly proud of the Climate Solutions Now Act (CSNA), passed in 2022 without the Governor's signature. The CSNA set goals of reducing Maryland's greenhouse gas (GHG) emissions by 60% (from 2006 levels) by 2031 and to net zero by 2045. In furtherance of those goals, the CSNA required that the Maryland Department of the Environment (MDE) study how to achieve these goals. MDE responded with Maryland's Climate Pollution Reduction Plan, published in December 2023.

The Climate Pollution Reduction Plan proposes policies for reducing greenhouse gas (GHG) pollution attributable to the building sector. Direct fuel used in this sector accounted for 16% of Maryland's GHG pollution in 2020. The proposed policies include:

- Strengthen EV-Ready Standards for New Buildings.
- Establish Zero-Emission Heating Equipment Standard (new) - Requires new space and water heating systems to produce zero direct emissions starting later this decade.
- Zero-Emission Heating Equipment Standard (new) - Requires new space and water heating systems to produce zero direct emissions starting later this decade.
- Clean Heat Standard (new) - Requires clean heat measures to be deployed in buildings at the pace required to achieve the state's GHG reduction requirements.

The Better Buildings Act puts these policies into action and augments them with policies to make certain buildings "solar-ready" – i.e. capable of accepting the installation of solar panels on roof areas. Key elements of the legislation are for new buildings to meet water and space heading demands without using fossil fuels, to conserve energy, and for certain buildings to meet electric- and solar-ready standards. The net effect of these provisions will be to reduce carbon pollution emissions, improve air quality, and substantially lower utility costs for building owners, homeowners, renters, and tenants over time.

Enacting the Bill and related legislation to reform EmPOWER Maryland is essential to meeting Maryland's climate goals established by the CSNA.

I urge the Committee to report the Bill favorably.

Better Buidlings Act testimony CR Senate.pdf
Uploaded by: Frances Stewart
Position: FAV

Committees: **Education, Energy, and the Environment**
Testimony on **SB 1023, The Climate Crisis and Environmental Justice Act**
Organization: **Climate Reality Greater Maryland**
Submitting: **Frances Stewart, MD, Chapter Chair**
Position: **Favorable**
Hearing Date: **February 29, 2024**

Dear Chair and Committee Members:

Thank you for allowing our testimony today in support of SB 1023. Climate Reality Greater Maryland is the Maryland chapter of the Climate Reality Project, a global network of 3.5 million people working to build a net zero future in which all of us can thrive. We urge you to vote favorably on SB 1023.

Climate change is one of the greatest threats to our public health. The health effects include more vector-borne diseases, more heat-related illnesses such as heat stroke, injuries from wildfires and extreme weather events such as hurricanes and floods, and mental health problems. These issues threaten the lives and health of all Maryland residents, particularly children and older adults.

One thing that is less often recognized is the close tie between air pollution and greenhouse gas emissions. 88% of Maryland residents live in areas that do not meet EPA air quality standards. Air pollution is a major contributor to absences from work and school, increased healthcare costs, and premature deaths. This can be seen clearly in the high rates of hospitalization for asthma in Maryland, especially in Baltimore. Research shows that decreases in air pollution lead to significant and rapid decreases in asthma hospitalizations. Improvements in health, especially in children and people living in overburdened communities, will be the first benefit we see from decreasing the use of fossil fuels.

The Climate Solutions Now Act of 2022 set the ambitious carbon pollution reduction goals of any state in the country. We must meet those goals. As the Maryland Commission on Climate Change said in their 2023 report, “The climate crisis is upon us. Within just five years, global temperatures could breach the critical 1.5°C threshold, triggering catastrophic and irreversible

consequences. This long-feared catastrophe is imminent - the time for meaningful climate action is now."

Buildings account for 13% of the state's polluting carbon emissions. It is impossible to meet the essential goals adopted in the Climate Solutions Now Act if we continue to utilize fossil fuels for space and water heating.

The Better Buildings Act does just what its name implies – it requires most new buildings to be built smart from the start, with better energy conservation and no onsite fossil fuel combustion for space and water heating. It requires electrification, EV-readiness, solar readiness, and high levels of energy efficiency in new buildings over 25,000 square feet.

SB1023 implements a simple vision of how we want our public and private buildings to be in the future – less expensive to operate and much better for the climate crisis we face. It is a common-sense bill that ensures that new construction utilizes highly efficient, cost-effective electric appliances that are better for our health, our wallets, and the climate.

Today's heat pumps are three to four times more efficient than fossil fuel heating equipment and remain two to three times more efficient even in winter weather. According to a report by the Building Decarbonization Coalition (BDC), the average heat pump sold uses as much as 29% less electricity during periods of peak demand than a central AC unit. The Maryland Energy Administration states, "Heat pumps are an essential tool to lowering monthly energy bills and keeping electricity demand low year-round."

Tax credits and rebates made available by the Inflation Reduction Act have made efficient electric appliances more affordable for Marylanders in every income bracket. Across Maryland, 98% of households using high-efficiency electric appliances instead of fossil fuel heating equipment can save money on their monthly energy bills. The median low-income household in Maryland would save $373 per year by replacing a gas furnace with an all-electric heat pump.

The net effect of passing the Better Buildings Act would be to reduce carbon pollution emissions both directly (through onsite combustion) and indirectly (through electric generation), improve air quality, and substantially lower utility costs for homeowners and renters. To strengthen the bill, we urge the committee to consider the prohibition of any fossil fuel appliances in the home, including gas stoves, which have been shown to have significant adverse health impacts, including a higher risk of asthma In children. Also, removing all use of fossil gas from a building eliminates the risk of gas explosions and greatly reduces the risk of carbon monoxide poisoning.

As Maryland transitions to a cleaner energy future, buildings using efficient electric heat pumps and heat pump water heaters will be cleaner, greener, and less costly to build and operate than those using methane gas or oil. All-electric buildings are simpler to construct, and that simplicity leads to cost savings. Gas piping increases the cost to build a typical single-family home in Maryland by $2,580. Mandating that new construction be smart from the start is a common-sense first step to reducing emissions from buildings. We strongly recommend a FAVORABLE report for SB1023 in committee.

I would like to urge support for The Better Buildi

Uploaded by: Gita Lefstein

Position: FAV

I would like to urge support for The Better Buildings Act (SB1023 and HB1279). I live in a house with gas for heating, for my hot water, for my stove and oven, and for my dryer. Until fairly recently, I was not aware of the leakage of chemical compounds from gas appliances, including hazardous chemicals. Because of that and because of the disastrous effects of burning fossil fuels on climate change, I am considering changing everything over to electric. However, because I already have gas it would be a major undertaking (and expensive) for me to change over. It doesn't make any sense to build new buildings with gas when they could start out on the healthier path of being all electric.

Gita Lefstein

Better Buildings Act Senate Testimony_Rewiring Ame

Uploaded by: Jamal Lewis

Position: FAV

March 4, 2024

Honorable Brian Feldman, Chair
Education, Energy, and Environment Committee
2 West
Miller Senate Office Building
Annapolis, Maryland 21401

Re: SB 1023, Maryland Building Performance Standards – Fossil Fuel Use, Energy Conservation, and Electric– and Solar–Ready Standards (Better Buildings Act of 2024)

Dear Chair Feldman and Members of the Education, Energy, and Environment Committee:

Good afternoon Chair Feldman and committee members, for the record, my name is Stephen Pantano, and I am representing Rewiring America, the nation's leading electrification nonprofit. Thank you for the opportunity to provide testimony. Today, we urge a favorable report on SB 1023, which would ensure that Maryland reaps the myriad of benefits of a more resilient, sustainable, and electric built environment.

I'd like to use my time today to set the record straight on what electrification means and how it will advance equity and energy affordability while also bringing Maryland closer to achieving its climate goals. Here are 9 facts about what all electric buildings mean for Maryland.

1. **Maryland's electric grid can handle the electrification of all newly-constructed buildings.** The PSC's December 2023 study indicated that high electrification scenarios in Maryland result in aggregate electric system load growth rates in the range of 0.6-2.1% per year through 2031, which is well within the normal range of growth (-0.6 - 4.9%) over the last 40 years.

2. **Newly constructed all-electric buildings are more affordable to build and maintain.** A 2022 New Buildings Institute analysis found that new all-electric, single-family homes were less expensive to build than new mixed-fuel homes that rely on gas for cooking, space heating, and water heating.

3. **Electrification of newly constructed buildings will create economic benefits.** This includes up to $2 billion in health benefits by 2031, more than 16,000 new jobs created, and increased personal income by nearly $1.5 billion by 2031.[1]

4. **Newly constructed electric buildings will mean lower energy bills for families**. . The average Maryland household would save over $1100[2] per year in reduced energy

[1] Maryland Climate Pathway Report, 2023
[2] Rewiring America analysis - Community profiler: Medium efficiency heat pump scenario + heat pump water heater scenario (unpublished)

bills if they electrified their home's space and water heating and cooling. Those savings are enhanced if basic weatherization and insulation are also included.[3]

5. **Electrification of newly constructed buildings will be equitable**. Sixty-five percent would save more than $300 a year on energy bills by heating with heat pumps and heat pump water heaters, with space heating energy demand projected to be 50 to 60 percent less than for typical buildings.

6. **The Better Buildings Act is essential in reducing carbon pollution from the building sector and achieving the state's climate goals.** Maryland's Climate Pathway report found that to meet our climate goal of slashing emissions by **60% percent by 2031,** Maryland must require the phaseout of methane gas and petroleum in household appliances so that over 90% of new appliance sales are zero-emission by 2031 and 100% electric by 2045.

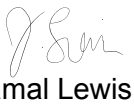
7. **Newly constructed buildings with heat pumps reduce carbon pollution no matter the generating source of the energy.** Even under conservative modeling assumptions, 98 percent of U.S. households would cut their carbon pollution by installing heat pumps today — no matter the fuel mix of their grid-generated electricity.

8. **Heat pumps can be used in cold-climates.** Cold climate heat pump technologies are common in places like Norway and Maine, both of which have significantly colder climates than Maryland.

9. **Heat pumps are no less reliable than fossil fuel space heating equipment during power outages**. Gas furnaces on the market today still need electricity to power their electronics and fans so they don't necessarily increase household resilience.

As we continue residential development in Maryland, it is critical that we build smart from the start. In passing SB 1023, this committee recognizes that reality and would be taking necessary action. We urge a favorable report on SB1023 and help Maryland communities move closer to a more resilient, healthier, and cleaner future. I am available for any questions.

Thank you,



Jamal Lewis
Director of Implementation Learning and Integration
Rewiring America

[3] Rewiring America analysis - Community profiler: Medium efficiency heat pump + basic weatherization scenario and heat pump water heater scenario (unpublished)

CCAN testimony for Better Buildings Act.pdf
Uploaded by: Jamie DeMarco
Position: FAV

Testimony in Support of Better Buildings Act
SB 1023
Education Energy and Environment Committee
3/4/2024

Jamie DeMarco, Maryland Director
Chesapeake Climate Action Network Action Fund

On behalf of the Chesapeake Climate Action Network Action Fund, I urge a favorable report on SB1023, the Better Buildings Act.

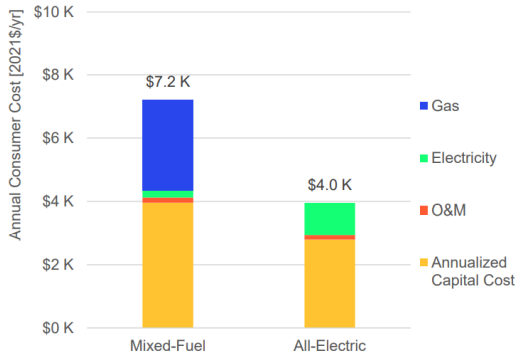
This important legislation would require that new buildings in Maryland meet their space and water heating needs without the use of fossil fuels. This policy costs nothing, saves Marylanders money,and reduces pollution. This policy would not require any changes in existing buildings and would only apply to new buildings. Importantly, the Better Buildings Act still allows buildings to be built with a gas stove. If you want a gas stove in your new home, you can still have one under this policy. Only furnaces and water heaters in new buildings are affected.

New York State, California, Washington State, and one hundred local jurisdictions across the country have already enacted this policy. That includes Howard County and Montgomery County Maryland. New polling found that 80% of Marylanders support the policies laid out in the Better buildings Act.

It costs less to construct a new building heated by electricity than it is to build a new building that is heated by gas. That is according to an analysis done by the Maryland Department of the Environment under the Hogan Administration. Requiring buildings to meet their space and water heating needs without the use of fossil fuels will reduce the cost of new construction, including the cost of new housing units. Below is a graph from that report:

All-electric design is expected to be the less expensive option

+ **All-electric new construction is cheaper than mixed-fuel new construction for single-family residential homes across all decarbonization scenarios due to both lower capital (with avoided gas connection) and operating costs**



Everytime we allow a new home to be built with a gas furnace we are driving up costs for Marylanders. Both because gas furnaces are more expensive to build and to operate and because someone will have to pay to retire those gas furnaces before the end of their useful lifetimes. Maryland has committed to having net zero carbon pollution by 2045, which is only 21 years away. We cannot achieve net zero emissions and heat our buildings with fossil fuels, which means fossil fuel infrastructure built today will have to be retired in less than 21 years. Fundamentally, no one buries a new pipe in the ground and expects to retire that pipe within 21 years. Allowing new construction to be heated by fossil fuels means that utilities will be installing pipes that will have to be retired in 21 years, a sunk cost that will ultimately be borne by ratepayers.

Decarbonizing Maryland's building stock over the next 21 years will be a challenge. The very first, easiest, and most obvious action to take is to stop making the problem worse. Requiring new buildings to meet space and water heating without fossil fuels will stop digging our hole any deeper than it already is. This is the low hanging fruit. The longer this action is delayed the harder all of our jobs become.

Ensuring new buildings aren't heated by fossil fuels will also improve outdoor air quality. Every fossil fuel powered furnace vents outside, and that vent is like a little smokestack that emits air pollutants like Nitrogen Dioxide. A recent study found that air pollution from heating buildings in Maryland is three times greater than all the air pollution from power plants in Maryland combined.

To save Marylanders money, reduce the cost of construction, clean up air pollution in the state, and make it easier to achieve our greenhouse gas reduction mandates, Maryland should pass the Better Buildings Act this year.

CONTACT
Jamie DeMarco, Maryland Director
jamie@chesapeakeclimate.org, 443-845-5601

Testimony for Better Buildings Act FINAL Jennifer
Uploaded by: Jennifer Mizrahi
Position: FAV

MIZRAHI
Family Charitable Fund

Committee: **Environment and Transportation**
Testimony on: **SB1023 The Better Buildings Act of 2024**
Organization: **Mizrahi Family Charitable Fund**
Submitting: **Jennifer Laszlo Mizrahi, co-founder**
Position: **Favorable**
Hearing Date: **March 4, 2024**

Honorable Chair and Committee Members:

Thank you for allowing my testimony today in support of SB1023 – The Better Buildings Act – which requires new homes and buildings to incorporate the most energy-efficient equipment, safety standards, clean air equipment, and effective insulation.

My name is Jennifer Laszlo Mizrahi and I serve on the Maryland Commission on Climate Change which recommended the policies in this proposed legislation. It will help us save lives and livelihoods of people across our state.

Previously I founded and led a Maryland headquartered disability nonprofit. I also know what it means to raise a child with multiple disabilities. There are more than 669,000 disabled people living in Maryland and most people in Maryland have a loved one with a disability. No group is more impacted from climate change.

People with underlying health conditions are more susceptible to death from extreme heat or cold. When the power goes off, people who rely on oxygen can't breathe, and people who use power wheelchairs can't move. When there is flooding, fires, or extreme wind they often cannot evacuate in time, or have no place to go that has the appropriate disability accommodations.

Maryland has a fantastic plan to fight climate change and the Better Buildings Act is a part of that plan. But it all honesty, we are not yet on track to meet our goals and time is running out. It's vital to do as much as we can as quickly and affordably as possible.

Fortunately, building right in the first place is a cost-effective way to save residents money while also saving our shared planet. This is important as people with low and moderate incomes, which includes most Marylanders with disabilities, need affordable housing. Thus, it is critical that this bill will help both their health and their costs of living.

Thank you for your consideration.

Mizrahi Family Charitable Fund 1306 Beachview Rd, Annapolis, MD 21403
+1 202 365 0787

Testimony for Better Buildings Act FINAL Jennifer
Uploaded by: Jennifer Mizrahi
Position: FAV

MIZRAHI
Family Charitable Fund

Committee: **EEE**
Testimony on: **Better Buildings Act (SB1023/HB1279)**

Organization: **Mizrahi Family Charitable Fund**

Submitting: **Jennifer Laszlo Mizrahi, co-founder/director**
Position: **Favorable**
Hearing Date: **March 4, 2024. 1 PM**

Honorable Chair and Committee Members:

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Maryland has a fantastic plan to fight climate change and the Better Buildings Act is a part of that plan. But it all honesty, we are not yet on track to meet our goals and time is running out. It's vital to do as much as we can as quickly and affordably as possible. This bill – in addition to the RENEW Act and other sources of revenue for the state plan – are key.

Fortunately, building right in the first place is a cost-effective way to save residents money while also saving our shared planet. This is important as people with low and moderate incomes, which includes most Marylanders with disabilities, need affordable housing. Thus, it is critical that this bill will help both their health and their costs of living.

Thank you for your consideration.

Mizrahi Family Charitable Fund 1306 Beachview Rd, Annapolis, MD 21403
+1 202 365 0787

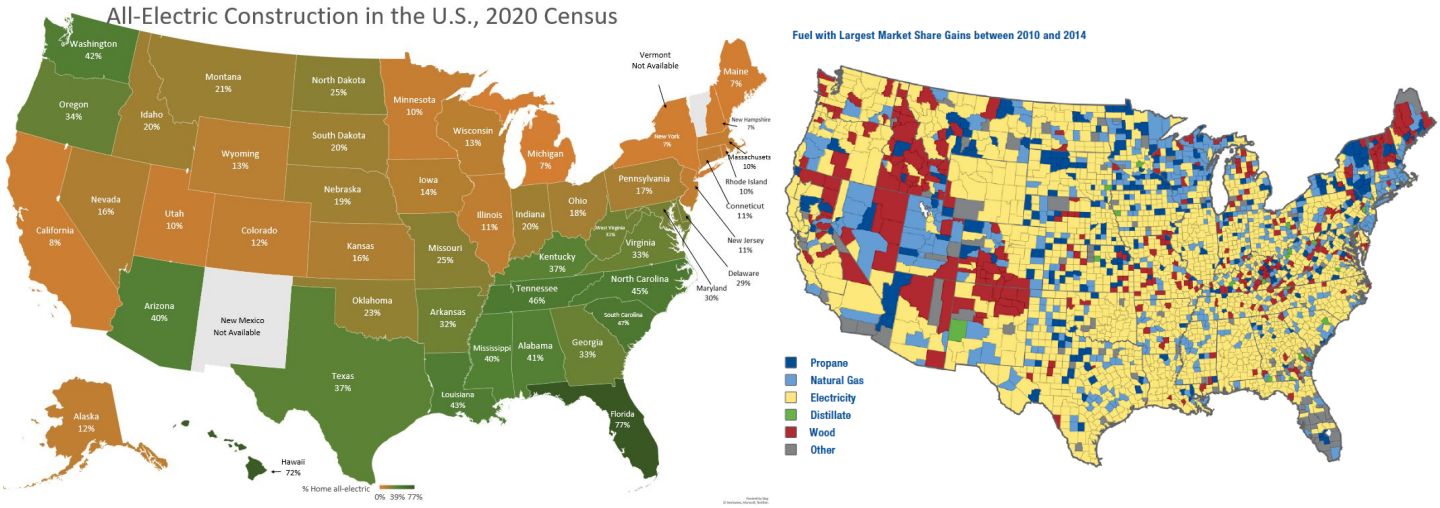
Letter in support Marland all-electric law.pdf
Uploaded by: Jessie Lee
Position: FAV

February 29, 2024

RE: SB 1023 will lower construction costs

Honorable Legislators,

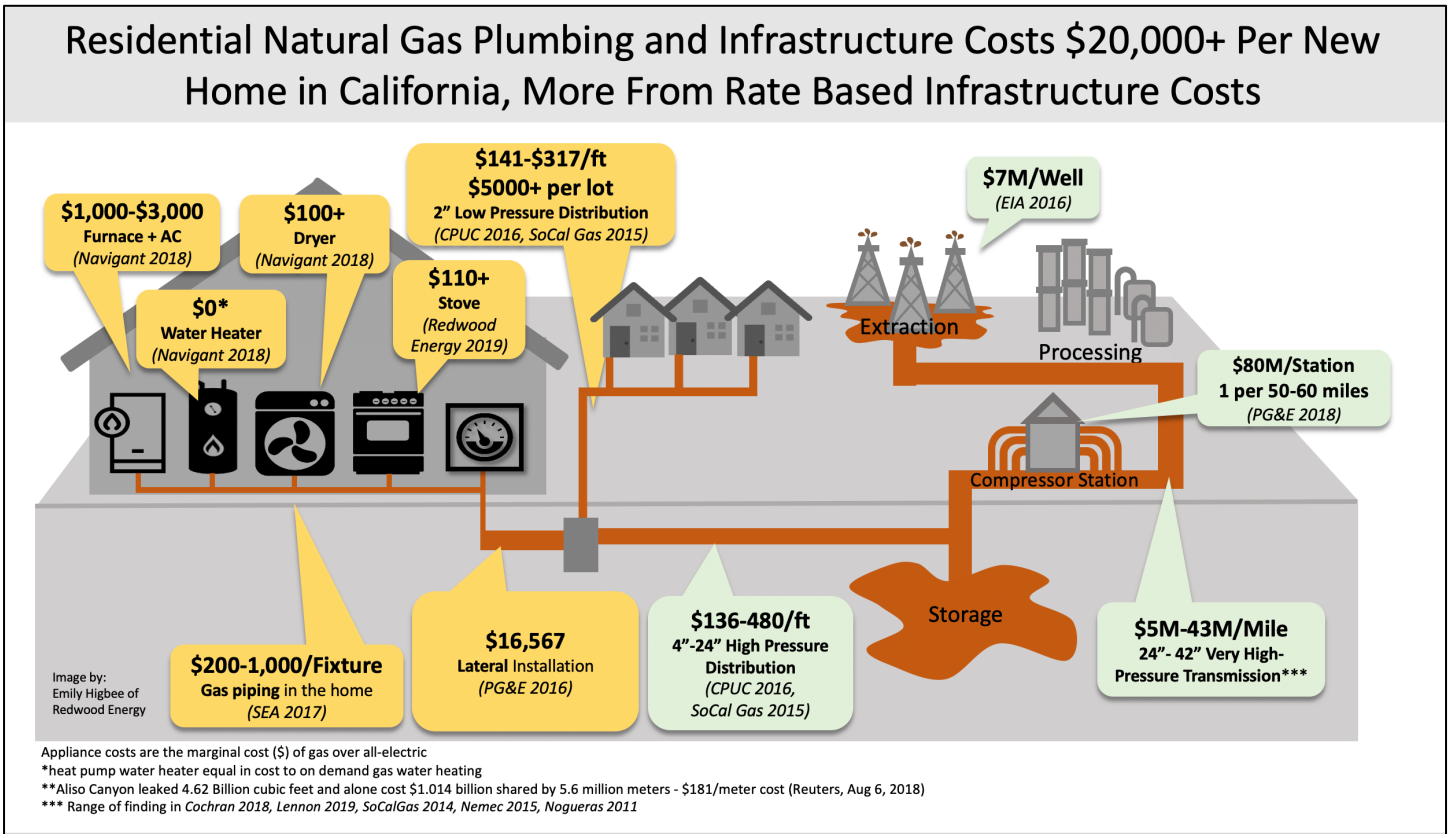
My consultancy has performed the energy design—HVAC, Hot Water, Appliances, Solar—for more than 30,000 apartments, including with Maryland's Montgomery County Housing Authority, to help lower construction costs by avoiding higher costs with gas infrastructure and gas appliances. This insight is already proven common knowledge in the South, America's long-time leaders in all-electric construction. While Maryland is already 30% all-electric, neighbors to the South are even more all-electric, like Tennessee (46%), South Carolina (47%) and Florida (77%). This trend dates back decades, and the embrace of all-electric construction cost savings by production builders has been national since 1993, but gained real traction by 2014 in almost every county in the nation, both urban and rural, North and South.



Left: 2020 Census data on the prevalence of all-electric residential construction. **Right**: An illustration from ICFs 2016 report for the Propane Education Research Council membership documenting the loss of market share by both Propane and Natural Gas to Electricity.

The construction cost savings from building all-electric ranges from ten thousand dollars to more than twenty thousand dollars per residence, particularly in cities where installing new gas laterals require trenching into actively used streets. I specialize in apartment complex design, and installing a new gas lateral from the street in any California city costs $100,000. There are usually no additional electrical infrastructure costs to building all-electric, and an overall project savings, because electricity is already wired throughout every residential building, including to all the gas burning appliances for safe ignition.

www.redwoodenergy.net
1887 Q Street, Arcata, CA 95521



Above is a compilation of California Utility studies of the cost of gas appliances vs. electric appliances. These studies have consistently shown all-electric construction is less expensive.

Please support cost-effective construction practices. Installing gas service slows down construction, increases jobsite risks, costs more to design and build, and contributes to air pollution.

Sincerely,

Sean Armstrong

Managing Principal
Redwood Energy

www.redwoodenergy.net
1887 Q Street, Arcata, CA 95521

Redwood Energy

Together Redwood Energy has led the energy design of more than 30,000 units of affordable housing, 90% of which is all-electric, and half of which pursued Zero Net Energy. Our consultancy serves low-income large families, seniors, farm workers, the homeless and first-time home buyers. We have won Grand Prize awards from the United Nations and the California Building Industry Association, among other honors.

Sean Armstrong taught net-zero design from 1992-2002 at a the Campus Center for Appropriate Technology, an off-grid, solar and wind powered demonstration house at Humboldt State University, and before founding Redwood Energy worked for 12,000+ hours of experience as Project Manager with affordable housing developers Pacific West Communities, Danco Communities, and the Redevelopment Agency of the City of Arcata. Sean designed the first 50% Net Zero Energy apartment complex in California in 2005-2006, and the first three 80-100% NZE apartment complexes in California in 2012. Sean was inducted into California's Clean Energy Hall of Fame in 2022.

Michael Winkler's career began as the technical lead for the world's first cell phone system in 1979 in Vienna. After a successful career in telecommunication software, Michael returned for his engineering degree at HSU in 1998 and was hired as a Renewable Energy Engineer at Schatz Energy Research Center. At the SERC he helped develop one of the world's most efficient hydrogen fuel cells. Michael currently lives in a remodeled Net-Zero house, but previously created an off-grid house in 1996 in Mountain View. Michael co-founded Redwood Energy with Sean in 2011. In addition to multiple energy credentials (EIT, CEPE, HERS, BPI), Michael is a software engineer. Michael served for 12 years on the Arcata City Council and co-founded Redwood Coast Energy Authority.

www.redwoodenergy.net
1887 Q Street, Arcata, CA 95521

IPL-DMV Favorable testimony Better Buildings Act .
Uploaded by: Joelle Novey
Position: FAV

Monday, March 4, 2024

Testimony supporting SB 1023
Maryland Building Performance Standards – Fossil Fuel Use, Energy Conservation, and Electric– and Solar–Ready Standards (**Better Buildings Act of 2024**)

Position: **favorable**

"Do the best you can until you know better. **Then when you know better, *do better*.**"

— Maya Angelou

There is no good reason to build a gas-burning building in Maryland ever again.

Today, we can build better buildings than we did in the past: all-electric heat pumps, heat pump water heaters, and induction stoves are more efficient than their gas-burning predecessors, healthier to breathe around, don't require leaking pipes or risk explosions, and protect our damaged climate. Inflation Reduction Act funds are rolling in to help pay for them, too. So now that we know better, state law should require that we do better.

Maryland's faith communities are doing *our* best to care for our neighbors and our common home. And that's why we want to live, work, and pray in buildings that don't burn gas indoors.

Our communities understand the harms of gas-burning because we have measured the pollution ourselves.

We are one of several grassroots organizations in Maryland using hand-held detectors both to measure methane leaks outdoors and to measure nitrogen oxide (NO2) indoors. NO2 is a respiratory irritant generated by gas-burning stoves. The EPA's outdoor guideline for safe levels of NO2 is 100 parts per billion. Our colleagues at Action in Montgomery (AIM), Adama Harouna and her team, have measured NO2 in over three hundred kitchens at Cider Mill Apartments in Gaithersburg, Enclave high rises in White Oak, and in Northwest Park's garden-style apartments. One such tenant was Ana Argueta in Silver Spring. After her gas-burning stove was on for twenty minutes, measured nitrogen oxide at 434 ppb, four times the EPA outdoor limit. Adama says that many of the kitchens she tests reach unhealthy NO2 levels when the families cook, contributing to asthma and other breathing problems, especially for young and old. We give a dish towel to every household with a gas-burning kitchen we test, sharing tips for reducing the impact of gas-burning on the air families are breathing.

In December, nearly 400 folks gathered at Good Hope United Methodist Church sanctuary for a statewide action hosted by Action in Montgomery, IPL-DMV, and Maryland Sierra Club. We held up N02 readings from our kitchen tests, and a whole section of the room held up red signs with readings over 100.

At community events throughout Maryland, we've also been giving folks a sweet taste of what doing better looks like, serving up chocolate fondue prepared on all-electric induction cooktops.

Electrifying our homes and electrifying gas-burning buildings can be difficult and expensive. By contrast, **building Maryland buildings better to begin with is easy**. That's why diverse and energized grassroots coalitions helped pass all-electric building code bills already in Montgomery County, where we danced the "electric slide" in front of the council chambers, and in Howard County, where a series of passionate high school students led off supportive testimony from over a dozens community groups.

Because of several years of grassroots education undertaken by a dozen organizations, a groundswell of Marylanders know better, and want to do better. We call on our leaders now to do your best for us, too.

letters@wash

Natural gas in homes is risky

When I heard that an apartment explosion in Gaithersburg had destroyed homes in two buildings and injured a dozen people on Wednesday morning, my heart sank ["12 hurt after blast, fire," Metro, Nov. 17].

Just the day before, as a director of the local Interfaith Power & Light, I was sitting in the chambers of the Montgomery County Council as Baltimore Gas and Electric's director for governmental affairs argued that the council should postpone passage of even a modest measure to require new buildings to be built without gas lines. "None of us knows" what a few all-electric buildings a year in the county would do to our infrastructure, he argued, and "we think that's really risky."

This is the third gas-related explosion in Montgomery County in just the past few years. We now know that gas-burning stoves pollute: with nitrogen oxide when they're on and with benzene when they're off. The gas in buildings such as Potomac Gardens is brought by miles of leaking pipes that course all the way back to drill sites where massive methane plumes can be mapped from space. And: As I write this, my devastated neighbors have lost their homes.

What could be riskier than that?

Joelle G. Novey, *Silver Spring*

MARYLAND
MATTERS

COMMENTARY

Commentary: Reflecting on holiday baking traditions and the push for an all-electric building standard

By **Guest Commentary**
January 5, 2024

Rev. Mary Gaut has a holiday baking tradition that has been passed down through generations. Courtesy photo.

By Rev. Mary Gaut

The writer served for 20 years as the pastor of Maryland Presbyterian Church in Towson and is a 2014 GreenFaith Fellow.

Christmas isn't over, the song reminds us. There are 12 days in the season which ends with the feast of the Epiphany for those in the Christian tradition. But, really, for most of us things are beginning to return to whatever we define as normal these days and the sights, smells, and sounds are already fading into memory as we look ahead to a new year of promise and peril.

For those of us fortunate enough to have friends and family close by, the holiday season was marked by gatherings and the observance of the unique traditions that bind us together. My family has a cake recipe passed down through generations and the smell of that cake baking, with its rich spices, was a hallmark of family gatherings. The tree was in the living room, but the cake was in the kitchen so it's no wonder the kitchen was where we gathered. And it's important that those gatherings be safe as well as festive.

Through the years, as I became more aware of environmental hazards and the impact of our choices on the future of our planet, I also learned that some choices like gas-burning stoves in our homes can have more immediate consequences for those closest to us. Could the stove where that holiday cake was baking actually have exacerbated my daughter's asthma years ago? Turns out the nitrogen oxide, benzene, and methane that are all emitted from gas-burning ovens are not only bad for the environment in general but also for those who gathered in the kitchen as the cake was baking. Yikes. So, when I had to replace my stove, I reviewed the research and went electric.

Prior generations passed along traditions that become the glue that binds us together in families and communities. They also bequeathed to us homes and buildings that rely on fossil fuels to heat and cook, but also pollute our air and damage our climate. They didn't know the impact of those choices — but we do. As we make our individual choices such as moving to all-electric induction stoves for cooking and electric heat pumps for heating and cooling, it makes sense that going forward we act collectively and make sure that all new buildings adhere to an all-electric standard that is proven to be better, healthier, and more conducive to a stable climate and a sustainable future.

Last August, a dozen community groups gathered with elected officials in Reisterstown to advocate for an all-electric building code proposal for Baltimore County (as both Montgomery and Howard counties have already done). But here we are, entering the new year, and no bill has been brought forward. Isn't it time to get this done?

As a pastor I would preach about how the Christmas story was about ordinary people doing the best they could in trying circumstances to shelter and nurture a vulnerable and fragile hope. The story of the "wise men" (celebrated at Epiphany) is in part a story of choosing a new way forward. For the family and friends who will continue to gather in this

new year and for the good of the climate on which all Creation depends, let's make 2024 the year we approve an all-electric building code for all new buildings in Baltimore County, gifting our children and grandchildren with a safer future through the choices we make now.

Guest Commentary

Maryland Matters welcomes guest commentary submissions at editor@marylandmatters.org. We suggest a 750-word limit and reserve the right to edit or reject submissions. We do not accept columns that are endorsements of candidates or submissions from political candidates. Views of writers are their own.

All posts by Guest Commentary

SB1023 - Better Buildings Act - Climate Parents of

Uploaded by: Joseph Jakuta

Position: FAV

Committee: Education, Energy, and the Environment
Testimony on: SB 1023 - "Better Buildings Act Act"
Organization: Climate Parents of Prince George's
Person Submitting: Joseph Jakuta, Lead Volunteer
Position: Favorable
Hearing Date: March 1, 2024

Dear Mr. Chairman and Committee Members:

Thank you for considering our testimony to SB 1023, "Better Buildings Act." Climate Parents is a campaign to reduce climate change-causing pollution in our schools, and our group is active in Prince George's County. In particular, we recently worked directly with Prince George's County Public Schools (PGCPS) technical staff and other advocates to develop a first in the national School Climate Change Action Plan.

The Better Buildings Act is a particularly important piece of legislation that is necessary to mitigate climate emissions, lower, total cost of ownership for new buildings, and improve indoor air quality. It does this by requiring all new buildings, with a few important exemptions, to meet all water and space heating spaces without using fossil fuels and by phasing in stricter energy use standards until, eventually, new buildings are required to be net-zero by 2035. It will also ensure that buildings will be prepared for the growing number of electric vehicles on the market by requiring a certain number of spaces to include EV charging or be EV-ready. It also requires new buildings to be solar-ready.

While there are many types of buildings covered through this regulation, our testimony focuses on why this is a common-sense piece of legislation for new schools.

Right here in Prince George's County, PGCPS has been building new schools both through conventional and the Alternative Construction Financing (ACF) model. PGCPS and the private companies that are building through the ACF program are finding that ground-source heat pumps make the most financial sense. In fact, now fifteen schools in Prince George's County have geothermal heat pump systems rather than fossil-fuel systems.

One of the main reasons that this is the economical choice is that any building built in October 2025 that is built with gas, water and space heating will need to completely retrofit within twenty years. There is no scenario for the construction of any of the applicable buildings that would make financial sense if the heating system is only given a twenty-year operating time horizon and a completely new heating system needs to be installed. We can see the evidence for that in Prince George's since one of the requirements of the ACF program is that at the end of the period, the schools be retrofitted to the building standards at the time of turnover, and the private partners know they do not want to finance a complete heating system retrofit at that time.

There is other evidence economically of the benefits of modern fossil fuel free HVAC systems being used in schools. According to RMI and Undaunted K12's "HVAC Choices for Student Health and Learning," due to funding from the Inflation Reduction Act, the Investment Tax Credit alone reduces the upfront cost by 30% of ground source heat pumps, making them the least expensive option for new buildings. They also reviewed an analysis completed by Fairfax County Schools that found a 50% reduction in operating and maintenance costs, which can make a real impact on school operating budgets.

The requirements in SB 1023 also align with the Climate Change Action Plan adopted unanimously by the Prince George's Board of Education, which recommends:

- "All new buildings will be designed to be solar ready, and when grant funds are available or deemed cost-effective, have solar installed. (M2.Buildings.B)"
- "Beginning in 2024, eliminate consideration of HVAC and water heating systems powered by fossil fuels in new buildings. (M4.Buildings.E.d)"
- "Ensure all new buildings are, at a minimum, ready for light-duty EV charging, and preferably include 2 Level 2 EV chargers and 5 Level 1 EV chargers. (M5.Transportation.C)"

When it comes to Maryland's schools and other taxpayer-funded buildings, it is clear that SB 1023 is the correct path for responsible stewardship of our precious tax dollars. We also, as a state, should not place the financial burden of premature whole-building retrofits on future homeowners and businesses. SB 1023 does right by the taxpayer and future owners of new buildings.

We encourage a FAVORABLE report for this important legislation.

2024.03.01 SWTCH Testimony on SB1023 - HB1279.pdf
Uploaded by: Josh Cohen
Position: FAV

SWTCH Energy Inc.
Greentown Labs
444 Somerville Ave
Somerville, MA 02143
swtchenergy.com

March 1, 2024

The Honorable Brian Feldman
Chair, Senate Education, Energy, and the Environment Committee

The Honorable Marc Korman
Chair, House Environment and Transportation Committee

Submitted electronically

Re: SWTCH testimony in SUPPORT:
SB 1023 / HB 1279: Maryland Building Performance Standards – Fossil Fuel Use, Energy Conservation, and Electric- and Solar-Ready Standards (Better Buildings Act of 2024).

Dear Chairs Feldman and Korman and Committee Members:

SWTCH is pleased to offer this testimony in SUPPORT of the companion bills SB 0695 and HB 0889.

About SWTCH

SWTCH is a leading provider of electric vehicle (EV) charging and energy management solutions for multifamily, commercial, and workplace properties across North America. SWTCH's end-to-end solution optimizes EV charging usage and manages load to benefit drivers, property owners, and the grid. SWTCH has deployed more than 10,000 charging stations, with a particular focus on ensuring equitable access to EV charging. SWTCH's charging management platform is built upon a foundation of open communication standards and interoperability to ensure future flexibility, scalability, and innovation even after purchase and installation.

Comments

Maryland's clean transportation policy leadership

For many years now, Maryland has been a leader in clean transportation policy. Last year, the State continued to set the bar high when it adopted the Advanced Clean Cars II (ACCII) Rule. This Rule requires automakers to deliver an increasing percentage of light-duty zero-emission or hybrid vehicles with each model year beginning with Model Year (MY) 2027, culminating in 100% ZEV or hybrid deliveries by MY2035. These and other policy actions matter because policy shapes the market for EVs and charging.

Zero-emission vehicle ("ZEV") mandates and other policy goals such as the ACCII Rule – while eminently worthy – are insufficient in and of themselves to bring about the changes they envision. Indeed, without a host of complementary actions, the achievement of high-level policy mandates and goals are likely to fall short. EV-ready construction requirements are among such complementary actions. For residents of apartments and condominium buildings in particular, EV-ready requirements are imperative – not only for the state to keep pace with its overall EV adoption targets, but to keep pace in an

equitable way that helps shrink the disparity between those who live in single-family homes and those who don't.

The value of EV-ready construction requirements

Establishing minimum EV-ready construction requirements matter because they enable more widespread and equitable EV adoption by driving down the cost of charging infrastructure. It is far less expensive – generally 4 to 8 times less expensive – to plan, engineer, design, and install EV charging infrastructure during new construction than to retrofit an already-built building.

More than 30% of all U.S. households live in multifamily apartment and condominium buildings. Multifamily properties are an underserved segment when it comes to EV charging for a host of reasons, cost being a major one. By driving down the cost of charging infrastructure, EV-ready construction codes will help expand equitable access to charging among multifamily households, as well as enable the corresponding savings that accrue to those who are able to charge at home. This is especially important because multifamily households are disproportionately low- and moderate-income, and face an above average transportation energy burden.

Charging infrastructure costs

In SWTCH's experience, the typical cost to install a commercial-grade Level 2 EV charger at an existing multifamily property ranges from $5,000 to $10,000. This range is consistent with industry experience. The National Renewable Energy Laboratory (NREL)'s "2030 National Charging Network" included a meta-review of literature and reported a range from $4,400 to $10,600 (Note "commercial" in the table below is the category that includes multifamily properties"):

Table 5. EVSE Capital Cost Assumptions

Charger Hardware		Unit Cost per Port	Install Cost per Port [a]	References
L1 residential	Low: High:	$0 $0 [b]	$100 $1,000	(Fixr.com 2022; Courtney 2021; HomeAdvisor 2022)
L2 residential	Low: High:	$400 $1,200	$500 $1,700	(Borlaug et al. 2020; Fixr.com 2022; Courtney 2021; HomeAdvisor 2022)
L2 commercial	Low: High:	$2,200 $4,600	$2,200 $6,000	(Nicholas 2019; Nelder and Rogers 2019; Borlaug et al. 2020; Bloomberg New Energy Finance 2020; Pournazeri 2022)

Source: National Renewable Energy Laboratory. (2023). The 2030 National Charging Network.

NREL's meta-review is consistent with Maryland's own experience as reflected in BGE's August 2023 Semi-Annual Report to the Public Service Commission. BGE's experience installing chargers at multifamily properties indicates an average cost of $9,662 per charger, installed.

4. **Actual costs of implementation at each site. Discuss the overall costs, broken down by cost categories and charger type (including capital costs and annual operations and maintenance costs). Also include incentive costs and any "make ready" costs such as distribution system upgrades.**

Average Multifamily Program Costs per EV Charger Port Jan 1, 2023 – Jun 30, 2023	
Equipment Cost	$ 3,953
Install Cost	$ 5,673
Other Cost*	$ 1,242
Total Average	**$ 9,662**

* Other Cost average based only on properties who reported applicable project costs that were not qualified under equipment or installation costs. 91% of properties did not report other costs associated with residential EV charger installation.

Source: BGE. (August 2023). Semi-Annual Report to the PSC, Case No. 9478. Page. 18.

Note that in all three of these examples – SWTCH, NREL, and BGE – the installation and supporting infrastructure comprise the bulk of the cost; the chargers themselves are generally between $1,000 to $2,000. These cost estimates are all for installing chargers in existing buildings. Importantly, if Maryland adopts EV-ready construction requirements, the costs to install chargers will be far less.

In Closing

SWTCH supports the goals of these companion bills and respectfully encourages favorable consideration.

Thank you for your consideration of these comments. If you have questions or if I can provide more information, please contact me at josh.cohen@swtchenergy.com or 202.998.7758.

Respectfully,

Josh Cohen
Head of Policy

The Better Buildings Act testimony from Climate Co

Uploaded by: Karl Held

Position: FAV

CLIMATE COALITION
Montgomery County, MD

Date: March 4, 2024
Topic: Testimony for Better Buildings Act, SB1023
From: Kevin Walton, Climate Coalition of Montgomery County
To: Education, Energy, and the Environment Committee

Dear Chair Feldman and Committee,

My name is Kevin Walton and I live in Montgomery County. I am representing the Climate Coalition of Montgomery County and the undersigned climate and environment focused member organizations. My experience with building energy performance and electrification issues includes serving as the Chair of Montgomery County Building Energy Performance Board, which advises on implementation of the county's Building Energy Performance Standards law, and I was co-Chair of the Market Rate Housing Subgroup of the Maryland Building Energy Performance Task Force.

The Climate Coalition of Montgomery County urges you to vote favorably for SB1023, the Better Buildings Act.

This act, which includes requiring electrification of space and water heating, aligns with the 2045 zero greenhouse gas emissions target in the Climate Solutions Now Act. It also aligns with the Maryland Building Energy Performance Standards targets of net zero greenhouse gas emissions by 2040. Addressing buildings is critical, as they account for 16% of the state's greenhouse gas emissions.

Similar actions have taken place in Montgomery County, where buildings account for almost 50% of greenhouse gas emissions. Montgomery County issued a Climate Action Plan with a goal of zero greenhouse gas emissions in the county by 2035. Many aspects of the state's laws and bills that are designed to address building emissions and energy efficiency have been enacted or are in process at our county's level, as these are the most effective tools we have to address greenhouse gas emissions by buildings.

In 2022, the Montgomery County Council unanimously passed a new building electrification law, which parallels the Better Building Act. This law requires the county to publish all-electric building standards for new buildings by the end of 2026. The new standards require systems, such as space and water heating, to use electricity rather than fossil fuels in new construction. By requiring only electric equipment, we avoid locking in greenhouse gas emissions for their 10 to 25-year usable life span, or alternatively, the building owner will not be hit with an added

expense imposed by the early replacement of the equipment to meet the target of zero greenhouse gas emissions.

In conclusion, the Better Buildings Act is forward thinking by addressing now the goals set over the next two decades for the state and its residents by the Climate Solutions Now Act. Therefore, the Climate Coalition of Montgomery County urges a favorable report.

Thank you for your time and attention.

Kevin Walton
On behalf of the following Climate Coalition Member Organizations

350 Montgomery County
ACQ Climate (Ask the Climate Question)
Elders Climate Action
Environmental Justice Ministry Cedar Lane Unitarian Universalist Church
Friends of Sligo Creek
Green Sanctuary Committee of the Unitarian-Universalist Church of Silver Spring
Montgomery Countryside Alliance
Montgomery County Faith Alliance for Climate Solutions
Poolesville Green
Safe Healthy Playing Fields
Sugarloaf Citizens' Association
Transit Alternatives to Mid-County Highway Extended/M-83 (TAME)
The Climate Mobilization Montgomery County
Takoma Park Mobilization Environment Committee (TPMEC)

Mobilize Frederick Testimony SB 1023F2.pdf
Uploaded by: Kathy Kinsey
Position: FAV

MOBILIZE FREDERICK
EQUITABLE SUSTAINABLE SOLUTIONS

March 1, 2024

Committee: Energy, Education, and Environment
Testimony on: SB 1023, the Better Buildings Act
Organization: Mobilize Frederick
Submitting: Karen Cannon, Executive Director
Position: Favorable
Hearing Date: March 4, 2024

Dear Chair and Committee Members:

Thank you for the opportunity to comment on Senate Bill 1023, the Better Buildings Act. Mobilize Frederick urges the Committee to issue a **favorable** report on this important climate bill.

Frederick County and the City of Frederick have adopted the 40 recommendations provided in the Climate Response and Resilience Report prepared by the City and County chartered Climate Emergency Mobilization workgroup to reduce carbon pollution and improve climate resilience. Both the City and the County are actively engaged in reducing the carbon footprint of our community to reach Maryland's objective to achieve a 60 percent reduction in greenhouse gasses by 2031 and a 100 percent reduction by 2045. Passage of the Better Buildings Act will provide necessary tools to help reach those goals.

Mobilize Frederick is a non-profit organization of Frederick City and County residents formed to assist with implementation of the Climate Response and Resilience Report recommendations. We fully support Section B of the bill, requiring the Department of Labor's Building Codes Administration to modify the Maryland Building Performance Standards to require, as of October 1, 2026, that all new buildings:

- Meet their water and space heating demands without use of fossil fuels;
- Over 20 stories and those with 20,000 square feet or more of continuous roof space be solar-ready;
- Be EV-Capable, EV-Ready, or have EV charging spaces if parking is provided; and
- Follow more stringent regional regulations as necessary.

In addition, we support the bill's suggested waivers and the requirement that buildings granted waivers must seek to minimize emissions; maximize health, safety, and fire protection; and be electric-ready.

We fully support Section C, requiring the Department of Labor's Building Codes Administration to modify the Maryland Building Performance Standards to require new buildings over 25,000 square feet to meet, on average, "Site Energy Use Intensity" (EUI) targets.

The Better Buildings Act will result in the reduction of carbon emissions, improve air quality, and substantially lower utility costs for homeowners, renters, and tenants. For all these reasons, we urge the Committee to issue a **favorable** report on SB 1023.

Karen Cannon
Executive Director

cc: Kathy Kinsey
Chair, Government Affairs and Policy Committee

SB 1023 - Better Building Act.pdf
Uploaded by: Ken Phelps Jr
Position: FAV

THE EPISCOPAL DIOCESE OF MARYLAND

The Maryland Episcopal Public Policy Network

Testimony in Support of SB 1023

Better Buildings Act of 2024

****FAVORABLE****

TO: Senator Brian J. Feldman, Chair; Senator Cheryl C. Kagan, Vice Chair; and the members of the Senate Education, Energy and the Environment Committee

FROM: Rev. Ken Phelps, Jr., Director, Maryland Episcopal Public Policy Network, Diocese of Maryland

DATE: March 1, 2024

The season of Lent calls the Church at this time to confess "our self-indulgent appetites and ways," "our waste and pollution of God's creation," and "our lack of concern for those who come after us" (Ash Wednesday Liturgy, Book of Common Prayer, p. 268).

Lent is also the season of the prophets.

Prophecy is a critical response to the excesses of society. It is marked by its fierce commitment to humanity and speaks to the perception of potentialities and possibilities - both for good and evil - within the social structure. Prophets hold up the mirror of existence and force us to take a look, a hard, honest look at whom we really are and the conditions that we have created

The mirror never lies. The prophets were God's inconvenient messengers. And when the activity of the people, or lack thereof - had moved the society to a tipping point, the prophets came with a warning about the wrath to come. Not the wrath of God, but the inescapable and often catastrophic consequences that were the product of their own doing. The warnings were dire, but they still carried with them the fleeting hope that if behaviors changed, disaster might be avoided.

Our collective histories reflect how often we have taken prophets' messages to heart. Our mother is dying. Her prophets - speaking for decades now - have made that quite clear.

THE EPISCOPAL DIOCESE OF MARYLAND

The Maryland Episcopal Public Policy Network

The mirror never lies. Each of the last ten years has ranked among the globally hottest ten years ever recorded. Compared to the magnitude of the climate crisis that humans face, SB1023 is a very modest policy bill even though this is not a time for incremental steps.

Maryland has statutorily committed to reaching net zero carbon pollution by 2045 – just 21 years from now. The Governor has recently advanced a comprehensive plan to make those required reductions with a necessary but large price tag. Why then allow new buildings to burn fossil fuels that directly spew carbon pollution into the air beyond the statutory net zero date. Why then allow buildings to waste electric energy that must be generated for the foreseeable future with at least some percentage of carbon-emitting fuels.

SB1023 addresses both of those areas. After a reasonable transition period, the bill would disallow direct burning of fossil fuels for heat and hot water energy in most new buildings. It would also speed up the international model energy codes process to make new buildings more energy efficient, giving Maryland a better shot at reaching its 2045 targets. Passing the Better Buildings Act would entail little or no cost additional to the state.

Much of the text of SB1023 is similar to the Climate Solutions Now Act as originally introduced in 2021 and passed in 2022. But the 2022 Climate Solutions Now Act's requirement that "new buildings meet all water and space heating demand without the use of fossil fuel" was dropped out of the bill in favor of a grid capacity study, which has shown that Maryland's utilities have plenty of capacity to accommodate new building electrification. SB1023 would restore the language dropped out of the Climate Solutions Now Act in 2022 and add reasonable energy conservation, EV charging readiness, and solar readiness provisions that would move us more rapidly towards a 100% clean energy future.

Requiring new buildings to be largely fossil free has corollary benefits for Marylanders as well, in at least three ways:

- Avoiding fossil fuel heat and hot water appliances that vent to the outside would reduce outdoor air pollution, which is a serious health problem in densely populated areas and has significant environmental justice implications.
- New homes and buildings that avoid fossil fuel lines and appliances for cooking, while not required by the bill, would be much better indoor environments for the respiratory health of children and adults.
- Owners and tenants in new homes and buildings that avoid the enormous cost increases projected for the delivery of methane gas would enjoy significant savings on their ongoing fuel bills.

THE EPISCOPAL DIOCESE OF MARYLAND

The Maryland Episcopal Public Policy Network

We are grateful that the General Assembly has set high statutory climate goals and has required public and private plans to meet them. With a handful of other states and DC, Maryland stands out as a model and inspiration for other states and localities. There is no policy that makes more sense to achieve Maryland's climate goals while providing significant public health and economic benefits to consumers than electrifying and conserving energy in new construction.

We have an opportunity here. This is the appointed time for all God's children to work together for the common goal of renewing the earth as a hospitable abode for the flourishing of all life, not just human.

Our mother is dying. There may still be time to save her, but we must act swiftly and definitively to accomplish that goal.

We urge a favorable report.

The Episcopal Diocese of Maryland

The Maryland Episcopal
Public Policy
Network

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SB1023_Better Buildings Act_EEE_CJW FAV.pdf
Uploaded by: Laurie McGilvray
Position: FAV

Committee:	**Education, Energy and the Environment**
Testimony on:	**SB1023 The Better Buildings Act of 2024**
Organization:	**Maryland Legislative Coalition Climate Justice Wing**
Submitting:	**Monica O'Connor, Co-Chair**
Position:	**Favorable**
Hearing Date:	**March 4, 2024**

Dear Chair and Committee Members:

Thank you for allowing our testimony today in support of SB1023, The Better Buildings Act of 2024. The Maryland Legislative Coalition (MLC) Climate Justice Wing, a statewide coalition of nearly 30 grassroots and professional organizations, urges you to vote favorably on SB1023.

The Better Buildings Act does just what its name implies – it requires most new buildings to be built smart from the start, with better energy conservation and no on-site fossil fuel combustion for space and water heating. It has two substantive divisions: a section requiring electrification, EV-readiness, and solar readiness; and a section requiring substantial energy conservation in new buildings over 25,000 square feet, towards the goal of only renewable energy use.

SB1023 implements a simple vision of how we want our public and private buildings to be in the future – less expensive to operate, and much better for the climate crisis we face. It is a common-sense bill that ensures that new construction utilizes highly efficient, cost-effective electric appliances that are better for our health, our wallets and the climate.

By law, Maryland has just 21 years to reach net zero carbon pollution emissions as mandated in the Climate Solutions Now Act of 2022. Because buildings account for 13% of the state's polluting carbon emissions[1], it is impossible to meet these targets if we continue to utilize fossil fuels for space and water heating. Today's heat pumps are three to four times[2] more efficient than fossil fuel heating equipment, and remain two to three times more efficient even in winter weather. According to a report by the Building Decarbonization Coalition (BDC)[3], the average heat pump sold uses as much as 29% less electricity during periods of peak demand than a central AC unit. The Maryland Energy Administration states, "heat pumps are an essential tool to lowering monthly energy bills and keeping electricity demand low year-round." Tax credits and rebates made available by the Inflation Reduction Act have made efficient electric appliances more affordable for Marylanders in every income bracket. Across Maryland, 98% of households using high-efficiency electric appliances in place of fossil fuel heating equipment can save money on their monthly energy bills. The median

[1] https://mde.maryland.gov/programs/Air/ClimateChange/MCCC/Documents/MWG_Buildings%20Ad%20Hoc%20Group/E3%20Maryland%20Building%20Decarbonization%20Study%20-%20Final%20Report.pdf
[2] https://www.rewiringamerica.org/circuit-breakers-heat-pumps#3
[3] https://buildingdecarb.org/resource/report-why-cooling-is-key

low-income household in Maryland would save $373 per year by replacing a gas furnace with an all-electric heat pump.[4]

The net effect of passing the Better Buildings Act would be to reduce carbon pollution emissions both directly (through onsite combustion) and indirectly (through electric generation), improve air quality, and substantially lower utility costs for homeowners and renters. To strengthen the bill, the Climate Justice Wing urges the committee to consider the prohibition of any fossil fuel appliances in the home, including gas stoves which have been shown to have significant negative health impacts.[5]

As Maryland transitions to a cleaner energy future, buildings using efficient electric heat pumps and heat pump water heaters will be cleaner, greener, and less costly to build and operate[6] than those using methane gas or oil. Mandating that new construction be smart from the start is a common-sense first step to reducing emissions from buildings. Therefore, we recommend a **FAVORABLE** report for SB1023 in committee.

350MoCo
Adat Shalom Climate Action
Cedar Lane Unitarian Universalist Church Environmental Justice Ministry
Chesapeake Earth Holders
Chesapeake Physicians for Social Responsibility
Climate Parents of Prince George's
Climate Reality Project
ClimateXChange – Rebuild Maryland Coalition
Coming Clean Network, Union of Concerned Scientists
DoTheMostGood Montgomery County
Echotopia
Elders Climate Action
Fix Maryland Rail
Glen Echo Heights Mobilization
Greenbelt Climate Action Network
HoCoClimateAction
IndivisibleHoCoMD
Maryland Legislative Coalition
Mobilize Frederick
Montgomery County Faith Alliance for Climate Solutions
Montgomery Countryside Alliance
Mountain Maryland Movement
Nuclear Information & Resource Service
Progressive Maryland
Safe & Healthy Playing Fields
Takoma Park Mobilization Environment Committee
The Climate Mobilization MoCo Chapter
Unitarian Universalist Legislative Ministry of Maryland
WISE

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4 https://mde.maryland.gov/programs/air/ClimateChange/BETITF%20Meeting%20Materials/Understanding%20Residential%20Electrification%20Costs%20and%20Benefits_ReWire%20presentation%207.27.23.pdf

5 https://news.stanford.edu/2022/01/27/rethinking-cooking-gas/

6 https://rmi.org/insight/the-economics-of-electrifying-buildings-residential-new-construction/

sb1023- energy-better buildings- EEE 3-1-2024.pdf
Uploaded by: Lee Hudson
Position: FAV

Delaware-Maryland Synod
Evangelical Lutheran Church in America
God's work. Our hands.

Testimony Prepared for the
Education, Energy, and the Environment Committee
on
Senate Bill 1023
March 4, 2024
Position: **Favorable**

Mr. Chairman and members of the Committee, thank you for this opportunity to support housing production with an energy regime that stewards creation. I am Lee Hudson, assistant to the bishop for public policy in the Delaware-Maryland Synod, Evangelical Lutheran Church in America. We are a faith community in every part of our State.

We have supported a variety of Maryland housing-related policies in prior MGA sessions to lower energy consumption and advance the meta-goal of decarbonized energy production.

Years ago, Baltimore Gas and Electric testified in the Maryland General Assembly that loss of Maryland's robust efficiency programs contributed to spikes in utility costs after deregulation of its electricity market (MD Senate Finance, 2007). The wisdom of Maryland's efficiency policies is now obvious: system demand has been decreasing for years even as more customers are being served.

That last fact supports our community's advocacy of swift energy decarbonization, in Maryland and nationally (see "Earth's Climate Crisis", ELCA, April 2023). System capacity to absorb increasing demand in the electric energy sector has already been produced by application of efficiencies. We believe the ambition of **Senate Bill 1023** will be prospectively supported with assiduous exploitation of efficiency opportunities and technologies as an adjunct to transmission capacity increase.

Senate Bill 1023 will reduce greenhouse gas emissions and scale green energy production. It calls for the Maryland Department of Labor to adopt the International Building Code, to include the International 2 Energy Conservation Code, as Maryland Building Performance Standards. The codes make net-zero by 2035, established in the Climate Solutions Act of 2022, more likely.

This testimony does not rehearse the obligatory of an immediate decarbonization project: the fire, flood, and related natural catastrophes currently informing the world that more and worse is to come. We elide our objections to specious cost-benefit analyses about the price of decarbonization. It is impossible to stop burning carbon by allocating additional capital to burn carbon. That has become a commercial exercise in cost-shifting that transfers value from the public and the commons to private sectors.

Senate Bill 1023 will distinctly benefit the entire State; every resident, every energy consumer, every subdivision. For those reasons and in reverence for creation, we support **Senate Bill 1023** and urge your favorable report.

Lee Hudson

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SB1023_Written_Testimony-Leo.pdf
Uploaded by: Leo Abubucker
Position: FAV

TESTIMONY IN SUPPORT OF SB1023
Maryland Building Performance Standards – Fossil Fuel Use, Energy Conservation, and Electric – and Solar – Ready Standards
(Better Buildings Act of 2024)

The Electrify Our Future organization strongly encourages the Committee to recommend the favorable reporting of SB1023, also known as the Better Buildings Act of 2024, introduced by Senator Brooks, Young, and Lam.

Electrify Our Future (EOF) is a student-led organization, advocating for electrification throughout the state of Maryland. Electrify Our Future, consists of multiple chapters across the state, the primary ones being in Baltimore, Howard, and Montgomery counties. As an organization that represents a diverse body of students, we work to educate Maryland residents and communities about the benefits of electrification, whilst staying politically active to support legislative action favoring electrification. Electrify Our Future commends the Maryland General Assembly for its prior work in combat climate change. However, Electrify Our Future recognizes that more legislation needs to be passed to further the fight against the pressing issue of global warming and pollution. The Better Building Act of 2024 greatly aligns with the perspectives of our organization, as we believe this bill will progress the future of electrification, allowing future Maryland generations to live sustainable lives.

The Better Buildings Act embodies principles that resonate deeply with our organization's mission and values. As students, we recognize the urgent need to address climate change and reduce fossil fuel consumption in order to create a sustainable future for ourselves and future generations. The data before us are alarming. Statistics such as children living in homes with gas cooking have a 42% increased risk of having asthma (Oxford Journal of Epidemiology) are terrifying. Yet these data should not serve to scare us, they must serve to warn us, a warning of a fast-approaching future and a call to action that change must happen now. The Better Buildings Act offers a crucial step forward in achieving these goals by promoting energy efficiency, electrifying new buildings in Maryland, and requiring them to have the capability for electric vehicle chargers and solar panels.

Furthermore, the Better Buildings Act aligns with our commitment to social justice and equity. Energy-efficient buildings not only reduce environmental harm but also improve indoor air quality and comfort, particularly in low-income communities that are disproportionately impacted by pollution and climate change. By prioritizing energy efficiency, the Better Buildings Act promotes healthier and more equitable communities for all.

As students, we recognize the importance of taking decisive action to combat climate change and create a more sustainable future. The Better Buildings Act represents a critical opportunity to advance these goals, and we urge you to support its swift passage and implementation.

As a student organization, we highlight that SB1023 is broadly supported by students across the state, most notably including the Baltimore County Student Councils which represents over 110,000 students. Our students are our future, thus it is imperative for them to be heard when decisions that affect them are decided.

The future of Maryland is in the hands of our youth, yet, the proper framework must be laid out. Infrastructure is continuously being built in Maryland to accommodate new generations, who will be heavily affected by environmental policies and actions. The data are there, the support is clear, and the precedent is set. Senator, we as students, we as an organization, we as citizens in the state of Maryland ask for one thing: the chance at a better future.

For these reasons, the Electrify Our Future organization asks for a FAVORABLE REPORT on SB1023.

SB 1023 - MoCo_Elrich_FAV (GA 24).pdf
Uploaded by: Marc Elrich
Position: FAV

OFFICE OF THE COUNTY EXECUTIVE

Marc Elrich
County Executive

March 1, 2024

TO: The Honorable Brian J. Feldman
Chair, Education, Energy, and the Environment Committee

FROM: Marc Elrich
County Executive

RE: Senate Bill 1023, *Maryland Building Performance Standards – Fossil Fuel Use, Energy Conservation, and Electric– and Solar-Ready Standards (Better Buildings Act of 2024)*

Support

I am writing to express my support for Senate Bill 1023, *Maryland Building Performance Standards – Fossil Fuel Use, Energy Conservation, and Electric- and Solar-Ready Standards (Better Buildings Act of 2024).* Solving the climate crisis requires us to shift to clean and renewable energy sources, and to convert many of our buildings and vehicles to run on that green electricity. All of us have roles to play and opportunities to benefit from this transition, and no one should be left behind.

This bill would require new buildings to meet their space and water heating needs through efficient electric equipment without the combustion of fossil fuels. It would also ensure that new buildings are energy efficient and ready for solar panels and electric vehicles. This is the right way to build new buildings, and all of these measures are cost-effective in new construction.

We have already passed a similar law in Montgomery County in order to advance our climate action goals, and would welcome a standardized statewide approach. The requirements to meet space and water heating needs without the use of combustion equipment are especially important.

I respectfully request that the Education, Energy, and the Environment Committee give this bill a favorable report.

cc: Members of the Education, Energy, and the Environment Committee

SB1023_MDSierraClub_fav 4March2024.pdf
Uploaded by: Mariah Shriner
Position: FAV

P.O. Box 278
Riverdale, MD 20738

Committee: Education, Energy, and the Environment

Testimony on: SB 1023 "Maryland Building Performance Standards – Fossil Fuel Use, Energy Conservation, and Electric– and Solar–Ready Standards (Better Buildings Act of 2024)"

Position: Support

Hearing Date: March 4, 2024

The Maryland Chapter of the Sierra Club urges a favorable report for SB 1023, the Better Buildings Act of 2024 (BBA). SB 1023 would make a significant contribution to achieving Maryland's 2045 climate goals of net zero emissions. This bill requires that, beginning in October 2026, all newly constructed buildings meet all of their heating and hot water demands without burning fossil fuels. There would be partial waivers, granted by local jurisdictions, for backup power in all buildings as well as full exceptions for commercial food establishments, laboratories, laundromats, hospitals, and crematoriums. If the building has parking it would need to be provide or be ready to electric vehicle (EV) charging. Buildings with over 20,000 square feet of roof area would, in most circumstances, need to be solar ready unless granted a waiver by local jurisdictions. New buildings over 25,000 square feet would also need to be highly energy efficient, with efficiency standards increasing over time. Local jurisdictions could adopt more stringent regulations. The Sierra Club strongly supports building electrification as a key way to meet our climate goals and urges a favorable report.

Nothing in the bill would require existing buildings to replace their fossil fuel burning furnace or water heater. Restaurants could continue to burn gas.

Additional Opportunities to Strengthen the Bill

As currently written, the BBA applies only to hot water and heating appliances. We would support an amendment to apply the BBA to all fossil fuel energy use in new buildings, including cooking and laundry equipment. We also suggest that the legislation apply not only to new buildings but also to buildings with significant improvements.[1]

Building Electrification is Essential for Meeting Maryland's Climate Goals

Fuel burned in buildings accounts for approximately 16% of greenhouse gas (GHG) emissions in Maryland. The electricity used in buildings accounts for an additional contribution to GHG pollution; however, this will decline over time as Maryland's energy production becomes increasingly renewable-based. As Maryland works to achieve its climate goals to reduce GHG emissions by 60% (from 2006 levels) by 2031 and reach net-zero by 2045, the BBA will play a crucial role in meeting those targets.

[1] Significant improvement is defined in the bill to mean "any repair, reconstruction, rehabilitation, alteration, addition, or other improvement of a building or structure, the cost of which equals or exceeds 50% of the replacement cost of the structure before the improvement or repair is started."

Maryland has already demonstrated significant interest in reducing GHG emissions in the buildings sector through building electrification. In its Climate Pollution Reduction Plan, released last December, the Maryland Department of the Environment called for a "zero-emission construction standard, to be implemented in 2027," which would "[cover] all new residential and commercial buildings, increasing electrification of the building sector." The legislature now has the opportunity with the BBA to establish a pathway to building electrification by eliminating fossil fuel consumption for heat and hot water in new buildings.

Building electrification of new homes, as mandated through the BBA, would have significant public health benefits. Currently close to half of homes in Maryland burn natural gas. Indoor gas leaks can increase levels of nitrous oxides, benzene, and particulates inside buildings, all of which generate health risk. The health risks from burning gas are most severe for underserved and overburdened communities. Inside our homes, gas leaks increase the likelihood that children will develop asthma. One study showed that children in homes with gas stoves have a 42% higher risk of asthma. Benzene is a known carcinogen.

Requiring proactive building electrification for new construction also makes economic sense. In the absence of BBA, new buildings built between 2026 and 2045 would continue to rely on fossil fuel infrastructure.[2] For Maryland to reach its statutorily-required climate goals, these buildings would then need to be retrofitted with new electric appliances before the fossil fuel burning appliances reach the end of their lives, at significant expense. The BBA provides us with a roadmap for how to avoid these additional retrofit expenses. Research shows that new buildings can be constructed without burning fossil fuels at roughly the same cost (+0%-2%) as buildings that use fossil fuels.[3]

The BBA Act Would Facilitate EV and Solar Deployment

SB 1023 would also support Maryland in achieving its transportation and clean energy climate goals through the provisions on EV charging and solar-ready roofs. As Maryland has adopted a mandate for 100% of light duty vehicle sales to be EVs by 2035, the EV charger-related requirements will help Maryland achieve its goals for EV deployment. The BBA's provisions that certain larger new buildings would need to be solar ready[4] will support additional solar deployment in line with Maryland's statutory target of achieving 14.5% of the state's electricity consumption from solar generation by 2030 and Governor Moore's commitment to achieving 100% clean energy by 2035.

The BBA Will Reduce Pressure on the Electric Grid and Reduce Energy Bills

Maryland must also pursue increasing energy efficiency, in addition to building electrification, to reach its climate goals. The bill calls for increasing energy efficiency standards over time for

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[2] New residences add 0.7% to total Maryland residences each year. Between 2026 and 2045, newly constructed homes would likely account for almost 11-15% of Maryland's homes.

[3] An Assessment of Electrification Impacts on the Maryland Electric Grid, Brattle Group, December 29, 2023, page 3, https://www.psc.state.md.us/wp-content/uploads/MD-PSC-Electrification-Study-Report.pdf

[4] The solar-ready roof provisions would apply to larger new buildings with at least 20,000 feet of roof space, a height of less than 20 stories, and appropriate roof angle to receive solar.

new buildings of greater than 25,000 square feet. Buildings over 25,000 square feet permitted on or after October 1, 2026 would have lower energy bills than residences burning fossil fuels. New residential buildings permitted in 2032 would need to be twice as efficient as buildings permitted in 2026. This will reduce the load on the electric grid and reduce residential energy bills.

In summary, SB 1023, the BBA, will contribute to achieving Maryland's climate goals by:

1) Reducing GHG emissions in new buildings through building electrification;
2) Ensuring that owners of new buildings would not need to replace fossil fuel burning equipment before the end of its life to meet the state's climate goals;
3) Facilitating the deployment of EVs by providing charging capabilities;
4) Helping Maryland reduce the climate impact of its electric system by enabling the deployment of additional solar; and
5) Increasing energy efficiency over time in new buildings over 25,000 square feet.

The Sierra Club Maryland urges approval of this legislation.

Christopher T. Stix	Mariah L. Shriner	Josh Tulkin
Clean Energy Legislative Team	Climate Campaign Representative	Chapter Director
Stixchris@gmail.com	Mariah.Shriner@MDSierra.org	Josh.Tulkin@MDSierra.org

ACEEE Support for Better Buildings Act SB 1023 and

Uploaded by: Mark Kresowik

Position: FAV

American Council for an Energy-Efficient Economy
529 14th Street, N. W., Suite 600 Washington, D.C. 20045 202.507.4000 202.429.2248 www.aceee.org

February 29, 2024

Education, Energy and the Environment Committee
2 West
Miller Senate Office Building
Annapolis, MD 21401

Environment and Transportation Committee
Room 251
House Office Building
Annapolis, MD 21401

RE: Testimony on SB 1023 and HB 1279, the Better Buildings Act of 2024

Dear Chair Feldman, Chair Korman, Distinguished Members of the Committees,

The American Council for an Energy-Efficient Economy (ACEEE) tremendously appreciates your leadership advancing affordability and growth in Maryland through energy efficiency and clean energy. We respectfully **urge you to lower costs for households and businesses in the necessary transition off fossil fuels by passing SB 1023 and HB 1279**, together the Better Buildings Act of 2024, out of your respective Committees.

ACEEE has deep experience and expertise when it comes to the benefits of energy efficiency in building construction and operation, particularly when considering the investments needed to meet Maryland's goals. Maryland Department of the Environment's Maryland's Climate Pathway report clearly delineates how buildings need to change to reduce climate pollution and avoid the worst impacts of climate disruption: virtually every building needs to use clean electricity efficiently for space and water heating.[1] The most affordable way to achieve those goals is to ensure every building constructed today and going forward is prepared for that future: it is significantly more expensive to retrofit buildings down the road.[2] **The provisions of the Better Buildings Act will thus lower the costs of that transition for Maryland households and businesses.**

It is unfortunate that the Better Buildings Act is necessary at all. If it wasn't for opposition from homebuilders and fossil fuel interests during the International Energy Conservation Code (IECC) process, Maryland's current building code would already include many of these provisions.[3] Misinformation from

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[1] Maryland's Climate Pathway Report

[2] Electric Readiness in Residential Energy Code (energycodes.gov)

[3] 2021 Energy Code Progress Challenged: Climate and Affordability Stand to Lose Unless We Speak Up - New Buildings Institute

those entities continues to this day when it comes to the costs of efficient home construction: the actual experience of a home builder in North Carolina was that the increased construction cost of a highly efficient home wired for solar and electric vehicle charging was around $6,000, far less than figures sometimes claimed by home builder organizations.[4] Analysis of the latest IECC code found that households experience net positive cash flow – the annual energy savings exceed the slightly increased cost of the downpayment and annual borrowing costs – in just the second year of ownership for similar levels of upfront cost.[5] Many of the requirements of the Better Buildings Act are also necessary for homes to qualify for DOE's Zero Energy Ready Homes program, which comes with a $5,000 tax credit thanks to the Inflation Reduction Act.[6] **In other words, an innovative builder can find a way to meet these requirements with virtually no upfront cost to the owner, the benefits are all savings to the occupant.**

Those savings are particularly important for low-income households in Maryland, who already face some of the highest energy burdens – the percentage of their income going to energy costs - in the United States. The American Housing Survey estimated that fully a quarter of low-income homeowners in Baltimore may have faced an absolutely shocking energy burden of nearly 50% in recent years.[7] The Maryland Office of People's Counsel has found that the price of fuel for households that remain on the gas distribution system will skyrocket in coming years.[8] **Adding new buildings to that increasingly expensive gas system – especially those buildings that will face barriers to transitioning to clean electricity without the Better Buildings Act – is simply unthinkable.**

Building for an affordable clean energy future for Maryland households and businesses is about as win-win a policy as can be imagined. **The Better Buildings Act will save money and reduce pollution that damages public health and disrupts the climate.** Please pass it expeditiously out of your Committees, through the House and Senate, and to the Governor to be signed into law.

Sincerely,

Mark Kresowik
Senior Policy Director
American Council for an Energy-Efficient Economy
mkresowik@aceee.org

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[4] How home builders are blocking measures to save energy - The Washington Post

[5] Federal Register :: Adoption of Energy Efficiency Standards for New Construction of HUD- and USDA-Financed Housing: Preliminary Determination and Solicitation of Comment; Extension of Comment Period

[6] Section 45L Tax Credits for Zero Energy Ready Homes | Department of Energy

[7] American Housing Survey (AHS) (census.gov)

[8] Gas Rates & Climate Report (maryland.gov)

24_0304_Senate 1023 testimony_Passive to Positive.
Uploaded by: Michael Hindle
Position: FAV

Testimony on SB 1023, The Better Buildings Act of 2024
Senate Committee on Education, Energy and the Environment
March 4th, 2024
Position: Support

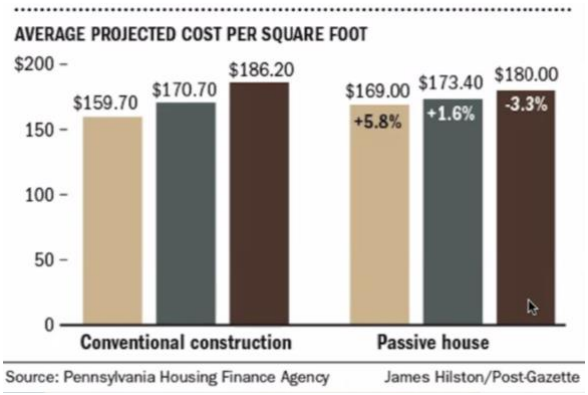
Testimony in Support of Senate Bill 1023

Dear Chairman Feldman and members of the committee;

I am the founder and principal of Passive to Positive, a Maryland based energy consulting firm. We have extensive experience performing energy modeling and design consulting for buildings in Washington DC, Maryland, Pennsylvania, Massachusetts and New Hampshire, ranging from single family homes to large apartment buildings.

Since 2009, we have helped design dozens of highly efficient buildings that meet Passive House and net-zero energy standards. The Passive House standard is roughly twice as ambitious as what has been articulated in SB 1023. All of our projects have been all electric and most have been affordable housing projects. We know from direct experience over 14 years that the standards for building energy performance in **SB 1023 are perfectly reasonable and achievable now**.

Several years ago, the Pennsylvania Housing Finance Agency offered 10 **voluntary bonus points** for meeting Passive House in the Qualified Allocation Plan (QAP) scorecard for **Low Income Housing Tax Credit applications. No financial incentive was offered**. Within a few short years, hundreds of affordable Passive House units had been constructed. The first year, the incremental cost to achieve this remarkable level of performance was 5.8% in the first year, but each year the cost fell. The second year, the incremental cost was only 1.6%. **By the third year, Passive House projects actually cost 3.3% less to build than conventional construction.** This is largely due to the fact that builders and designers get better at doing their jobs in the face of such challenges, and are actually able to optimize buildings to target wasteful spending that is inherent in conventional construction.



Please bear in mind that **cost reduction was achieved while building structures with EUI's of less than one half of those articulated in SB 1023.**

Five fundamental strategies deliver enhanced energy performance, 1) improving air tightness 2) increased insulation 3) higher performance windows and doors 4) avoiding significant thermal bridges, and 5) balanced energy recovery ventilation. If these things are done, efficient heat pumps deliver the remaining heating and cooling demand with a very small energy demand, making the home truly zero energy ready.

We have utilized cold-climate heat pumps since the 2009, and have never had a problem with a client not being able to maintain comfort under, even extreme winter conditions of Garrett County in the depth of winter.

Affordability of high-performance homes is better than conventional homes. Even if conventional homes can be constructed for a marginally lower first cost, high performance homes deliver cost savings on energy bills that last for the life of the home and deliver **a satisfying ROI**. Green appraisals by the American Appraisal Institute capture the value of green features for the purposes of lending and resale, and banks increasingly offer better terms for sustainable buildings and the lower operational cost of high-performance buildings. **National affordable housing developers come to us to make their buildings more efficient specifically because it yields better financial outcomes for residents whom they serve.**

Currently, buildings are disproportionately responsible for between 44 and 48% of carbon emission. In order to avoid the worst impacts of catastrophic climate change, aggressive reductions of operational carbon emissions in buildings are essential. The good news is that all of the technologies we require already exist and are feasible for widespread adoption. Any member of this committee would **be welcome at any of our projects to see first-hand that better buildings are built now** in our region, how they perform, and to meet the builders that build them.

Improving building energy standards will happen out of necessity, if not this year, then very soon. The builders that embrace higher performance building practices now will find that once they have done so, it becomes second nature, and ceases to feel like a challenge at all. We really can deliver better comfort and indoor air-quality, efficiency and lower carbon emissions with a favorable ROI to homeowners and developers now. Why on earth would we wait?

Testimony by:

Michael Hindle, CPHC, MFA
Principal, Passive to Positive
Low Impact Design for a Livable Future
phone 240-431-1281
michael@passivetopositive.com

2027 Edmondson Ave
Catonsville, MD 21228
United States

BBA Senate Testimony .pdf
Uploaded by: Neal Goturi
Position: FAV

Dear Energy, Education & Environment Committee,

My name is Neal Goturi and I am a junior at River Hill High School. I am passionate about energy and the role it plays in our lives. I believe it's imperative that we constantly try to improve the world around us to make it safer, more equitable and ultimately more prosperous. I take the independent research course offered by the Howard County Public School System where I study the future of the American energy landscape. In my months of reading scientific articles, analyzing data and discussing my ideas with experts, I've realized that academia has a consensus: the future of America is electric. Fossil fuels are unstable, unequal and they are quite simply, antiquated.

I am thrilled to be able to write in support of the Better Buildings Act.

In 2012 my family moved to a home, built in 2011 with a gas stove. All throughout elementary school, I had severe asthma and it limited my ability to participate in PE, have fun in sports and play outside. Recently, troves of evidence have come out highlighting the respiratory danger of gas stoves; most importantly, the International Journal of Environmental Research and Public Health showed that 12.7% of current childhood asthma in the US is attributable to gas stove use. In the past few years, gas stoves have become a known risk factor for asthma and I'm unsure to what extent the gas stove contributed to my asthma.

I'm writing to ask for your support of this bill and further support of a strong electrification statute in the Maryland Building Code; I recognize the importance of the Act and the electrification and efficiency it predicates. For that reason, I've spent the last month educating and organizing students all over Maryland. Every student I spoke to about the Act supported the bill as they also recognize that electrification is necessary to secure the future; over 300 students have signed off in support of the BBA. The climate crisis resonates with students and they are looking towards their elected officials for action. We students are inheriting the future, yet we often feel like we're powerless to shape it.

Climate change is a global problem with global impacts but the solution is local. 11% of the county's emissions come directly from burning methane gas or propane in furnaces and appliances in buildings. As our population grows, and new construction without electrification follows, that number is only going to go up. Change starts from the ground up and unless communities band together and work towards the common good then there is little hope for the future.

These students are aware of the economic need for electrification; gas is slated to become 56% more expensive in the next 12 years. They are also passionate about the equity aspect of this

projection because as prices go up, low-income families will have to start making budgetary concessions in order to keep the heat on.

The facts are clear: electrification helps health, makes society more equitable, is an economic necessity and a necessary first step in fighting back climate change. I hope that my letter has shown that electrification is also vehemently supported by the younger generation.

I urge you again, to vote in favor of the BBA and to enact a strong electrification code within our State in the coming months.

Sincerely,
Neal Goturi

Testimony in opposition to SB1023.pdf
Uploaded by: Richard KAP Kaplowitz
Position: FAV

SB1023_RichardKaplowitz_FAV
03/04/2024

Richard Keith Kaplowitz
Frederick, MD 21703

TESTIMONY ON SB#/1023 – FAVORABLE

Maryland Building Performance Standards – Fossil Fuel Use, Energy Conservation, and Electric– and Solar–Ready Standards (Better Buildings Act of 2024)

TO: Chair Feldman, Vice Chair Kagan, and members of the Education, Energy and the Environment Committee

FROM: Richard Keith Kaplowitz

My name is Richard K. Kaplowitz. I am a resident of District 3. I am submitting this testimony in support of SB#1023, Maryland Building Performance Standards – Fossil Fuel Use, Energy Conservation, and Electric– and Solar–Ready Standards (Better Buildings Act of 2024)

Maryland has an ambitious program to reduce the use of fossil fuels to ameliorate the effects of climate change in our state. Fossil fuel extraction and refinement are exacerbating the problems we are facing. This bill is an attempt to mandate new Building Performance Standards that eliminate the use of fossil fuels in new construction. It further sets targets for energy conservation and use of electric and solar sources for powering new construction. It does not call for older buildings to be changed; it is a forward looking bill for new construction within Maryland. We must commit that the continued use of those fossil fuel sources while we transition away from them we assist in the mitigation of health harms from these fuels.
.
This bill facilitates addressing health impacts of climate change and can provide environmental justice to vulnerable populations already facing extreme effects from climate change caused by fossil fuels sited within or near those communities.

Fixing the problem and moving towards Maryland clean energy goals requires a plan to do so and the legal framework to make it happen. This bill moves the state in the direction of fixing problems by eliminating major contributors to those problems. It is a commonsense solution to move Maryland forward.

I respectfully urge this committee to return a favorable report on SB#1023.

COG CEEPC Comment Letter Supporting SB 1023 - Bett
Uploaded by: Robert Christopher
Position: FAV

Metropolitan Washington
Council of Governments

February 28, 2024

The Honorable Brian J. Feldman
Chair of the Education, Energy, and the Environment Committee
Senate of Maryland
Miller Senate Office Building, 2 West Wing
11 Bladen Street
Annapolis, MD 21401

RE: Support for SB 1023, Maryland Building Performance Standards - Fossil Fuel Use, Energy Conservation, and Electric- and Solar-Ready Standards (Better Buildings Act of 2024)

Dear Chair Feldman:

On behalf of the Climate, Energy, and Environment Policy Committee (CEEPC) of the Metropolitan Washington Council of Governments (COG), I am writing to support SB 1023, the Better Buildings Act of 2024.

Climate change is a regional priority for COG, the association of local governments in metropolitan Washington. COG's legislative priorities include supporting aggressive energy efficiency goals and policies and actions that reduce greenhouse gas (GHG) emissions in metropolitan Washington This bill would directly assist in implementing actions to reduce energy consumption in the State of Maryland's built environment, while facilitating deployment of clean energy technologies. As such, CEEPC, on behalf of COG, supports SB 1023, as it would implement more stringent building codes, thus reducing total energy consumption and GHG emissions.

Please contact Jeffrey King, COG Director of Climate, Energy, and Air Programs at (202) 962-3238 or jking@mwcog.org if you have any questions. Thank you for your consideration.

Sincerely,

Jolene Ivey

Jolene Ivey
Chair, Climate, Energy and Environment Policy Committee

cc: Honorable Cheryl C. Kagan
Honorable Malcolm L. Augustine
Honorable Benjamin T. Brooks
Honorable Mary Beth Carozza
Honorable Jason C. Gallion
Honorable Katie Fry Hester
Honorable Bryan W. Simonaire
Honorable Mary L. Washington
Honorable Ronald L. Watson
Honorable Karen Lewis Young

Better Buildings Act Testimony - Third Act.pdf
Uploaded by: Robert Wald
Position: FAV

This **testimony in support of HB1279/SB1023, the Better Buildings Act of 2024,** is submitted by Third Act Maryland. We have more than 1,300 members and are part of a nationwide climate justice organization of more than 70,000 experienced Americans over age 60 who are determined to change the world for the better.

The Better Buildings Act must be passed if Maryland is to meet the goals specified in the Climate Solutions Now Act of 2022, which sets a goal of 60% of statewide emissions reductions by 2031 and net zero by 2045. Simply put, **if we continue to expand methane gas infrastructure, we can't meet our climate goals.** The Better Buildings Act will, with certain exceptions, require new buildings across the state to be gas-free.

The Better Buildings Act will **create high-paying jobs for electricians,** while enabling gas utilities to shift their workforce from infrastructure expansion to the much needed maintenance and repair of existing infrastructure: **Methane leaks from pipes beneath our streets in your neighborhood and in neighborhoods across the state, and leaks worsen with infrastructure age.**

The oil and gas industry has known for quite some time that climate-crisis-driven change is coming, yet **they continue to operate in Maryland with a 20th-century business model well into the 21st century.** They've had plenty of time to adapt their business model to the climate crisis, and now it's time—long past time—for the state to compel them to do so.

We urge you to pass the Better Buildings Act of 2024 without weakening amendments.

CHESSA - MD - EEE Testimony SB1023 Favorable 20240
Uploaded by: Robin Dutta
Position: FAV

3 March 2024

Senator Brian Feldman, Chair
Education, Energy, and the Environment Committee
2 West
Miller Senate Office Building
Annapolis, Maryland 21401

Written Testimony
SB1023: Maryland Building Performance Standards – Fossil Fuel Use, Energy Conservation, and Electric– and Solar–Ready Standards (Better Buildings Act of 2024)

Position: Favorable

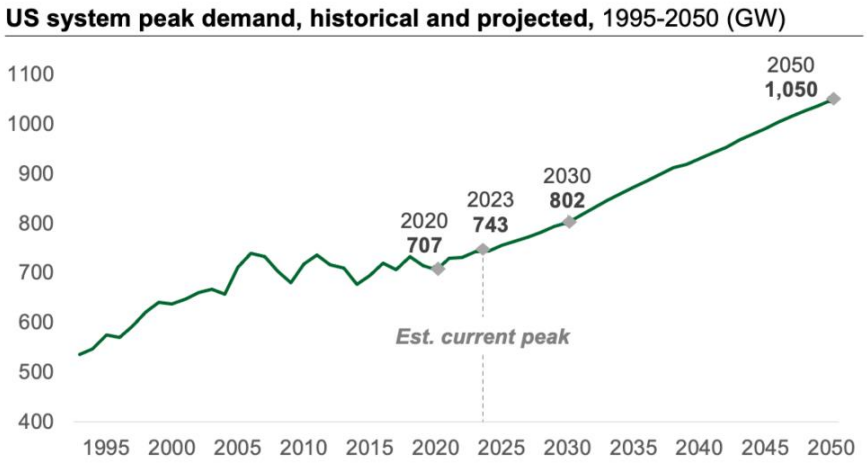
Chair Feldman, Vice Chair Kagan, Members of the Committee, thank you for the opportunity to testify on Senate Bill 1023, Maryland Building Performance Standards – Fossil Fuel Use, Energy Conservation, and Electric– and Solar–Ready Standards (Better Buildings Act of 2024). I am Robin Dutta, the Executive Director of the Chesapeake Solar and Storage Association (CHESSA). Our association has over 100 member companies in the solar and energy storage industries. Many members are Maryland-based. Others are regional and national companies with an interest and/or business footprint in the state. Our purpose is to promote the mainstream adoption of local solar, large-scale solar, and battery storage throughout the electric grid in order to realize a stable and affordable grid for all consumers.

I write to provide favorable testimony on SB1023, Maryland Building Performance Standards – Fossil Fuel Use, Energy Conservation, and Electric– and Solar–Ready Standards (Better Buildings Act of 2024). The Better Buildings Act is an important piece of legislation to move Maryland toward its 100% clean energy by 2035 goal. This legislation is focused on ensuring that new buildings built in Maryland are built with those goals in mind.

In support of its 100% clean energy goals, Maryland is changing how it is powered. Constructing a 100% clean energy future means making sure we are constructing our buildings with that future in mind. Electrification retrofits for buildings will be significantly more costly than integrating clean energy-ready amenities in the initial construction process. Building roofs need to be designed in a way where heating, ventilation, and air conditioning (HVAC) is sited appropriately but not inadvertently obstructing rows of solar panels from being installed at a later date. And, the more that building design and construction has an eye towards integrating advanced energy technologies, the easier that installation can be. Solar-ready buildings will be particularly important as Marylanders make the move towards building and transportation electrification because adding solar generation on and near buildings and load centers will reduce the overall cost of that transition.

The grid of the future will have the combined roles that today's grid, natural gas system, and gas stations have now. To serve those roles, the grid will need to look and act differently, accounting for

higher overall statewide electric loads as well as higher demand in peak periods. The higher peak demand gets, the more expensive the electric grid becomes due to expensive infrastructure expansion and higher peak energy pricing. In a 2023 report, the U.S. Department of Energy estimates that nationwide peak demand will increase by over 40 percent by 2050. The chart below from that report illustrates that projection.



Increasing clean energy generation on buildings and near load centers in Maryland lowers peak demand, lowering the cost of the grid and the cost of the clean energy transition. For the everyday Maryland consumer, more clean solar energy generation would mean that critical grid events and spiking wholesale energy prices would occur less frequently, in less duration, and in lower extremes.

SB1023 would increase the amount of solar-friendly rooftops around Maryland by eliminating or minimizing the need for electric upgrades and retrofits for businesses and building owners seeking to add solar to their properties.

For these reasons, CHESSA asks the committee to issue a favorable report on SB1023. Please reach out with any questions on solar and storage policy. CHESSA is here to be a resource to the committee.

Sincerely,

Robin K. Dutta
Executive Director (acting)
Chesapeake Solar and Storage Association
robin@chessa.org

BDC SB 1023 Testimony.docx.pdf
Uploaded by: Rose Stephens-Booker
Position: FAV

BUILDING DECARBONIZATION COALITION

S.B. 1023

Evaluating All-Electric New Construction from an Energy System Standpoint

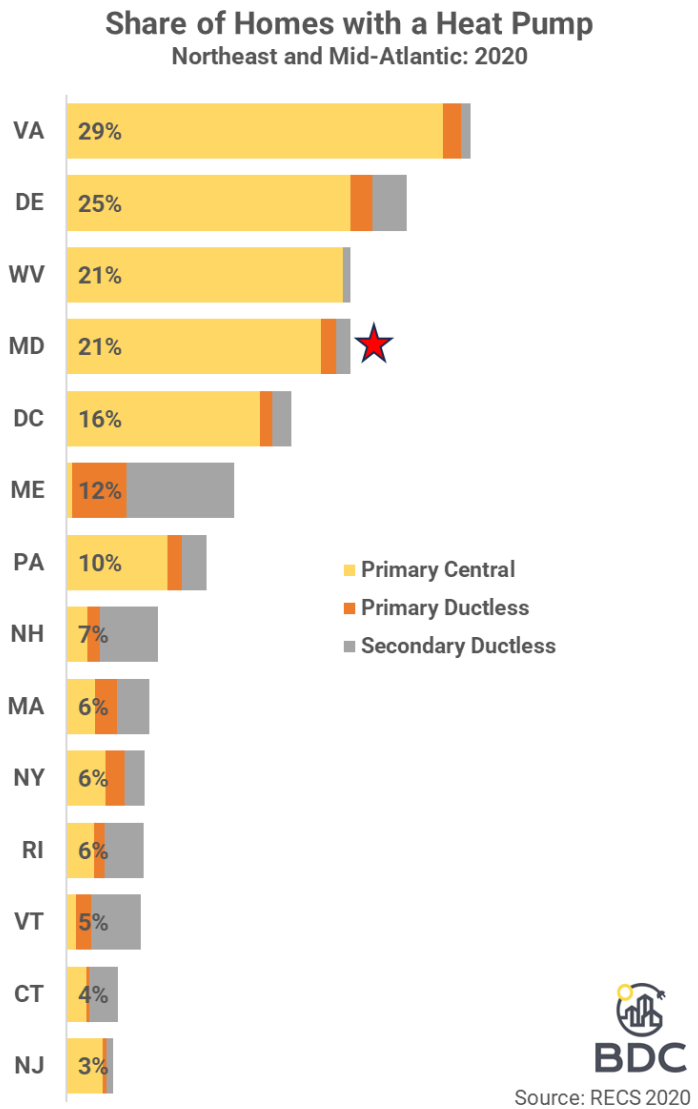
Good afternoon, and thank you so much for the opportunity to speak today. My name is Rose Stephens-Booker. I'm Director of State Mobilization at the Building Decarbonization Coalition (BDC). Our members run the gamut from small towns to major multinational corporations.

The Coalition's manufacturing members together produce about 75% of all HVAC products sold in the U.S. and 90% of water heaters.

Recently, we released a pro-decarbonization statement from these members—the first of its kind. The statement reads, in part:

> "Installing heat pumps in new construction is generally easier than doing so in an existing building. Encouraging or requiring all-electric new construction can help to cost-effectively grow the marketplace for efficient electric space heating and water heating products in the immediate term."

There's a reason why the supply chain is comfortable with electrification in new construction, especially in Maryland. According to the best available data, more than one in every five Maryland homes already has a heat pump installed,[1] and fully half of all residential HVAC products sold in the state is a heat pump.[2]



There is a large and growing marketplace for efficient electric energy systems in Maryland, and there has been since well before the Inflation Reduction Act. Product availability is not an issue.

[1] Energy Information Administration (EIA) Residential Energy Consumption Survey (RECS). 2020.
[2] Heating, Air Conditioning, and Refrigeration Distributors International (HARDI). Unitary Market Report. 2021.

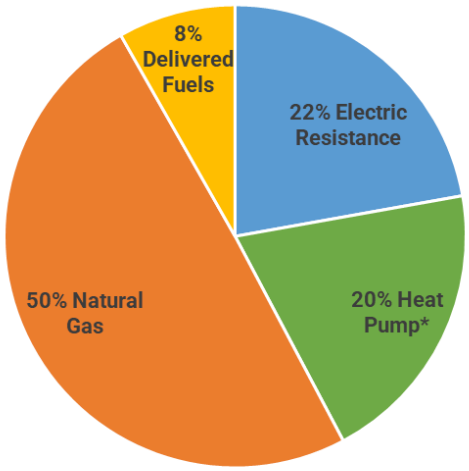
On the contrary, all-electric new construction is an infrastructure question. But maybe not in the way you would expect.

BDC's research has shown that new natural gas mains can cost anywhere from $2-5 million per mile. That means that on any given Maryland street, a new or replacement gas pipeline could cost ratepayers up to $70,000 per meter.[3]

Normally, that cost would be amortized over several decades. But Maryland law requires net zero emissions by 2045. Why spend all that money building energy infrastructure that will be obsolete in 20 years, and in the meantime doesn't even give you air conditioning?

And so you might ask whether electrification will strain the electric grid. The truth is that it's going to be easier on the grid in Maryland than it will be in some other states.

Primary Heating Fuel in Maryland Homes



BDC

Source: EIA 2020 RECS
* 20% of MD homes use a heat pump for their primary heat source and 1% use one for part of their heating, for a total of 21%.

NESCAUM, a consortium of air quality agencies in the Northeast, released a report in August of 2023[4] which showed that rolling out heat pumps to every home in Maryland would save nearly 7 million megawatt-hours of electricity annually, which is 25% of all the electricity used in the state's residential sector.

How could that be?

It's because 22% of Maryland homes use the outdated kind of electric heat—baseboard or space heaters. Heat pumps use a third of the electricity that those systems use. Far from straining the grid, you can expect heat pumps to reduce costs and improve resilience in Maryland.

Thanks for the opportunity to speak today. If you have questions, you can find me at rstephensbooker@buildingdecarb.org.

[3] Pipeline and Hazardous Materials Safety Administration (PHMSA). Gas Distribution Annual Data, 2022. https://www.phmsa.dot.gov/data-and-statistics/pipeline/gas-distribution-gas-gathering-gas-transmission-hazardous-liquids

[4] "Residential Building Electrification in the Northeast and Mid-Atlantic." Northeast States for Coordinated Air Use Management (NESCAUM). August 2023. https://www.nescaum.org/documents/Residential-Building-Electrification-Final-Report-August-2023.pdf

SB1023_BetterBuildingsAct_EEE_HoCoCA.org_FAV.pdf
Uploaded by: Ruth White
Position: FAV

HoCoClimateAction.org
Howard County, Maryland

Testimony: SB1023 : **Maryland Building Performance Standards – Fossil Fuel Use, Energy Conservation, and Electric– and Solar–Ready Standards (Better Buildings Act of 2024)**
Hearing Date: March 4, 2024
Bill Sponsor: Senators Brooks, Lewis Young, and Lam
Committee: Education, Energy, and the Environment
Submitting: Ruth White for **Howard County Climate Action**
Position: Favorable

HoCo Climate Action is a 350.org local chapter and a grassroots organization representing approximately 1,400 subscribers. It is also a member of the Climate Justice Wing of the Maryland Legislative Coalition. We enthusiastically urge you to support SB1023, The Better Buildings Act, which requires most new buildings and substantial improvements to be built smart from the start, with better energy conservation and no on-site fossil fuel combustion for space and water heating.

HoCo Climate Action has been advocating for building decarbonization since October 2020 and soon after spearheaded a campaign to electrify all new buildings in Howard County. We actively supported the Climate Solutions Now Act of 2022 (CSNA) but were disappointed that it passed with only a study for all-electric new buildings, so we pivoted back to our Electrify HoCo campaign. Last March, the County Council passed the Clean New Buildings Climate Act (CB5-2023), requiring the County Executive to submit a report on changes needed to the county building code to ensure that future homes and buildings in Howard County rely on all-electric appliances, as well as several related policy items. This bill put the county on the pathway to all-electric new buildings. In November 2022, the Montgomery Council also voted to require new all-electric building standards.

Like most Marylanders, we want to see action on protecting our climate and health. Furnaces and water heaters fired with fossil fuel cause 17% of Maryland's greenhouse gases. Every new building that installs fossil fuel appliances adds to air pollution and climate change when the state is simultaneously devoting substantial funding on efforts to reverse these trends. CSNA commits us to a 60% GHG reduction by 2031 and net zero by 2045. The year 2031 is a mere 7 years away, and 2045 is in 21 years. New appliances typically last 15 years and more. It is counterintuitive to continue to permit buildings that make efforts to achieve our climate goals more difficult to achieve.

The urgent need to transition away from burning fossil fuels in buildings was outlined in several official Maryland reports finalized in December 2023:

- *The climate crisis is upon us. Within just five years, global temperatures could breach the critical 1.5°C threshold, triggering catastrophic and irreversible consequences. This long-feared catastrophe is imminent - the time for meaningful climate action is now* (Maryland Commision on Climate Change 2023 Annual Report p.3)

- *We are motivated by our shared vision of a future where every building is fossil-fuel free. In this vision, residents can spend more of their hard-earned paychecks doing what they love, and businesses can reinvest in their products and services, rather than in energy bills.* (Building Energy Transition Implementation Task Force report p. 4)

- *To meet the statewide climate goals, a large portion of the statewide building stock will need to be updated.* (Building Energy Transition Implementation Task Force report p.9)

- ***…**given the scale of Maryland's GHG reduction goals, efficiency is a necessary but insufficient building decarbonization solution, as buildings will also need to stop burning fossil fuels like gas and oil onsite by switching to electric equipment to meet the same needs* (Building Energy Transition Implementation Task Force report p.10)

- *The transition to a clean energy economy requires millions of fuel-burning devices to be replaced with efficient, zero-emission alternatives.* (Maryland Climate Reduction Plan p. 12)

- *Billions of dollars in investments from the Inflation Reduction Act and other sources are already converging with current federal and state policies to transition to zero-emission vehicles, buildings, electricity sources, and more. New policies and investments will quicken the pace of decarbonization.* (Maryland Climate Reduction Plan p. 15)

- *Maryland's 2030 GGRA Plan called for the state to accelerate the transition of fossil fuel heating equipment in buildings to efficient electric equipment that can be powered by clean electricity.* (Maryland Climate Reduction Plan p.35)

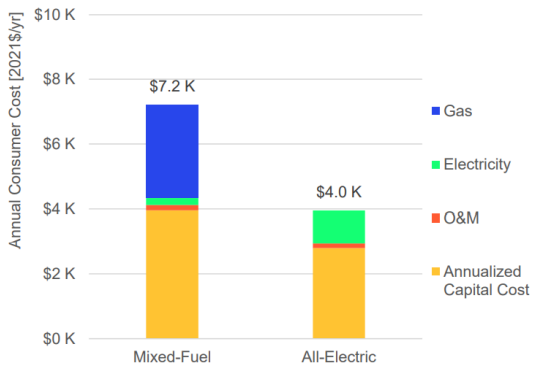
- *Maryland is among several states moving to adopt zero-emission appliance/heating equipment standards…Modern heat pumps are more than capable of meeting 100% of the heating demand of Maryland buildings, as evidenced by the fact that heat pumps are already commonly used in buildings statewide.*
  (Maryland Climate Reduction Plan p. 39)

Continuing to construct fossil-fueled buildings that will need costly retrofits within a decade or so poses an unnecessary burden on the state and residents. We will end up in an endless game of Whac-A-Mole if we insist on building 20th century buildings that need to be quickly retrofitted for the 21st century and beyond. With the Better Buildings Act, we can avoid this costly transition work by building smart from the start. Additionally, those new buildings that will eventually be covered under Building Energy Performance Standards (BEPS) regulations will be at an advantage if they begin as efficient electric buildings.

In most if not all new buildings, the cost of all-electric construction is cheaper, as are the costs to operate electric appliances. While electricity rates are expected to rise, "natural" gas rates are expected to skyrocket. Today, it costs the average resident $200 a year to just be connected to gas and that doesn't include the gas usage costs. This charge is expected to rise exponentially as more customers transition off gas leaving fewer customers to foot the bill for maintaining the gas infrastructure.

All-electric design is expected to be the less expensive option

+ **All-electric new construction is cheaper than mixed-fuel new construction for single-family residential homes across all decarbonization scenarios due to both lower capital (with avoided gas connection) and operating costs**



From Maryland Building Decarbonization Study page 65 (this was an report for Appendix A, Building Transition Plan for the 2021 Maryland Commission on Climate Change Report)
NOTE: O&M is operation and maintenance. Click to enlarge.

The Better Buildings Act ensures we are moving in the right direction, preventing new sources of climate pollution while we work to undo the harms from old ways of planning and building. If we don't pass this legislation, buildings that install fossil fuel heat and hot water appliances in the next few years will still be emitting greenhouse gases long after the state is required to achieve net zero emissions.

We urge a favorable report for SB1023.

Howard County Climate Action
Submitted by Ruth White, Steering and Advocacy Committee
www.HoCoClimateAction.org
HoCoClimateAction@gmail.com

Citizens' Climate Lobby Maryland BBB Senate testim

Uploaded by: Thaddeus Waterman

Position: FAV

Citizens' Climate Lobby
Maryland

March 1, 2024	**HEARING DATE: March 4, 2024**
BILL:	**SB1023 (Companion bill: HB1279)**
TITLE:	**Maryland Building Performance Standards – Fossil Fuel Use, Energy Conservation, and Electric– and Solar–Ready Standards (Better Buildings Act of 2024)**
POSITION:	**Favorable**
COMMITTEE:	**Education, Energy, and the Environment**
SPONSORS:	**Senators Brooks, Lewis Young, and Lam**

Hello Chairman Feldman, Vice Chairwoman Kagan, and Members of the Committee,

My name is Thaddeus Waterman. I live in District 22 in Hyattsville Maryland, and I am honored to be representing the Maryland Chapters of Citizens' Climate Lobby. Citizens' Climate Lobby is a national, nonpartisan, volunteer driven climate advocacy organization. In Maryland our Chapters consist of over 3000 residents from across the State.

Our Maryland Chapters support SB 1023, the Better Buildings Act of 2024.

Our volunteers passionately advocate for solutions to the climate challenges we currently face. Our global dependency on burning fossil fuels is harming not only the climate, but our health, economy, and security.

The Better Buildings Act of 2024 is part of the solutions we need. It directs that the Department of Labor's Building Codes Administration modify the Maryland Building Performance Standards to require, as of October 1, 2026, that new buildings meet their water and space heating demands without the use of fossil fuels.[1] Local jurisdictions may grant waivers for emergency backup systems. The Act also recognizes that specified businesses might utilize areas or systems that cannot feasibly use non-fossil fuels.[2] Jurisdictions may grant waivers for those areas and systems, as well.

Beyond addressing water and space heating, the Act requires that new buildings, 20 stories or less with at least 20,000 square feet of continuous roof space, be solar ready. (Waivers could be granted by local jurisdictions for poor sun conditions.). New buildings must also be "EV ready" or "EV capable", *i.e.*, provide space and charging capabilities for electric vehicles. The specific requirements for electric vehicles vary by building type.

Finally, the Act sets out increasing "Site Energy Use Intensity (EUI)" targets, which new buildings over 25,000 square feet must meet. The targets commence October 2026. Between that date and September 2035, the targets increase every three years. The goal is net zero energy balance for building permit applications received

[1] It does **not** preclude gas stoves or restrict their installation.

[2] The Act identifies these businesses as commercial food establishments, laboratories, laundromats, hospitals, or crematoria. Financial considerations are explicitly not sufficient for a determination of feasibility.

Decreased greenhouse gas emissions will improve our climate, environment, property, and health. With better building energy conservation and the use of highly efficient heat pumps, consumers would pay far less for heat and hot water than they do now. The Governor's Climate Pollution Reduction Plan estimates that the average Maryland family would save $2600 each year by adopting heat pumps. This is particularly important for lower-income households, which are often overburdened both by housing costs and energy costs

Maryland residents want effective and fair climate policies. The policies put forth by the Better Buildings Act help ensure we build things with emissions in mind moving forward. The Maryland Chapters of Citizens Climate Lobby urge a FAVORABLE REPORT on SB1023.

Respectfully submitted,

Thaddeus Waterman
Mid-Atlantic Regional Coordinator, Citizens' Climate Lobby
1-434-806-2798
ThaddeusWWaterman@gmail.com
cc: Members of the Education, Energy, and Environment Committee

Howard County OCS 2024 - SB 1023 Better Buildings
Uploaded by: Timothy Lattimer
Position: FAV

HOWARD COUNTY OFFICE OF COMMUNITY SUSTAINABILITY
9200 Berger Road • Columbia, Maryland 21046 • 410-313-0700
Calvin Ball, County Executive • Timothy Lattimer, Director
www.livegreenhoward.com

March 4, 2024

Senator Brian J. Feldman, Chair
Senate Education, Energy, and the Environment Committee
Miller Senate Office Building, 2 West
Annapolis, Maryland 21401

RE: SB 1023: Better Buildings Act of 2024

Dear Chair Feldman, Vice Chair Kagan, and Members of the Education, Energy, and the Environment Committee,

Thank you for the opportunity to convey Howard County's support for Senate Bill 1023. Howard County Executive Calvin Ball has made ambitious climate action and environmental justice a top priority throughout his tenure. We are already taking aggressive action on energy, transportation, waste, and nature-based climate solutions, which has reduced Howard County's greenhouse gas (GHG) emissions by 15% since 2005. Since 2018, Howard County has prioritized energy-efficient building upgrades, County fleet electrification, expanding publicly available EV chargers, and advancing clean energy by executing Maryland's largest solar power purchase agreement that will ultimately power more than half of Howard County Government operations. As a result of these efforts, Howard County was the nation's first county to receive a LEED Platinum certification for Cities and Communities from the U.S. Green Buildings Council.

Recognizing the need for deeper reductions in this decisive decade for climate action, Howard County Executive Ball launched Howard County's "Climate Forward: Climate Action and Resiliency Plan" in June 2023. This plan sets forth comprehensive strategies required to achieve Howard County's ambitious goals of reducing GHGs by 60% by 2030 and achieving net zero emissions by 2045. Energy use in buildings is second only to transportation as the largest source of GHG emissions in Howard County. Building electrification is an important part of our plan because it reduces the emission of GHGs while also improving indoor air quality and health.

The Better Buildings Act of 2024 would advance Maryland's transition away from the use of fossil fuels for water and space heating, promote energy efficiency, and set important new electric-, solar-, and EV-ready standards for certain new buildings. Because new building systems can lock in and perpetuate carbon emissions for decades to come, the proposed standards are important to safeguarding a livable climate for us and future generations. Howard County requests the Committee's favorable report for SB1023.

Sincerely,

Timothy Lattimer

Timothy P. Lattimer
Administrator, Office of Community Sustainability

SB_1023_IndivisibleHoCo_FAV_Peter Alexander.pdf
Uploaded by: Virginia Smith
Position: FAV

SB1023

Maryland Building Performance Standards - Fossil Fuel Use, Energy Conservation, and Electric- and Solar-Ready Standards (Better Buildings Act of 2024)

Testimony before the Education, Energy, and Environment Committee

Hearing March 04, 2024

Position: Favorable

Dear Chair Feldman and Vice-Chair Kagan, and members of the committee, my name is Peter Alexander, and I represent the 700+ members of Indivisible Howard County. Indivisible Howard County is an active member of the Maryland Legislative Coalition (with 30,000+ members). We are providing written testimony today **in support of SB1023**. We appreciate the leadership of Senator Brooks and his colleagues in sponsoring this legislation.

SB1023 requires the state Building Codes Administration to adopt codes requiring that all new buildings, additions that increase heat loads by 30% or more, and other significant improvements meet all energy demands of the building without the use of fossil fuels. Local jurisdictions could grant certain, limited waivers but only in buildings that cannot feasibly use non-fossil sources. Any buildings granted waivers would have to be built electric-ready and must include automatic ventilation to maintain healthful indoor air quality.

The BBA also requires the Maryland Building Codes Administration to adopt new energy conservation requirements for all new buildings. Buildings would be required to meet absolute measures of "site energy use intensity" as defined by the US Department of Energy, thus reducing the amount of electricity needed from the grid.

Enacting SB1023, which has its basis in the 2022 Climate Solutions Now Act, will help to meet Maryland's legal obligation to achieve net zero climate pollution. It will make Maryland a global leader in healthy, modern, climate-safe homes and buildings while saving money for home and building owners, tenants, and the state.

Thank you for your consideration of this important legislation.

We respectfully urge a favorable report.

Peter Alexander, PhD
District 9
Woodbine, MD 21797

SB1023_Brooks.pdf
Uploaded by: Benjamin Brooks
Position: FWA

Benjamin Brooks
Legislative District 10
Baltimore County

Education, Energy, and the Environment Committee

Energy Subcommittee

Chair, Joint Electric Universal Service Program Workgroup

THE SENATE OF MARYLAND
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TESTIMONY IN SUPPORT OF SB1023
Maryland Building Performance Standards – Fossil Fuel Use, Energy Conservation, and Electric – and Solar – Ready Standards
(Better Buildings Act of 2024)

Education, Energy and the Environment Committee
March 4, 2024

Chair Feldman, Vice-chair Kagan and Members of the Committee,

Thank you for the opportunity to testify before you on SB1023– The Better Buildings Act of 2024. This bill honors the General Assembly's commitment in the Climate Solutions Now Act to "move toward [the] broader electrification of… new construction" following a feasibility study.

This past December, the Public Service Commission (PSC) released that study. The PSC found that a high electrification of the State would only moderately increase the demand in electricity while significantly reducing gas demand. Specifically, the State's electric grid would see a maximum growth of "2.1%" which is comparable to the average growth of Maryland's electric grid over the past 40 years. Additionally, building sector gas demand would be reduced by about 31% by 2031.

After much research and patience, it is time for the General Assembly to act on its promise and pass the Better Buildings Act. The longer we wait to electrify our buildings and make our energy grid cleaner, the harder it will be to make the transition in the future. If passed, SB1023 has four key parts to ensure that our buildings are clean, efficient, and prepared for the clean energy economy of the coming decades.

1. The bill requires that all new buildings must get their energy from non-fossil fuel sources. This means that appliances like home furnaces and water heaters installed in new construction would have to be electric. The bill does allow jurisdictions to make exceptions for back-up generators, cooking stoves, and other buildings that have a demonstrated need for fossil fuels.

2. Next, the bill requires that parking at certain new buildings be "EV-capable" or ready to provide EV charging. This does not mean that all parking spaces will have to require EV charging– this requirement only mandates that a certain percentage of spaces, depending on the type or size of the building, be capable of having an EV charger.

3. The bill also requires the next building code to have energy conservation requirements for new buildings with increasing requirements every year. By 2035, all new buildings will have to have a net-zero energy balance which means that the new building produces as much energy as it uses.

4. Lastly, the bill requires that all new buildings which have more than 20,000 sq/ft of clear roof space, be solar ready. This requirement will allow large buildings to be able to meet the net-zero energy balance required by 2035 and ensure that clean electricity can easily power our State's large buildings.

SB1023 would be a tremendous step forward for Maryland in reaching our climate goals. It is a bold and ambitious plan, which is exactly the attitude we need for a task such as making our buildings energy efficient and electric-ready. However, this bill has not been hastily drafted. We have conducted the necessary studies since 2022 as well as made considerations for exceptions to the proposed requirements. Moreover, this transition will not be overnight, but phased in to ensure that new requirements are implemented properly and that builders can adapt and prepare for the all-electric transition.

For these reasons I am requesting a favorable report on SB1023.

With kindest regards,

Benjamin T. Brooks

Benjamin Brooks

SB1023 OPC Testimony.pdf
Uploaded by: Mark Szybist
Position: FWA

DAVID S. LAPP
PEOPLE'S COUNSEL

WILLIAM F. FIELDS
DEPUTY PEOPLE'S COUNSEL

JULIANA BELL
DEPUTY PEOPLE'S COUNSEL

OPC

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BRANDI NIELAND
DIRECTOR, CONSUMER
ASSISTANCE UNIT

BILL NO.:	Senate Bill 1023 Maryland Building Performance Standards – Fossil Fuel Use, Energy Conservation, and Electric– and Solar–Ready Standards (Better Buildings Act of 2024)
COMMITTEE:	Education, Energy, and the Environment Committee
HEARING DATE:	March 4, 2024
SPONSOR:	Senators Brooks, Lewis Young, and Lam
POSITION:	Favorable with amendments

****

The Office of People's Counsel supports Senate Bill 1023, the Better Building Act of 2024, with an amendment to require that significantly improved existing buildings, as well as new residential buildings, meet all water and space heating demands without the use of fossil fuels.

SB 1023 requires most new buildings in Maryland to meet all energy demands without fossil fuels (i.e., to be fully electric) and requires new construction that cannot feasibly be built without fossil systems and appliances to meet a separate "electric-ready standard." In addition, SB 1023 establishes a solar-ready standard for new buildings that are less than 20 stories tall and have 20,000 square feet or more of continuous roof space, establishes an electric-vehicle-ready standard for all new buildings, and establishes energy conservation standards for new buildings that have 25,000 square feet or more of floor space.

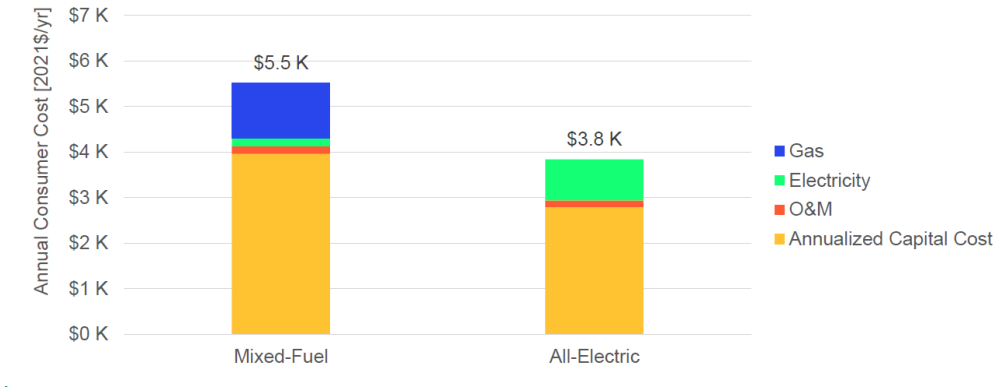
OPC supports SB 1023 with the above-referenced amendment because requiring that new and significantly improved residential buildings be all-electric, while also meeting strong energy efficiency and conservation standards, is both in the economic interest of Maryland's residential utility customers and a critical step for Maryland's achievement of its greenhouse gas ("GHG") reduction goals.

Background

Direct fossil fuel use in buildings for space heating, water heating, and cooking accounts for approximately 14 percent of Maryland's GHG emissions. For Maryland to achieve net zero emissions by 2045 in accordance with the Climate Solutions Now Act ("CSNA"), both new and existing buildings must generally electrify these energy loads. This makes economic sense for utility customers, as well as climate sense, because as a 2021 analysis by Energy + Environmental Economics ("E3") for the Maryland Commission on Climate Change ("MCCC") found,[1] all-electric buildings are generally more economical in Maryland than mixed-fuel new construction.

The following E3 graphs illustrate the economic advantage of all-electric new construction and retrofits for single-family and multifamily residential buildings:

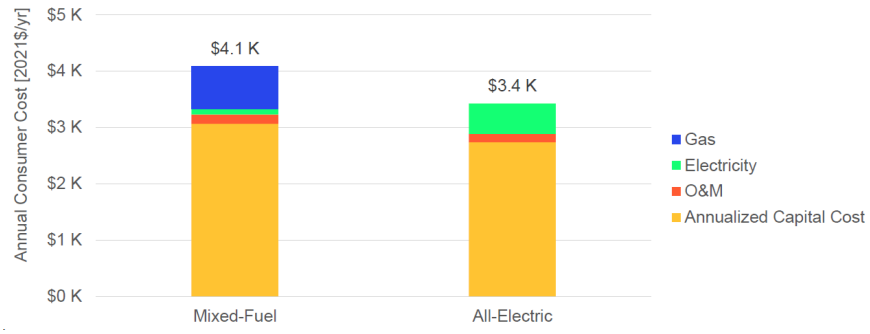
Figure 1: Annual New Customer Costs – Single-Family Residential Buildings



From E3 Maryland Building Decarbonization Study: Final Report (slide 65)

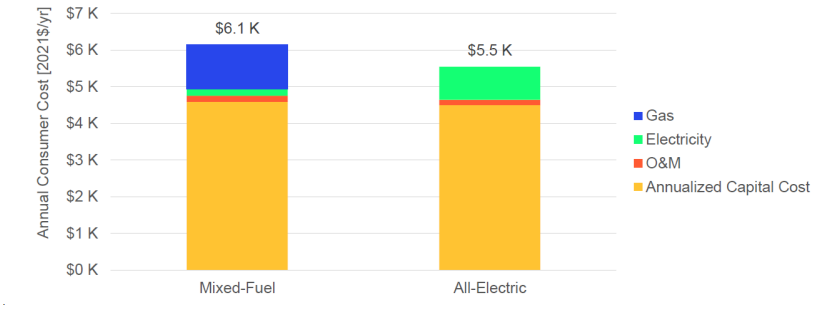
[1] Energy + Environmental Economics ("E3"), *Maryland Building Decarbonization Study: Final Report*, (Oct. 20, 2021) at 37. More recently, RMI's 2022 report, *The Economics of Electrifying Buildings*, found that in nine U.S. cities representing a range of climate zones, all-electric single-family new construction is more economical to build and operate than a home with gas appliances and has lower lifetime emissions. *Available at* https://rmi.org/economics-of-electrifying- buildings/

Figure 2: Annual New Customer Costs – Multifamily Buildings



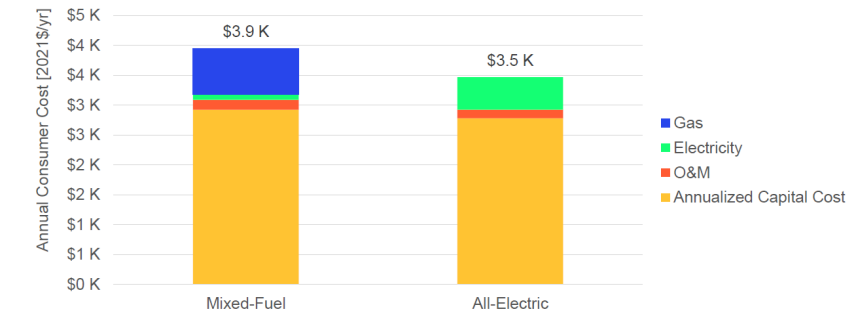
From E3 Maryland Building Decarbonization Study: Final Report (slide 67)

Figure 3: Annual Retrofit Customer Costs – Single-Family Residential Buildings



From E3 Maryland Building Decarbonization Study: Final Report (slide 64)

Figure 4: Annual Retrofit Customer Costs – Multifamily Buildings



From E3 Maryland Building Decarbonization Study: Final Report (slide 66)

In light of the E3 analysis, the MCCC in 2021 recommended that the General Assembly "require the Maryland Building Code Administration to adopt a code that

ensures that new buildings meet all water and space heating demand without the use of fossil fuels," along with a process whereby buildings that cannot electrify cost-effectively may obtain variances if they meet electric-ready standards.[2] These requirements were in fact included in the initial drafts of the CSNA—but then were removed from the bill before it was passed due to the concern that Maryland's electricity grid would be unable to handle the increased demand from a highly electrified building sector.

The requirements were replaced with language stating that in alignment with MCCC's recommendation, the General Assembly "supports moving toward broader electrification of both existing buildings and new construction as a component of decarbonization" that that "it is the intent of the General Assembly that the State move toward broader electrification of both existing buildings and new construction on completion of the study required under subsection (b) of this section." That subsection tasked the Building Codes Administration with developing specific recommendations for an all-electric building code by December 1, 2023.

With respect to electricity grid impacts, the General Assembly directed the Public Service Commission ("PSC") to conduct a study "assessing the capacity of each company's gas and electric distribution systems to successfully serve customers under a managed transition to a highly electrified building sector," and directed the Building Codes Administration to conduct a study that includes recommendations "for the fastest and most cost–efficient methods for decarbonizing buildings and other sectors in the State."[3]

The PSC submitted its analysis to the General Assembly on December 29, 2023.[4] It concludes that across three "high electrification" scenarios modeled to reduce statewide GHG emissions 60 percent by 2030—including a scenario where buildings electrify mainly by using less efficient heat pumps with electric resistance backup—electricity load growth would range from 0.6 percent to 2.1 percent through 2030.[5] Moreover, each scenario assumed minimal levels of "demand-side management" strategies like energy efficiency and load flexibility (e.g., time-varying rates that shift electricity consumption

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[2] Maryland Commission on Climate Change, *Building Energy Transition Report: a Roadmap for Decarbonizing the Residential and Commercial Sectors in Maryland* (November, 2021), at 5, *available at* https://mde.maryland.gov/programs/air/ClimateChange/MCCC/Documents/2021%20Annual%20Report%20FINAL%20(2).pdf.

[3] *See* CSNA at § 10(b).

[4] Serigici, Ramakrishnan, et al., *An Assessment of Electrification Impacts on the Maryland Electric Grid*, prepared by the Brattle Group for the Maryland Public Service Commission with support from Applied Energy Group and Mondre Energy (Dec. 19, 2023), *available at* https://www.psc.state.md.us/wp-content/uploads/MD-PSC-Electrification-Study-Report.pdf.

[5] *Id.* at 2-3.

to times of non-peak demand).[6] The study found that load growth could be reduced by 0.2 to 1.2% per year with additional demand-side management programs.[7]

As far as OPC is aware, the Building Codes Administration has yet to submit its study including specific recommendations for an all-electric building code.

Comments

OPC supports SB 1023 for four reasons.

First, as the MCCC concluded in its 2021 Building Energy Transition Plan, and as the analysis cited above shows, all-electric new residential buildings, as well as all-electric residential retrofits, are more cost-effective for Marylanders than mixed-fuel buildings— and the general electrification of the building sector is necessary for Maryland to achieve the GHG reduction targets in the CSNA. The E3 graphs reprinted above show that for both single-family and multifamily residential buildings, the lower cost of all-electric construction is attributable to lower utility costs as well as lower capital costs.

Second, HB 1023's requirement that the Department adopt regulations that establish energy efficiency and conservation requirements for new buildings with a gross floor area equal to or greater than 25,000 square feet will minimize energy usage and costs for Marylanders living in multifamily buildings, who are disproportionately low-income and generally have less ability to improve the energy efficiency of their living spaces than inhabitants of single-family homes. Moreover, the greater the efficiency of new buildings in Maryland, the less likely those buildings will be to need services (and necessitate expenditures) under Maryland's EmPOWER programs.

Third, as the PSC noted in transmitting its grid impacts analysis to the General Assembly, the load growth rates associated with high electrification in Maryland through 2031 (0.6 percent to 2.1 percent with minimal levels of demand-side management) are significantly lower than the rates that Maryland experienced in the 1980s (4.9 percent average annual growth), and are comparable to those experienced from 1990 to 2010 (1.2 percent to 1.5 percent). Accordingly, the Commission concluded that "[t]hese results show that peak load growth through 2031 with high electrification of the building sector will be comparable to or less than the growth rate that the Maryland system has seen over the past 40 years."[8] In other words, the PSC's analysis satisfies concerns about electricity

[6] *Id.* at 3.
[7] *Id.*
[8] Fredrick H. Hoover, Chair, cover letter to President Ferguson and Speaker Jones accompanying *An Assessment of Electrification Impacts* (Dec. 29, 2023), *available at* https://www.psc.state.md.us/wp-content/uploads/MD-PSC-Electrification-Study-Report.pdf.

load growth expressed during passage of the CSNA, especially if the General Assembly and the Commission require electric utilities to maximize energy efficiency savings and load flexibility.

Finally, the electrification of new buildings will reduce the build-out of new gas infrastructure—and thereby insulate not just the owners and inhabitants of those buildings, but gas customers as a whole, from rising gas system costs. As OPC has explained,[9] increasing electrification—which will happen even without SB 1023, only to a lesser extent—will lead to fewer gas utility customers and sales. If sales decline faster than gas utilities' asset bases depreciate and faster than utilities can lower their operating and maintenance costs, the utilities will seek approval for higher gas rates to recover their costs over fewer unit sales. Higher rates will in turn spur more customers to electrify, and those left on the gas system will be required to pay even higher rates. This vicious cycle will have the greatest impact on low- and moderate-income households who lack access to the upfront capital needed to electrify or rent from building owners that lack incentive to electrify.

This trend, which has already begun, was the impetus for a petition that OPC filed with the Public Service Commission in February, 2023 to require long-term gas utility planning and certain immediate actions by the utilities.[10]

Recommendation: OPC requests a favorable report from the Committee on SB 1023 with the amendment recommended above.

[9] Office of People's Counsel, *Maryland Gas Utility Spending: Projections and Analysis* (Oct., 2022), with 2023 update, *Maryland Gas Utility Spending: Updated Revenue Projections and Bill Impact Analysis* (Nov, 2023), *available at* https://opc.maryland.gov/Publications.

[10] The Commission docketed OPC's petition to Case No. 9707 and issued a notice on June 14, 2023 requesting public comments through October 10, 2023.

SB1023 UNF 3-1-24.pdf
Uploaded by: Bernie Marczyk
Position: UNF

American Petroleum Institute
Northeast Region

March 1, 2024

Education, Energy and the Environment Committee
Miller Senate Office Building, 2 West
Annapolis, Maryland 21401

IN RE: *SB 1023 "An Act Concerning Maryland Building Performance Standards – Fossil Fuel Use …" (Better Buildings Act of 2024)*

Dear Chair Feldman, Vice Chair Kagan, and Members of the Committee:

The American Petroleum Institute (API)[1] opposes a ban on the use of fossil fuels in new building construction and encourages the legislature to preserve consumer choice with respect to heating options. The comments that follow are specific to the bill's requirement that "[on or before October 1, 2025 … the Department shall adopt … a requirement that new buildings meet all water and space heating demands of the building without the use of fossil fuels]." Policymakers should appreciate the value natural gas has demonstrated in reducing emissions as well as the pivotal role this fuel can play in ensuring a diverse and reliable fuel mix while facilitating the state's energy transition. API believes legislative and regulatory efforts to ban natural gas use are premature and not prudent. While API understands the desire to act, we believe that effective and equitable environmental policy must be flexible and technology neutral, allowing residents to choose the solution which works best for them.

Consumers Should Have Right to Choose

A prudent public policy provides consumers with options. Competition is imperative to protect consumers while driving innovation, ingenuity, and progress. Policymakers should not pick winners and losers but should allow resources and technologies to compete. Free market policies provide the consumer with options to select what best fits their unique requirements. An all-electrification requirement, as contemplated in SB 1023, would remove natural gas from the heating markets, stripping the consumer of the right to select the heating fuel that best suits their needs. A ban on natural gas represents the worst type of policy because it effectively affords consumers only one option – electricity. The state should not develop a policy which allows for just one option and instead should embrace a diverse portfolio of resources, fuels, and technologies.

The Role of Natural Gas in Balancing the Grid and Reducing Emissions

A move to all-electric heating will leave Maryland residents at the mercy of a power grid that is increasingly reliant on intermittent resources. The state should strive for a diversified portfolio of energy resources, and lawmakers should thoroughly assess the grid impacts that could result from comprehensive economy-wide electrification efforts.

Broad electrification could negatively impact the power grid. Policymakers should fully and carefully consider the grid impacts that could result from the changing magnitude and pattern of load associated with electrification. In recent years the state has forwarded policies and incentives to advance electrification in the transportation and building sectors by encouraging electric vehicles as well as home appliance and heating conversions. These policies can increase the demand for electricity significantly with no corresponding assurances that there will be sufficient resources in place to meet this incremental demand. This means that the state may be forced to rely on the use of older and less efficient power plants and import electricity from other regional power systems that may also utilize less efficient power plants.

Building new and efficient gas-fired power plants can provide a pivotal solution that is currently being challenged by plant retirements and growing demand for electricity. The PJM Interconnection (PJM), which operates the wholesale electric grid serving Maryland (and all or parts of 12 other states plus Washington, D.C.), wrote in a recent letter that the deactivation of certain power plant units in the state "will adversely affect the reliability" of the power grid.[2] Furthermore, PJM has approved $5 billion in new

[1] The American Petroleum Institute represents all segments of America's natural gas and oil industry, which supports more than 11 million U.S. jobs. Our nearly 600 members produce, process, and distribute the majority of the nation's energy. API members participate in API Energy Excellence, through which they commit to a systematic approach to safeguard our employees, environment, and the communities in which they operate. Formed in 1919 as a standards-setting organization, API has developed more than 700 standards to enhance operational and environmental safety, efficiency, and sustainability.

[2] *See* https://www.pjm.com/-/media/planning/gen-retire/deactivation-notices/pjm-response-letter-wagner.ashx.

substations and power lines in order to avoid the violation of transmission standards and a recognition of potential increased demands for electricity.[3] PJM also specifically cited electricity demand growth from electrification as a key trend that could increase reliability risks in the coming years, and noted that "if more natural gas capacity achieved commercial operation, it could help avoid reliability issues."[4] Additionally, PJM has recently requested that certain fossil fuel "generating units in Maryland" delay retirements to help maintain bulk power system reliability and "mitigate reliability impacts."[5]

Additionally, moving to all-electric heating requirements without any new baseload power plants could result in more emissions rather than less.[6] It would be prudent for the state to encourage the construction of new highly efficient gas-fired power plants as these facilities would reduce the use (and likely hasten the retirement) of older, higher-emitting and more expensive power plants. The dispatchability and flexibility of natural gas-fired power plants allow them to complement the sometimes-variable output of wind and solar facilities. The state should not pass any bill that stigmatizes or bans the use of natural gas. Rather, policymakers should encourage the use of natural gas to facilitate the integration of renewables.[7] Additionally, natural gas has long been valuable in reducing emissions from the power sector and ensuring a reliable system while providing reserve and regulation support.[8]

A Ban Inappropriately Closes Door on Prospect of Renewable Natural Gas and Emerging Technologies

API and its members are committed to delivering solutions that reduce the risks of climate change while meeting society's growing energy and electricity needs. The industry is investing in the development of cleaner fuels including renewable natural gas and hydrogen. A fossil-fuel free building requirement creates a disincentive for investment in these promising technologies.

Unintended Consequences

Legislators should also recognize that moving the state to electric heat and heat pumps can have the unintended consequence of incentivizing customers to purchase and use backup generators that run on fossil fuels. The state must first understand and appreciate the potential economic and environmental consequences of additional backup generators before pursuing a future of only electric heat in new construction.

Cost

Good public policy considers cost impacts on consumers, especially those in overburdened communities. All-electric legislation will likely increase costs. According to research conducted for the National Association of Home Builders, all-electric homes cost more upfront in comparison to gas homes.[9] Specifically, for new construction the estimated electrification costs for an electric reference house in Baltimore compared to a baseline gas reference house ranges from just under $4,000 to over $14,000.[10]

Conclusion

For the reasons outlined above, API respectfully ***opposes SB 1023***, which removes consumer choice and effectively bans the use of all fossil fuels in new building construction. Thank you for considering these comments, and please feel free to follow up with Michael Giaimo (giaimom@api.org or 603.777.0467) should you have any questions.

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[3] *See* https://pjm.com/-/media/committees-groups/committees/teac/2023/20231205/20231205-pjm-teac-board-whitepaper-december-2023.ashx.
[4] *See* https://www.pjm.com/-/media/library/reports-notices/special-reports/2023/energy-transition-in-pjm-resource-retirements-replacements-and-risks.ashx.
[5] See https://insidelines.pjm.com/pjm-working-to-mitigate-reliability-impacts-of-retiring-wagner-units/.
[6] As a point of reference, technological improvements over the past decade have reduced the carbon emission rate of new gas plants by 12 percent, which means that over the course of a year, a typical baseload gas plant built in 2020 emits 170,000 tons less carbon than one built in 2009.
[7] Natural gas combusted on-site is currently cleaner per unit of energy than electricity from the grid because of the energy losses occurring during the generation, transmission, and distribution of electricity. *See* City of New York Mayor's Office of Sustainability, *One City Built to Last: Transforming New York City Buildings for a Low-Carbon Future*, 34 (2016).
[8] The electric generation sector has significantly decreased greenhouse gas emissions. Emission reductions in this sector are greater than any other sector of the economy. Using data from the U.S. Energy Information Administration, API estimates that carbon emissions from New York's power generation sector have plummeted 56 percent since 2000. Most of this decline can be attributed to the switch from coal and oil to natural gas. *See* also The North American Electric Reliability Corporation, the standard bearer for reliability of the continent's bulk power systems, concluded that flexible, fast-ramping natural gas generators will be needed to maintain reliability as intermittent renewable resources become more prevalent.
[9] *See* https://www.nahb.org/-/media/NAHB/nahb-community/docs/committees/construction-codes-and-standards-committee/home-innovation-electrification-report-2021.pdf.
[10] *Ibid.* These numbers reflect the ranges associated with the low- and high-reference cases contained in this study.

MD 2024 SB 1023 Columbia Gas Testimony Final.pdf
Uploaded by: Carville Collins
Position: UNF

Columbia Gas of Maryland
A NiSource Company

OPPOSE – Senate Bill 1023
Maryland Building Performance Standards
Senate Education, Energy and the Environment Committee

Columbia Gas of Maryland, Inc. opposes Senate Bill 1023, which requires the Maryland Department of Labor to adopt, as part of the Maryland Building Performance Standards, a requirement that new buildings meet all water and space heating demands of the building without the use of fossil fuels. The legislation also requires buildings 25,000 square feet or larger and new residential buildings less than four stories above grade plane to achieve site energy use intensity (EUI) standards which eventually are set at a net-zero energy balance on or after October 1, 2035.

Electrifying buildings does not necessarily lead to decarbonization. A significant percentage of electricity provided to Maryland today is supplied by fossil fuels. Mandated building electrification now would just shift the point source of emissions from a new building to a base load electric generation facility. Senate Bill 1023 fails to address the need for a diverse and robust energy portfolio, necessary to maintain grid stability and reasonable, affordable utility rates for residential homes and commercial buildings in Maryland.

The legislation prevents the use of renewable natural gas (available today) and new technologies like hydrogen, both of which are expected to provide cost-effective heat and energy to homes and businesses. In addition to the cost-effectiveness, these technologies can produce meaningful greenhouse emission reductions over other conventional energy sources in the short and long term without the need to replace appliances, and thus should not be barred from use.

While the proposed legislation allows a local jurisdiction to grant a waiver from the requirement banning fossil fuel use for emergency back-up power systems and buildings designated for use by five types of business, it ultimately prevents customer choice for those building their own homes or building commercial business space in the future. Under the bill, financial considerations are not a sufficient basis to pursue a local waiver of the requirement. To the contrary, Columbia Gas respectfully submits that financial considerations are *the* major consideration when building a new home or business.

It should be noted, the federal Energy Policy and Conservation Act (EPCA) preempts state regulations or laws that effectively ban EPCA-regulated products from accessing necessary energy sources. *See, e.g.*, 42 U.S.C. § 6297(c). SB 1023 is expressly intended to reduce greenhouse gas emissions by mandating electric only buildings and preventing the use of fossil fuel appliances. In most buildings, appliances like natural gas furnaces and water heaters are "covered products" under EPCA and EPCA preempts efforts by states to establish "energy conservation standards" relevant to these products, particularly where state legislation functionally bans the use of the products. Accordingly, Columbia Gas believes SB 1023 is preempted by federal law.

Columbia Gas wishes to make clear that its company leadership believes climate change is real, and we are committed to reduce the greenhouse gas emissions of our operations and pursue opportunities to reduce customer emissions. However, that change must happen within the confines of the reality with which our energy is produced and consumed. Columbia Gas supports appropriately crafted policy on emission reductions that:

- Targets deep greenhouse gas reductions consistent with affordability and reliability
- Preserves customer energy choice
- Addresses customer equity issues and supports an equitable energy transition
- Expands utility energy efficiency and renewable energy programs
- Incentivizes market demand for low carbon gas and advanced technologies
- Recognizes the mitigation, adaptation, affordability and reliability benefits of gas infrastructure
- Promotes modernization of gas infrastructure, which is key to reducing emissions and ensuring a safe, reliable and climate-resilient energy system
- Promotes an environment of innovation, research, development and deployment needed for deep emissions reductions; and
- Supports utility rate mechanisms and cost recovery processes that support a lower carbon future.

The requirements of SB 1023 are not in line with the above parameters, and consequently Columbia Gas cannot support SB 1023 as appropriately crafted policy on greenhouse gas emission reductions, and therefore urges an unfavorable report.

March 4, 2024

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BGE_EEE_OPP_Senate Bill 1023- Maryland Building Pe
Uploaded by: Charles Washington, Vice-President of Government & Externa
Position: UNF

bge
AN EXELON COMPANY

Position Statement

Oppose
Education, Energy, and Environment
3/4/2024

Senate Bill 1023- Maryland Building Performance Standards - Fossil Fuel Use, Energy Conservation, and Electric- and Solar-Ready Standards (Better Buildings Act of 2024)

Baltimore Gas and Electric Company (BGE) opposes *Senate Bill 1023- Maryland Building Performance Standards - Fossil Fuel Use, Energy Conservation, and Electric- and Solar-Ready Standards (Better Buildings Act of 2024). Senate Bill 1023* requires the Maryland Department of Labor to adopt a requirement that new buildings, 20,000 sq. ft or more or 20 stories or less in height above grade plane, meet all water and space heating demands without using fossils. Additionally, *Senate Bill 1023* requires buildings undergoing significant repair or improvements costing equal or exceeding 50% of the structure's replacement cost before the improvements or repair started.

Currently, the Department of Environment (MDE) is promulgating regulations to implement the building performance standards (BEPS)for buildings of a specific size as required by the 2022 Climate Solutions Now Act (CSNA). MDE is still reviewing feedback received during the comment period ending on January 18 and making necessary revisions to the proposed regulations based on the numerous stakeholder responses received. MDE indicated that the BEPS regulations would not be finalized until May of this year. But once finalized and implemented, building owners must benchmark energy data and meet interim net direct GHG emissions reductions by 2030. BGE supports the deliberate approach currently undertaken by the State to implement building performance standards to align with Maryland's ambitious climate goals.

There are ongoing processes holistically addressing this topic, which *Senate Bill 1023* does not consider and, if passed, could delay the progress of existing efforts, including:

- The CSNA required that the Maryland Department of Labor's Building Codes Administration to study options for developing an all-electric building code and that Maryland adopt the 2018 International Green Construction Code (IGCC). State building codes were updated in May 2023 based on the 2021 International Energy

Charles Washington| Brittany Jones | Guy Andes| Dytonia Reed| 410.269.5281

Conservation Code (IECC). Model energy and building codes may aid in reaching the State's goals of adopting low or zero-carbon construction standards by 2031.

- The Green and Healthy Task Force of 2023-2026 is tasked with and will recommend how to deliver green housing for limited-income households throughout the State.
- The Maryland Green Building Council guides Maryland's High-Performance Building Program, which applies to new and renovated State-funded buildings.
- The Air Quality Control Advisory Council advises on draft air quality rules and regulations proposed by MDE, including BEPS.

BGE supports building decarbonization in our service territory in a way that takes customer choice and costs to our customers seriously and helps ensure the safe, reliable, and resilient provision of energy to them. Electrification will require significant incremental investments in our electric infrastructure to serve the resulting load reliably and with resilience in mind. However, such a meaningful shift to the State's building standards as the one contemplated in *Senate Bill 1023* requires time for planning and implementation. The BGE territory serves 54% of Maryland's residential gas customers and 55% of commercial and industrial gas customers. These customers represent nearly half of statewide natural gas use in Maryland's buildings and industry. Of this natural gas use, approximately 25% is associated with harder-to-electrify large commercial and industrial users. *Senate Bill 1023* does not provide the tools necessary to expedite the planning, siting, permitting, and construction of such electric system infrastructure, and fails to address the significant potential costs associated with electrification. Without the required time and tools, the grid may be unable to serve new loads during times of peak energy usage.

Further, BGE engaged Energy + Environmental Economics (E3) to analyze viable pathways that achieve the State's net zero goals and identify potential implications for BGE's customers and service area. E3 analyzed three key decarbonization scenario pathways that built on prior work E3 performed for the State: 1) Limited Gas; 2) Hybrid; and 3) Diverse. Each of the pathways could achieve Maryland's net-zero GHG emission targets and all require significant electrification – including building and transportation electrification. The most important finding by E3 is that the Hybrid and Diverse pathways, both of which leverage the combined capabilities of electric and gas delivery systems, achieve Maryland's goals at lower cost and less risk for customers and the State's economy. These Integrated Energy System (IES) pathways also deliver greater resiliency, fuel diversity, more realistic constructability and less disruption to customers and the State's economy[1]. And again, the Integrated Energy

[1] BGE_PathToClean_Final_090623.pdf (contentstack.com)

Charles Washington| Brittany Jones | Guy Andes| Dytonia Reed| 410.269.5281

System pathways meet Maryland's goal of achieving net zero greenhouse gas emissions by 2045.

BGE opposes *Senate Bill 1023* as it forces a rapid shift without appreciating the current ongoing MDE work, costs, and the impacts of such a rapid change on all energy customers in Maryland. BGE respectfully requests that the Committee issue an unfavorable committee report.

Charles Washington| Brittany Jones | Guy Andes| Dytonia Reed| 410.269.5281

SB1023UNF.pdf
Uploaded by: Eric McWilliams
Position: UNF

March 4, 2024

Education, Energy, and the Environment Committee
2 West, Miller Senate Office Building
Annapolis, Maryland 21401

SB1023- Maryland Building Performance Standards – Fossil Fuel Use, Energy Conservation, and Electric- and Solar- Ready Standards (Better Buildings Act of 2024): OPPOSE

Chair Feldman, Vice Chair Kagan, and Members of the Education, Energy, and the Environment Committee,

The ICSC Maryland Government Relations Committee respectfully opposes Senate Bill 1023: *Maryland Building Performance Standards – Fossil Fuel Use, Energy Conservation, and Electric- and Solar- Ready Standards (Better Buildings Act of 2024).* ICSC is the marketplaces industry association supporting more than 45,000 members. In Maryland our industry supports 500,000 jobs and is responsible for nearly $7.1 Billion in state sales and use tax revenue. Senate Bill 1023 would require that new buildings meet all energy demands without the use of fossil fuels and create an electric- and solar-ready standard for certain buildings.

ICSC is concerned with the large change in policy that this bill would mandate. In recent months, PJM has placed a strong emphasis on ensuring the grid's reliability in the face of electrification challenges. This potential policy's change in electrification may further strain the grid before its capacity is adequately addressed. In addition, the economic burden falls heavily on utility payers, and this transition could impact not just new building owners but the broader community due to an increased electricity demand.

We respectfully ask for an unfavorable report for this legislation.

Sincerely,
Eric McWilliams
ICSC Maryland Government Relations Chair

If you have any questions regarding this document or ICSC please contact Sushant Sidh (Sushant.Sidh@capitol-strategies.com)

EnPAC SB 1023.pdf
Uploaded by: Gary Baxter
Position: UNF

The Honorable Chair, Senator Brian Feldman

Education, Energy, and the Environment Committee

2 West

Miller Senate Office Building

Annapolis, MD 21401

On behalf of the Energy and Poverty Awareness Center (EnPAC), I write to share our comments on the proposed Maryland Building Performance Standards – Fossil Fuel Use, Energy 2 Conservation, and Electric– and Solar–Ready Standards 3 (Better Buildings Act of 2024).

The Energy and Poverty Awareness Center (EnPAC) is a non-profit dedicated to advancing reliable and affordable energy policies that help alleviate and reduce poverty in racial and ethnic minority communities.

I founded EnPAC after witnessing how energy policies created systemic barriers perpetuating energy poverty among minority communities. While I am not from Baltimore, I spent a significant number of formative years in the city and have paid witness to the struggles of the Black community. For this reason, EnPAC champions initiatives that bring forward more thoughtful policy, education, and sustainable energy solutions to underserved neighborhoods that help foster economic growth opportunities and improve the quality of life for marginalized communities.

Affordable energy is vital for communities of color. By keeping energy costs affordable, families can redirect funds to other critical needs, fostering economic stability and improving overall quality of life.

Maryland is mistakenly taking regulatory steps that will ultimately serve as a de facto ban on natural gas services and appliances negatively impacting communities that can least afford it. These decisions will be extremely costly for all ratepayers, from families to large and small businesses, and worse, for low-wage workers, people on a fixed income, and others who are just trying to get by. This is especially important for Maryland's Black families and the state's Black middle class, the largest in the nation. Black Americans pay 43% more for energy than the average U.S. household and are three times more likely to be disconnected.

Last winter, homes using natural gas spent $746, while those relying on electricity were expected to spend an average of $1,268 this winter. That is a projected difference and savings of $522 in winter home heating bills for those using natural gas compared with electricity.

Electrification also forces significant costs onto homeowners. According to the consumer website Homewyse, a new heat pump in Baltimore, Maryland, would currently cost homeowners between

$4,177 and $5,239. After labor, fees, and permits, costs can hit $20,000 or more, not including ducts, according to consumer website HomeAdvisor.

Requiring the replacement of just four major gas appliances like water heaters, furnaces, stoves, and dryers could top out at more than $26,884 for a Baltimore household. For families that are already struggling financially, where are they going to access these funds?

Polling shows that these aggressive anti-energy positions are deeply unpopular; for example, a new poll shows left-leaning Maryland is deeply averse to one of Governor Wes Moore's largest environmental initiatives to cut carbon emissions, with 61 percent of those surveyed saying they oppose plans to end sales of new gas-powered cars by 2035.

EnPAC wants to see a clean future with lower emissions, and we can get there without dictating energy choices for families, seniors, and or neighbors. Natural gas also helps renewables get rolled out sooner, a fact that should not be overlooked. We even have the opportunity to clean up our landfills and farms by using new technologies like renewable natural gas (RNG), which can help reduce potent methane emissions and improve water quality, all while still using existing infrastructure.

Marylandersdeserve access to clean, efficient, affordable energy, regardless of background or economic status. We recognize the historical inequities that have disproportionately affected us and are committed to advocating for transformative initiatives that ensure equal access to sustainable, reliable, and affordable energy sources.

We respectfully request the Senate to reconsider the unduly taxing requirements of SB 1023 which will have negative impacts for Maryland's racial and ethnic minority communities.

Gary Baxter

Founder, Energy Poverty Awareness Center

SB 1023_MDCC_Better Buildings Act of 2024_UNFAV.pd
Uploaded by: Hannah Allen
Position: UNF

MARYLAND
Chamber of Commerce

LEGISLATIVE POSITION:
Unfavorable
Senate Bill 1023 – Maryland Building Performance Standards – Fossil Fuel Use, Energy Conservation, and Electric– and Solar–Ready Standards (Better Buildings Act of 2024)
Senate Education, Energy, and the Environment
Monday, March 4, 2024

Dear Chairman Feldman and Members of the Committee:

Founded in 1968, the Maryland Chamber of Commerce is the leading voice for business in Maryland. We are a statewide coalition of more than 6,800 members and federated partners working to develop and promote strong public policy that ensures sustained economic health and growth for Maryland businesses, employees, and families.

Senate Bill 1023 requires the Maryland Department of Labor to adopt a requirement, as part of the Maryland Building Performance Standards, that new buildings are electric- and solar-ready and meet energy conversation requirements without the use of fossil fuels.

This legislation creates high barriers to new construction, resulting in significant challenges for existing and new businesses and future economic development in Maryland. Senate Bill 1023 would severely restrict the availability of affordable energy options for all new buildings in the state. It also places Maryland at a significant regional economic competitiveness disadvantage by ultimately phasing out the use of other affordable energy sources for commercial buildings that are critical to every jurisdiction in our state. This bill sets Energy Use Intensity standards that lack clarity, as it remains uncertain how these standards will be applied on a building-by-building basis or whether they are realistically achievable.

While the intention of SB 1023 is to reduce greenhouse gas emissions by mandating electric-only buildings, it overlooks the fact that a significant portion of Maryland's electricity is generated from fossil fuels. This legislation simply shifts emissions from individual buildings to electric generation facilities, without fundamentally reducing carbon output. Moreover, it neglects the importance of maintaining a diverse energy portfolio for grid stability and reasonable utility rates, which are vital to both residential and commercial consumers. Additionally, this legislation restricts the adoption of innovative technologies such as renewable natural gas and hydrogen, which offer cost-effective and environmentally friendly alternatives for heating and energy needs.

The Maryland Energy Administration released a study in January 2024 on the costs, barriers, and impacts related to requiring both new and existing multifamily residential buildings to include

electric vehicle supply equipment or EV-ready parking spaces. The report explains that the infrastructure comes at a steep cost, estimated at $7.4 billion dollars to install EV-ready infrastructure for 50% of parking spaces, which does not include the cost of running power to the building. We encourage the committee to consider these large cost impacts, as an electric vehicle-ready requirement alone will have substantial costs to businesses and residents building or purchasing a new building.

SB 1023 also brings forward legal concerns. This legislation is intended to reduce greenhouse gas emissions by mandating electric only buildings and preventing the use of fossil fuel appliances. In April of 2023, the U.S. Court of Appeals for the Ninth Circuit held that the Energy Policy and Conservation Act (EPCA) preempts state and local building codes concerning the energy use of natural gas appliances, including Berkeley's building code which prohibits natural gas piping into new buildings, preventing the use of natural gas. In January 2024, the Ninth Circuit denied Berkeley's request for review and the panel's decision, which struck down Berkeley's ordinance, was reaffirmed.

It is also important to note that the federal Energy Policy and Conservation Act (EPCA) preempts state laws and regulations that effectively ban certain EPCA-regulated energy products from accessing energy sources. In most buildings, appliances like natural gas furnaces and water heaters fall under the category of "covered products" according to the EPCA. EPCA precludes states from setting energy conservation standards for these products, especially when state laws effectively prohibit their use. SB 1023, by mandating electric-only buildings and prohibiting fossil fuel appliances, conflicts with EPCA regulations, likely rendering it preempted by federal law.

Lastly, the Chamber is concerned that SB 1023 fails to account for customer choice and could lead to affordability and reliability issues. We believe that legislation aimed at reducing greenhouse gas emissions must be comprehensive, inclusive of innovative technologies, and mindful of federal regulations to ensure a sustainable and prosperous energy future for Maryland. While we have been supportive of efforts to responsibly reduce emissions, Senate Bill 1023 sets for an unrealistic implementation timeline that would drastically change the permitting process for future construction in the state. A sole source energy policy poses risks, high costs and challenges. A balance should be struck between reducing emissions, promoting technological innovation, and ensuring affordability, accessibility and choice for consumers.

For these reasons, the Maryland Chamber of Commerce respectfully requests an **Unfavorable Report** on **SB 1023.**

MBIA Letter of Opposition SB 1023.pdf
Uploaded by: Lori Graf
Position: UNF

MARYLAND BUILDING INDUSTRY ASSOCIATION
11825 West Market Place | Fulton, MD 20759 | 301-776-6242

March 1, 2024

The Honorable Brian Feldman
Chairman, Senate Education, Energy, and the Environment Committee
2 West Miller Senate Office Building
Annapolis, Maryland 21401

RE: MBIA Letter of Opposition SB 1023 Maryland Building Performance Standards – Fossil Fuel Use, Energy Conservation, and Electric- and Solar-Ready Standards (Better Buildings Act of 2024)

Dear Chairman Feldman,

The Maryland Building Industry Association, representing 100,000 employees statewide, appreciates the opportunity to participate in the discussion surrounding **SB 1023 Maryland Building Performance Standards – Fossil Fuel Use, Energy Conservation, and Electric- and Solar-Ready Standards (Better Buildings Act of 2024)**. MBIA **opposes** the Act in its current version.

This bill requires the Maryland Department of Labor to adopt a requirement that new buildings meet all water and space heating demands of the building without the use of fossil fuels, energy conservation requirements, and an electric– and solar–ready standard for certain buildings. While we fully support the goals of promoting sustainability and environmental responsibility, we believe that the provisions in this bill will present significant challenges for our industry. Implementing the mandated requirements for electric vehicle infrastructure, solar readiness, and energy conservation measures is likely to increase construction costs significantly. Ensuring compliance with these standards will require specialized expertise and resources that may not be available or cost-effective for all stakeholders involved. Additionally, meeting the new standards will require more time for planning, design, and construction. This will add significant delays to the construction process that is already very slow.

This bill will further add a disincentive for investment in housing in Maryland. As you know, Maryland currently faces a housing shortage of approximately 96,000 housing units. If nothing changes, that number will increase by 5600 units per year. The National Association of Homebuilders reports that the estimated rent of a Maryland Housing Units is more than 30% of household incomes state wide with 25% of people spending more than 50% of their income on housing. In order to address this problem, we need a concerted effort to make housing available, and affordable to the residents of this state. This bill is a step in the wrong direction.

For these reasons, MBIA respectfully urges the Committee to give this measure **an unfavorable** report. Thank you for your consideration.

For more information about this position, please contact Lori Graf at 410-800-7327 or lgraf@marylandbuilders.org.

cc: Members of the Senate Education, Energy, and the Environment Committee

SB1023 Fossil Fuel Use Opposition.pdf
Uploaded by: Lory Ebron
Position: UNF

COMMISSIONERS FOR SOMERSET COUNTY
11916 SOMERSET AVENUE, ROOM 111
PRINCESS ANNE, MARYLAND 21853
TELEPHONE 410-651-0320, FAX 410-651-0366

COMMISSIONERS
CHARLES LAIRD, PRESIDENT
RANDY LAIRD, VICE-PRESIDENT
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DARRYL K. WEBSTER

COUNTY ADMINSTRATOR
RALPH D. TAYLOR

DEPUTY COUNTY ADMINISTRATOR
ERNEST J. LEATHERBURY, JR.

COUNTY ATTORNEY
KIRK G. SIMPKINS

February 27, 2024

The Honorable Brian J. Feldman
Education, Energy and the Environment Committee
2 West
Miller Senate Office Building
Annapolis, MD 21401

Re: SB1023-Maryland Building Performance Standards-Fossil Fuel Use and Electric-Ready Standards (Better Buildings Act of 2024)- **Letter of Opposition**

Dear Chairman Feldman and Committee Members:

On behalf of the Commissioners for Somerset County, this is written to express our respectful, but strong opposition to Senate Bill 1023.

First and foremost, Somerset County has a long history of taking actions to reduce the effects of climate change. As you may know, a natural gas company recently completed the construction of a line with natural gas service already serving the Pharmaceutical Building at the University of Maryland – Eastern Shore, and work is in process to provide the service to Eastern Correctional Institution in Westover and the US 13 corridor. This gas line has been a priority of Somerset County for decades and we greatly appreciate the help the State provided in making this happen. For years, potential employers have been hesitant to locate in Somerset County due to its lack of natural gas service. Now that the line is finished, employers and property owners (including certain agri-businesses, the Princess Anne Industrial Park and home builders) are counting on the ability to connect to natural gas.

Secondly, as the Governor and the State of Maryland have placed a strong emphasis on affordable and adequate housing, implementing SB1023 would significantly increase the cost of building affordable homes not just in Somerset County but across the state.

Respectfully, we believe that artificially choking off the ability of customers to choose natural gas will defeat all of the hard work the Somerset County has expended over the last several years to bring the natural gas line to the County. Furthermore, the increased costs of building a home to the standards in SB1023 would further hinder development in Somerset County. We ask that you please consider our serious concerns as you review and debate SB1023.

Sincerely,

Charles Laird
President

Washington Gas - SENATE BILL 1023 - Oppose.pdf
Uploaded by: Manuel Geraldo
Position: UNF

1000 Maine Avenue, SW | Suite 700 | Washington, DC 20024 | www.washingtongas.com

COMMITTEE: EDUCATION, ENERGY, AND THE ENVIRONMENT

TESTIMONY ON: SB1023 MARYLAND BUILDING PERFORMANCE STANDARDS – FOSSIL FUEL USE, ENERGY CONSERVATION, AND ELECTRIC– AND SOLAR–READY STANDARDS (BETTER BUILDINGS ACT OF 2024)

POSITION: OPPOSE

HEARING DATE: MARCH 1, 2024

Washington Gas respectfully submits this statement in **OPPOSITION** to **Senate Bill 1023 – Maryland Building Performance Standards – Fossil Fuel Use, Energy Conservation, and Electric– and Solar–Ready Standards (Better Buildings Act of 2024)**

Washington Gas Light Company ("the Company") provides safe, reliable natural gas service to more than 1.2 million customers in Maryland, Virginia, and the District of Columbia. Washington Gas has been providing energy to residential, commercial, government, and industrial customers for more than 175 years, and currently serves more than 500,000 Maryland customers in Montgomery, Prince George's, Charles, St. Mary's, Frederick, and Calvert Counties. The Company employs over 400 people within Maryland, including contractors, plumbers, union workers, and other skilled tradespeople. The Company strives to improve the quality of life in our communities by maintaining a diverse workforce, working with suppliers that represent and reflect the communities it serves, and giving back through its charitable contributions and employee volunteer activities. The Company, together with other natural gas distribution utilities, are responsible for delivering the primary source of heat to Maryland residential energy consumers, serving approximately one half of all Maryland households while providing critical energy services to residential, commercial, and industrial customers at one-third the cost of electricity on a per unit basis.[1]

The Company supports Maryland's climate goals and believes that Maryland's gas infrastructure can help the State meet those goals while providing a wide range of benefits to Maryland customers. Senate Bill 1023 ("SB 1023") would require, starting October 1st, 2025, all new

[1] DOE. Energy Conservation Program for Consumer Products: Representative Average Unit Costs of Energy (Aug. 28, 2023).

buildings or buildings undergoing significant improvements to meet all water and space heating demand without fossil fuels. SB 1023 also proposes to implement strict site energy use intensity ("EUI") requirements and offers no rationale for how the targets were determined. These requirements mandate that all of Maryland's buildings electrify regardless of any impacts on reliability, affordability, and energy choice while disregarding practical, low cost decarbonization alternatives. The State should consider technology-agnostic policies that can help achieve its greenhouse gas ("GHG") emissions reduction goals while maintaining affordable, reliable, safe, and secure energy for Marylanders. SB 1023 is not an appropriate, realistic, or efficient way to advance emissions reductions for customers in Maryland. It will require substantial investments by Maryland's residents and businesses, increase utility bills, and reduce the diversity, reliability, and resilience of Maryland's supply of energy.

Affordability

By forcing home and building owners to electrify, SB 1023 will increase Marylanders' energy bills. The Energy Information Administration's (EIA) Winter Fuels Outlook for 2023-2024 estimates that it will cost, on average, 76% more to heat homes this winter using electricity compared to natural gas (U.S. Average: $1,063 vs $601). In the Northeast, it is estimated to cost 92% more this winter (Northeast Average: $1,465 vs. $761).[2] Additionally, widespread electrification will increase electric rates overall due to the increased need for infrastructure investments that are needed to support high load growth. A recent New York Times article stated that "power bills have been rising nationwide, and in Baltimore, electricity rates have increased almost 30 percent over the last decade, according to data from the Bureau of Labor Statistics."[3]

Additional benefits and cost savings resulting from the reliability of the State's natural gas infrastructure would be lost through widespread electrification. Less than 1% of customers are expected to experience a natural gas outage in any given year, while electric distribution systems see an average of one (1) outage per year per customer.[4] The high reliability of the natural gas system provides significant cost savings on peak demand days. For example, Oregon utility Northwest Natural Gas conducted an analysis of its winter peak demand days and found that the amount of new renewables and storage required to replace the use of natural gas on such days (in terms of exajoules of energy) would cost approximately $20 billion, not including any grid upgrades required to reliably integrate and deliver energy from these renewables.[5]

The site EUI targets included in SB 1023 are stricter than the targets adopted in Maryland's Building Energy Performance Standards ("BEPS") and would accrue significant costs to all buildings in the State to achieve compliance. The Building Energy Transition Implementation Task Force ("BETITF"), co-chaired by the Maryland Department of the Environment with the Maryland Energy Administration, estimates the compliance costs for buildings covered by BEPS at roughly

[2] U.S. Energy Information Administration. Winter Fuels Outlook 2023-24 (Jan. 9, 2024).
[3] New York Times. As Utility Bills Rise, Low-Income Americans Struggle for Access to Clean Energy - The New York Times (nytimes.com) (Jan. 11, 2024).
[4] AGA. Natural Gas is Reliable
[5] NW Natural. Understanding Peak Demand (2023).

$1 billion per year.[6] BETITF assumed that at most half of these necessary costs are financeable, meaning that the State would be accountable for funding at least the other half. Modeling commissioned for BETITF, conducted by the engineering firm AECOM, estimated ~$15B in total costs for all covered buildings to achieve compliance.[7] SB 1023 applies to all buildings in the State, not just those covered by BEPS. When analyzing HVAC electrification of residential buildings, BETITF estimated that electrification could cost as much as $1.3 billion per year for a total cost of ~$715 per year for each residential building in the State.[8] SB 1023 would impose these costs onto Marylanders in the form of high compliance costs for building owners and strain the State's budget without viable sources of funding.

Feasibility of Implementation

SB 1023 bans using fossil fuels for water and space heating, and questions remain about the legality of such a measure. For example, Berkely, California's proposed ban on natural gas hookups in new construction was struck down in federal court.[9] There are also uncertainties around the feasibility of abandoning natural gas for widespread electrification and whether the grid will be able to accommodate the increased load. The United States Department of Energy's ("DOE") 2023 Transmission Needs Study found that PJM must increase within-region transmission by 61% by 2035 and interregional transfer capacity with the Midwest region by 474% by 2035, both relative to 2020 to accommodate high load and high clean energy growth.[10] Major transmission lines can take more than a decade to obtain permits.[11] This does not account for the planning, purchasing of land, construction, and other subsequent activities that go into making new transmission operational on the grid.

Besides the cost and grid impact-related challenges of electrification, there is reason to question whether the site EUI requirements outlined in SB 1023 are feasible. According to the DOE, a typical heat hump in a typical home uses 5,475 kWh per year[12] (~18,680 kBtu), and a typical heat pump water heater uses 2,195 kWh per year[13] (~7490 kBtu). Together these two end uses would account for ~83% of a home's site EUI requirement in 2032, without accounting for additional energy needs for lighting, cooking, clothes drying, etc. It is unreasonable to assume any building will be able to comply with this extremely strict requirement.

Finally, the timeline in which the site EUI targets are implemented is very aggressive and not feasible for Marylanders. Going from 17 kBTU/sqft to net zero in three years would require

[6] Building Energy Transition Implementation Task Force. Final Report of the Building Energy Transition Implementation Task Force (Jan. 24, 2024).
[7] MDE. Maryland Cost of Building Data Summary (2023). See 'Total Costs' under the 'Potentially Covered Costs' Tab
[8] MDE. Maryland Cost of Building Data Summary (2023). See 'Total Costs/year' under the 'Residential Costs' Tab. $1303545544.23688/year divided by 1,823,247 buildings equals $714.958/residential building/year
[9] SmartCitiesDive. Federal court won't reconsider decision to overturn Berkeley, California, natural gas ban (Jan. 2, 2024).
[10] DOE. Transmission Needs Study Mid-Atlantic Region (Oct. 30, 2023).
[11] Bloomberg Law. States Balk at Permitting Plan's 'National Interest' Power Lines (Sep. 2022).
[12] Energy Sage. How much energy does a heat pump use? (Nov. 20, 2023).
[13] Carbon Switch. Heat Pump Water Heater Buyer's Guide (2024).

aggressive energy efficiency, solar, storage, and/or electrical heating equipment rollouts and saddle Maryland residents and businesses with significant energy-related costs. This does not consider the availability of the necessary equipment and labor. According to the Bureau of Labor Statistics, there will be ~73,500 electrician job openings per year over the next decade.[14] Electricians are necessary to electrify buildings, and this projected shortage will hamper Maryland's ability to electrify on the timeline stated.

Emissions from Electricity Generation

While SB 1023 is meant to reduce GHG emissions to help meet the State's climate goals, PJM's current and future electricity generation mix presents challenges to reducing GHG emissions through electrification. Today, fossil fuel resources comprise over 55% of PJM's generation mix,[15] with fossil generation often being higher during periods of peak demand,[16] and PJM has documented challenges in interconnecting new renewable energy resources.[17] The State's Climate Pollution Reduction Plan further anticipates that the State's reliance on imported power from PJM will increase ~81% by 2030 and ~142% by 2035 as it retires additional in-State fossil resources and fails to add in-State zero-emission generation at a commensurate pace.[18] The high reliance on fossil-fuel heavy electricity imports from PJM underlines the fact that electrification is not guaranteed to reduce GHG emissions, and SB 1023 risks increasing that reliance.

The State's inability to meet its own in-State renewable energy generation targets also highlights the challenges that the electric sector is facing to meet Maryland's climate goals. The Bureau of Ocean Energy Management recently excluded a proposed offshore wind energy area in Maryland from an offshore wind lease sale that is set to occur this year. 278,000 acres off the shores of Delaware and Virgnia were approved by BOEM, while 78,265 acres off the shore of Ocean City, MD,[19] were deemed unviable due to the significant costs and mitigation of negative environmental effects that would be required.[20] The excluded area was projected to generate between 1.1 – 2.2 GW of power.[21] Meanwhile, Ørsted has cancelled its Maryland offshore wind projects as the State and the broader Northeast region has hit major stumbling blocks in adding their own in-State renewable energy sources.[22] In 2021, Senate Bill 65 revised down the solar carve-out requirement in Maryland's renewable energy portfolio standard for every year from 2023-2029,[23] and the State has been challenged to add sufficient new solar resources. According to the Public Service Commission's 2022 Annual Report, applications for in-State photovoltaic solar renewable energy credits were down by ~3.9% from 2021 and the total capacity of projects approved was only 263 MW, down more than 40% from 2021.[24]

[14] Bureau of Labor Statistics. Electricians Job Outlook (Sep. 6, 2023).
[15] PJM. Markets & Operations (last accessed Feb. 27, 2024).
[16] PJM. Winter Operations of the PJM Grid: December 1, 2020 – February 28, 2021 (Apr. 7, 2021).
[17] PJM. Energy Transition in PJM: Resource Retirements, Replacements & Risks (Feb. 24, 2023).
[18] MDE. Climate Pollution Reduction Plan – Climate Plan Data (Dec. 28, 2023).
[19] BOEM. BOEM Finalizes Wind Energy Areas in the Central Atlantic (Jul. 31, 2023).
[20] BOEM. Biden Harris Administration Advances Offshore Wind in the Central Atlantic (Dec. 11, 2023).
[21] Offshore WIND. BOEM Issues Draft EIS for Maryland Offshore Wind Project (Oct. 2, 2023).
[22] Maryland Matters. Md. offshore wind developer announces 'repositioning' of project, seeks new financial support (Jan. 25, 2024).
[23] Maryland General Assembly. Senate Bill 65 (Jun. 1, 2021).
[24] Maryland Public Service Commission. 2022 Annual Report (April 2023).

Lower carbon fuels and other GHG emission abatement strategies for the gas system can provide emissions benefits when compared to the emissions profile of the current and projected grid electricity supply, and these solutions should not be disadvantaged by the electrification mandate proposed in SB 1023.

Conclusion

The Company is committed to working with stakeholders to help achieve Maryland's GHG emissions reduction targets. SB 1023, by prohibiting natural gas, eliminates an affordable way for Maryland customers to heat their homes, cook their meals, and operate their businesses. Electrification is not the sole solution to climate change in Maryland and should not be treated as such. There is a role for existing and future technology innovation to support diverse pathways to decarbonizing Maryland, and the State's existing natural gas infrastructure can and should be leveraged to preserve affordability, reliability, safety, and security of energy delivery.

For the above reasons Washington Gas respectfully requests an unfavorable report on Senate Bill 1023. Thank you for your consideration of this information.

Contact:
Manny Geraldo, State Government Relations and Public Policy Manager
M 202.924.4511 | manuel.geraldo@washgas.com

Consumer Energy Alliance SB 1023 Testimony.pdf
Uploaded by: Michael Butler
Position: UNF

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The Honorable Chair, Senator Brian Feldman

Education, Energy, and the Environment Committee

2 West

Miller Senate Office Building

Annapolis, MD 21401

Chairman Feldman, Vice-Chair Kagan and member of the Maryland Senate Education, Energy, and the Environment Committee, on behalf of Consumer Energy Alliance (CEA), I write to share our comments on SB 1023 the Better Buildings Act of 2024.

Founded in 2006, CEA is a nonpartisan, nonprofit organization advocating for balanced energy policy and responsible access to resources. Our mission is to help ensure American families and businesses have access to affordable, reliable, and environmentally sustainable energy. Our members support all forms of domestic energy production – both traditional and renewable – as well as energy efficiency technologies. This is because we need to continue to meet the energy needs of our communities, protect our shared environment, and maintain our energy security – all while keeping the cost of energy affordable and the delivery of energy reliable for our families and businesses.

We understand the challenges and difficulties presented to the Education, Energy, and Environment Committee in trying to implement the sweeping directives related to the Maryland Building Performance Standards. CEA shares a commitment to finding paths that reduce the emissions profile of the state and find ways to stay in compliance with the directives of the law. However, some of the policy ideas under consideration – such as a ban on all fossil fuel services and appliances through the proposed energy conservation requirements and an all-electric– and solar–ready standard for new construction and provisions for existing residential buildings – could create significant economic hardships for Marylanders already struggling to get by.

Natural gas, fuel oil, and propane currently provide for over 50% of all Maryland households home heating needs. According to federal estimates, homes using natural gas for home heating were expected to save over $400 more in heating costs during this winter's heating season as compared to homes purely reliant on electric heating.

This is important because Maryland residents are already dealing with surging utility bills. According to the report, Powerless in the United States, the number of households having their electricity disconnected as a result of not being able to pay skyrocketed. Nearly 74,345 Maryland families saw their power cut off between January and October 2022, and in 2023, disconnections skyrocketed 80% to 116,591.

While energy efficiency is an important pillar of offering energy savings and achieving greenhouse gas emissions reductions, attempts have been made in other states to use the building code process to ban

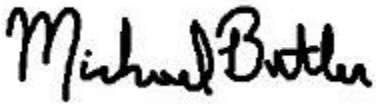
appliances and services without considering the overall site to source environmental impact of those requirements or cost impacts to customers. According to a study by Home Innovation Research Labs, requiring forced electrification on new construction can add upwards of $14,495 in construction costs for homes in Baltimore and areas of similar climate across the state.

As is too often the case regarding energy policy, low- and fixed-income communities would likely be most affected by untested solutions like forced electrification.

It is worth noting a few key observations in closing:

- No independent cost-benefit analysis has been conducted to examine the impact of complying with these proposals. This is a fundamental building block and principle of public policymaking that should have been completed and provided with the proposed code changes now under consideration.
- Policy decisions cannot occur in a vacuum. Without getting into the complexities and suite of issues of decarbonizing the residential, commercial, and transportation sectors for roughly 6.2 million people, considering whether the existing electric system can support this transition without harming reliability and without significant investment in the electric grid is necessary. This is particularly true provided PJM's warning about electric reliability in Maryland earlier this year.
- Marylanders demand energy justice to achieve social and economic equity in our energy system while remediating social, economic, and health burdens on those disproportionately harmed by unaffordable or unreliable energy. Unnecessarily increasing housing prices and rent through unattainable building codes disproportionately affects the poorest among us.

Again, thank you for the opportunity to comment on SB 1023 the Better Buildings Act of 2024. We ask that you carefully consider the cost implications for families and businesses throughout the state resulting from the adoption of this proposed legislation.



Michael Butler

Mid-Atlantic – Executive Director

Consumer Energy Alliance

2024-SB1023-UNFavUNCONSTITUTIONAL.pdf
Uploaded by: Nelda Fink
Position: UNF

SB1023 – UNFAVORABLE UNCONSTITUTIONAL!

Nelda Fink

MD District 32

I strongly oppose this bill because it requires additional building expenses for reasons that are not necessary to the safety of the building but are there only to support the state's unconstitutional mandates of a certain agenda. This bill as well as the house bill cross-filed with it, infringe on a person's property rights that are protected in the Constitution of the US as well as in the Maryland Constitution.

The purpose of government is to protect the rights of the citizens, not to mandate them away.

100% OPPOSE this bill and ask an unfavorable report as it is unconstitutional.

Thank you.

Nelda Fink

Suburban Propane - Senate Bill 1023.pdf
Uploaded by: Paul Rozenberg
Position: UNF

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Paul M. Rozenberg
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March 1, 2024

VIA ELECTRONIC SUBMISSION
Senator Brian Feldman
Chair, Senate Education, Energy, and Environment Committee
Maryland General Assembly
2 West
Miller Senate Office Building
Annapolis, Maryland 21401

RE: Senate Bill 1023

Dear Chair Feldman:

Suburban Propane writes in regards to Senate Bill 1023, which requires new buildings meet all water and space heating demands without the use of fossil fuels beginning October 1, 2026. Suburban Propane has been serving customers for more than 95 years and is the nation's third-largest propane retailer with operations in 42 states. In Maryland, we currently have 135 employees at 19 locations serving more than 40,000 customers.

Suburban Propane supports Maryland's overall goal of reducing the carbon footprint of buildings. However, pushing all building construction towards electricity as the only energy source comes with significant costs and is not an effective way to achieve the State's goal. Combatting the impacts of climate change will require a technology-neutral approach that uses all available fuel sources, including: low carbon intensity (CI) traditional propane, lower-CI renewable propane, zero- or negative- CI blends of traditional propane, renewable propane, and/or renewable dimethyl ether (rDME); and renewable natural gas (RNG). Therefore, we ask that Senate Bill 1023 be amended to promote a technology-neutral approach encouraging the use of all low-CI energy sources to achieve Maryland's emissions reduction target.

Senate Bill 1023 clearly prioritizes electricity under the inaccurate assumption that electricity is the energy source with the lowest carbon intensity. Electricity can be a tool in reducing the carbon footprint of buildings, but rapid electrification is detrimental to decarbonization. If buildings move to all-electric too quickly, it further taxes an already overburdened electrical grid. More power must be generated, which

will most likely come from increased electric generation at existing power plants using fossil fuels, negating any benefit electrification may provide, and increasing electricity costs for residents.

Meanwhile, other low-, zero, and negative-CI fuels, including those previously mentioned, are already available to consumers and can be used in existing infrastructure, allowing for immediate reductions in carbon emissions and saving residents thousands of dollars in conversion costs. For example, our subsidiary, Suburban Renewable Energy (Suburban Renewables), owns and operates RNG production facilities in Arizona, New York, and Ohio. This RNG is a drop-in replacement for natural gas and can use the existing natural gas transmission and distribution system.

Instead of relying solely on electricity, we encourage the State to adopt a technology-neutral approach in reducing carbon emissions, similar to the clean fuel standards adopted in California, Oregon, and Washington for transportation emissions, and permit the use of other energy sources that are low-carbon, including traditional and renewable propane. Propane is a reliable and abundant energy source that millions of households and businesses use for heating, cooking, and other purposes. Rural communities, like many of the communities in Maryland, rely on propane as they do not have access to natural gas lines.

Suburban Propane is proud to be leading the propane industry in the energy transition to a low-carbon world. Through our Suburban Renewables platform, we are also committed to investing in the next generation of even cleaner, less carbon-intensive energy sources, such as rDME, biogas, renewable natural gas, and hydrogen. However, it will take time to bring these new products to widespread commercial scale and the use of propane will be important in reducing emissions in the short term.

We urge the Senate Education, Energy, and Environment Committee to amend Senate Bill 1023 by adopting a technology-neutral approach that incentives buildings to use low-carbon, carbon-neutral, or carbon-negative fuels. We would appreciate the opportunity to discuss with you how propane, renewable propane, and other low-carbon fuels can play a role in lowering the carbon footprint of buildings in Maryland. Thank you for your consideration.

Sincerely,

/s/ Paul M. Rozenberg

Paul M. Rozenberg
Senior Manager, Government Affairs &
Corporate Communications
Suburban Propane

MCIES LOO SB 1023 March 1.pdf
Uploaded by: Sarah Peters
Position: UNF

Bill: SB 1023- Maryland Building Performance Standards

Position: OPPOSE

Dear Chair, Vice Chair, and Members of the Committee:

On behalf of the Maryland Coalition for Inclusive Energy Solutions (MCIES), a trade association promoting the inclusivity of all energy sources to meet the state's energy needs, I am writing to oppose.

Electrifying buildings does not necessarily lead to decarbonization. A significant percentage of electricity provided to Maryland today is supplied by fossil fuels. Mandated building electrification now would shift the point source of emissions from a new building to a base load electric generation facility. Senate Bill 1023 fails to address the need for a diverse and robust energy portfolio, necessary to maintain grid stability and reasonable, affordable utility rates for residential homes and commercial buildings in Maryland.

The legislation prevents the use of new technologies like renewable natural gas and hydrogen which is expected to provide cost-effective heat and energy to homes and businesses. In fact, changes in households' heating fuel expenditures for the upcoming winter will likely vary significantly. Because we expect natural gas prices will be lower than last year, the 46% of U.S. households that use natural gas as their main heating fuel will likely spend less on heating this winter compared to last winter[1]. In addition to the cost-effectiveness, these technologies can produce meaningful greenhouse emission reductions over other conventional energy sources in the short and long term, and thus should not be barred from use.

It should be noted, the federal Energy Policy and Conservation Act (EPCA) preempts state regulations or laws that effectively ban EPCA-regulated products from accessing necessary energy sources. *See, e.g.*, 42 U.S.C. § 6297(c). SB 1023 is expressly intended to reduce greenhouse gas emissions by mandating electric only buildings and preventing the use of fossil fuel appliances. In most buildings, appliances like natural gas furnaces and water heaters are "covered products" under EPCA and EPCA preempts efforts by states to establish "energy conservation standards" relevant to these products, particularly where state legislation functionally ban the use of the products. Accordingly, MCIES believes this legislation is preempted by federal law.

For these reasons, we respectfully oppose this legislation.

Sincerely,

George Anas
President

[1] https://link.edgepilot.com/s/b174b4a5/I0qRlpK1BE6fRkDehp3OFA?u=https://www.eia.gov/outlooks/steo/report/WinterFuels.php%23tab1

SB 1023_Chesapeake Utilities_Unfav (02-29-24).pdf
Uploaded by: Steve Baccino
Position: UNF

March 4, 2024

SENATE EDUCATION, ENERGY AND THE ENVIRONMENT COMMITTEE
SB 1023 – Maryland Building Performance Standards – Fossil Fuel Use and Electric-Ready Standards

Statement in Opposition

Chesapeake Utilities Corporation ("Chesapeake Utilities") respectfully **OPPOSES** certain provisions contained in SB 1023. Among other things, SB 1023 seeks to ban a proven, affordable, reliable and domestic energy supply for all new buildings on or before October 1, 2026, for all new buildings less than seven stories tall and on or before October 1, 2030, for all new buildings seven or more stories tall. In addition, SB 1023 requires the Department of Labor to adopt the ban on fossil fuel use in new buildings by January 1, 2025.

Chesapeake Utilities operates natural gas local distribution companies that serve approximately 32,000 customers on Maryland's Eastern Shore in Caroline, Cecil, Dorchester, Somerset, Wicomico, and Worcester Counties. These public utilities are regulated by the Maryland Public Service Commission and have provided in the coldest months of the year safe, reliable, resilient, and affordable service in the State for decades. As a company, Chesapeake Utilities serves as a positive and informed resource in the ongoing energy and climate change discussions. Moreover, Chesapeake Utilities is committed to continuing being part of the solution as Maryland addresses greenhouse gas emissions.

SB 1023 is expressly designed to artificially increase costs for existing gas customers. When gas companies add new customers, their fixed costs are spread over a larger customer base (keeping costs down for all customers). SB 1023 intends to cut-off the ability of gas companies to add new customers, causing existing customers to pay more and more for their service – this is referred to as a rate "death sprial." This unprecedented and unchecked rate inflation will continue until existing customers can no longer afford to maintain their service. Of course, remaining natural gas customers especially those who happen to be low and middle-income will be the most adversely impacted due to these artificially created costs increases.

SB 1023 will significantly increase costs for owners of new buildings and existing gas customers. According to the Maryland Commission on Climate Change ("MCCC"), direct use emissions from all current buildings account for only 13% of economy-wide greenhouse gas ("GHG") emissions in Maryland.[1] These current emissions have decreased (and will continue to decrease) from historical levels because of natural gas. SB 1023 would impose significant costs on the construction of all new buildings to be built to be electric ready. In addition, regardless of whether the new building will be permitted to use fossil fuels or not, as the buildings eligible for a waiver under the new Building Performance Standards (the "Standards"), must still be

[1] *See* E3's *Maryland Building Decarbonization Study*, September 16, 2021, at 5

constructed to be all electric ready. The types of buildings described in SB 1023 that cannot feasibly use energy generated from a source other than fossil fuels such as commercial food establishments, laboratories, laundromats, hospitals, or crematoriums must still incur construction costs to be all electric ready under the proposed Standards.

SB 1023 unnecessarily eliminates an energy option that Maryland customers want. Approximately 1.3 million households and businesses in Maryland use gas. The number of gas customers (both the number of residential customers and the total number of customers from all rate classes) grew at approximately one percent per year from 2014 through 2022. In 2022, Maryland's customers purchased about 168 million dekatherms of gas. Between 2014 and 2022, the total amount of gas purchased by Maryland customers grew by an average of 0.52 percent per year. This increase in total gas purchases is consistent with the fact that the number of gas customers is growing. However, it is important to note gas purchases are rising more slowly than the number of customers. Accordingly, gas usage per gas customer is *declining* slightly. For example, for the three largest gas utilities in Maryland, Baltimore Gas & Electric, Washington Gas, and Columbia MD, average residential throughput has decreased by 4.15 percent since 2014. The fact that the number of gas customers is increasing, but their average gas usage is declining can be explained by energy efficiency (e.g., more efficient appliances or improved insulation in buildings) and conservation efforts by customers (e.g., using a programmable thermostat). The data is clear, an increased number of Maryland residents continue to choose natural gas, purchase energy efficient appliances and adjust behaviors to conserve energy. We respectfully suggest that the State should not prohibit the use a proven and affordable energy resource.

SB 1023 compromises Maryland's electric grid and fails to recognize alternatives. Today, Maryland building owners who live in areas served by fossil fuels, such as natural gas and propane, can choose to use the fuels or not. However, SB 1023 assumes that forcing electrification on all new buildings is the right choice for Maryland to lower its GHG emissions. On the contrary, the fact that natural gas and propane have been replacing the use of dirtier fuels, such as fuel oils, is a primary driver of lower emissions from the residential and commercial building sector.

Also, banning and reducing the use of fossil fuels will significantly increase the amount of electricity required to be delivered to Maryland customers. Delivering this increased amount for electricity into Maryland will require billions of dollars of annual investments in the State's electric transmission and distribution system. Electric transmission and distribution system planning is a complicated and time-consuming process, as it should be. It can take years to obtain the regulatory and federal/state/local permit approvals necessary to construct electric transmission lines, substations, and related facilities. SB 1023 would significantly increase the demand for electricity in Maryland, especially if multiple, large counties implement fossil fuel bans on all new buildings.

SB 1023 may be preempted by federal law. The Energy Policy and Conservation ACT (EPCA) preempts state regulations or laws that effectively ban EPCA-regulated products from accessing necessary energy sources. The State should reconsider its approach to ensure alignment with the Energy Policy and Conservation Act, foster consumer choice, and preserve access to today's cost-effective technologies and options and future emerging renewable technologies.

SB 1023 will negatively impact emerging renewable technologies. The development of, and transition to, emerging renewable technologies such as renewable natural gas and hydrogen, to offset "traditional" natural gas, are a way to lower GHG emissions. Chesapeake Utilities currently owns a Maryland company, Planet Found Energy Development, that is developing a process to turn chicken litter into organic fertilizer and renewable natural gas (RNG), also referred to as biomethane or biogas. RNG is a fossil-free natural gas that is produced from naturally occurring sources such as food waste, manure, and other animal/plant-base materials to create biogas. The biogas is upgraded and cleaned to a quality similar to traditional natural gas and can be injected into a public utility's natural gas distribution system to offset the use of traditional natural gas. RNG can be used just like natural gas and is clean, reliable, and environmentally friendly and can also be used as a transportation fuel for vehicles. In addition, Chesapeake Utilities also recently completed a successful test that blended hydrogen with a gas supply to power a combined heat and power unit. The State should not discourage the use of these emerging renewable technologies that have been proven effective here and in other states to offset greenhouse gas emissions.

On behalf of Chesapeake Utilities Corporation, and our thousands of employees and their families who contribute every day in the communities where they live, work and serve, we respectfully request an unfavorable vote on SB 1023.

Sincerely,

Chesapeake Utilities Corporation
Steve Baccino, Governmental Affairs Director
Contact: sbaccino@chpk.com

SB1023 - Better Buildigs Act - NAIOP - UNF - EEE

Uploaded by: Tom Ballentine

Position: UNF

NAIOP
MARYLAND CHAPTERS
THE ASSOCIATION FOR COMMERCIAL REAL ESTATE

March 1, 2024

The Honorable Brian J. Feldman, Chair
Education, Energy, and the Environment Committee
Miller Senate Office Building, 2 West
Annapolis, MD 21401

Oppose: SB 1023 – Building Performance Standards – Fossil Fuel Use, Energy Conservation Solar and EV Standards

Dear, Chair Feldman and Committee Members:

On behalf of the NAIOP Maryland Chapters representing seven hundred companies involved in all aspects of commercial, industrial, and mixed-use real estate I am writing in opposition to SB 1023.

This bill would override and expand provisions and performance requirements in the International Building Code, International Residential Code and the International Energy Conservation Code. The Maryland Codes Administration would be required to include specific requirements in the Maryland Building Performance Standards related to installation of electric vehicle charging equipment, solar capabilities and progressively lower energy use allowances for all buildings terminating in a requirement that all new buildings in the state must be Net-Zero Energy Balance beginning in October of 2035.

The rationale for NAIOP's opposition includes the following:

- Provisions in the bill are similar to proposals considered and rejected by the international code writing organizations because they are technically infeasible or not cost effective.
- There is no definition of Net-Zero Balance included in the text. Many of the other technical references are either inconsistent with current code or will be quickly outdated.
- The energy performance requirements in the bill will be extremely expensive to construct and provide little prospect for immediate or long-term payback. The levels of allowed energy use will require severe limitation and rationing of energy use in some building types.
- There is no precedent or method we can think of to require all buildings achieve the average energy use limits required by the bill.

For these reasons NAIOP respectfully requests your unfavorable report on SB 1023.

Sincerely,

Tom Ballentine, Vice President for Policy
NAIOP – Maryland Chapters, *The Association for Commercial Real Estate*

cc: Education, Energy, and the Environment Committee Members
Manis – Manis, Canning Assoc.

U.S. Mail: 12 Francis Street, Annapolis, Maryland 21401 **Phone:** 410.977.2053 **Email:** tom.ballentine@naiop-md.org

SB 1023 _realtors_unf.pdf
Uploaded by: William Castelli
Position: UNF

Senate Bill 1023 – Maryland Building Performance Standards – Fossil Fuel Use, Energy Conservation and Electric- and Solar-Ready Standards (Better Buildings Act of 2024)

Position: Unfavorable

The Maryland REALTORS® oppose SB 1023 which requires new buildings to meet all water and space heating demands without the use of fossil fuels by October 1, 2025.

The REALTORS® have concern over the following provisions:

- The change to non-fossil fuel equipment kicks in upon a significant improvement (50% of the replacement cost or the original structure) which appears to require the building to meet "all" water and space heating demands and not just the addition or new construction. This can add significant costs particularly if existing equipment must be replaced. The improvement has some exceptions but would apply to any addition and repair unless the repair corrects existing health or a safety code violation.
- The bill also requires all new one and two-family homes to have one EV-ready or capable space regardless of whether the new buyer has requested it.
- The solar ready requirement for roofs adds additional costs to multi-unit buildings that already face many requirements making it difficult to construct affordable units.
- The bill requires new buildings to meet all water and space heating demands "without the use of fossil fuels" which raises the question of whether electric equipment powered by fossil fuel utilities would be acceptable.

The Maryland REALTORS® recognizes that the housing industry along with other industries will be moving to electric standards but is concerned about the time frames and requirements in this bill that will impact housing affordability. For these reasons, the Maryland REALTORS® recommend an unfavorable report.

For more information contact lisa.may@mdrealtor.org or christa.mcgee@mdrealtor.org