

<b>Committee:</b>	<b>Environment and Transportation</b>
<b>Testimony on:</b>	<b>HB973 Maryland Building Performance Standards – Fossil Fuel Use, Energy Conservation, and Electric- and Solar-Ready Standards (Better Buildings Act of 2025)</b>
<b>Submitted by:</b>	<b>Deborah A. Cohn</b>
<b>Position:</b>	<b>Favorable</b>
<b>Hearing Date:</b>	<b>February 26, 2025</b>

Dear Chair and Committee Members:

Thank you for allowing my testimony today in support of HB973, The Better Buildings Act of 2025.

Under the Climate Solutions Now Act, Maryland must reach net zero carbon pollution emissions by 2045 – just 20 years from now. Buildings account for 13 percent of the state’s carbon emissions, and 80 percent of direct building emissions are from space and water heating.<sup>1</sup> We simply cannot meet our carbon emissions reductions targets if most buildings continue to use fossil fuels for space and water heating.

The Better Buildings Act creates state energy conservation requirements in new construction and major renovations of residential and commercial buildings that, while being resource neutral,<sup>2</sup> effectively ensure that most newly constructed buildings will meet their space and water heating needs without using fossil fuels. Building highly energy efficient residential and commercial building is much less expensive than retrofitting existing buildings to achieve similar energy efficiency and greenhouse gas emission reduction standards. And state law already requires all buildings over 35,000 square feet to eliminate onsite emissions by 2040. So building smart from the start just makes economic sense.

All electric buildings are less expensive to build and operate. In a comprehensive study of Building Decarbonization Codes<sup>3</sup> the all-electric single-family residence was \$7,500 - \$8,200 less expensive to build than a comparable conventional residence, and reduced total energy consumption by 34 percent. A mixed fuel scenario reduced energy consumption only by 9 percent compared with conventional construction. A similar analysis by the Maryland Department of the Environment (MDE)<sup>4</sup> showed similar results but over a broader range of building types, including single family homes, multi-family homes and commercial buildings.

Air source heat pumps are more than two to three times as efficient as gas furnaces<sup>5</sup> and cold climate heat pumps work well even in quite cold weather.<sup>6</sup> Thus, in Maryland well insulated, air sealed

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<sup>1</sup> Maryland Building Decarbonization Study, [https://mde.maryland.gov/programs/Air/ClimateChange/MCCC/Documents/MWG\\_Buildings%20Ad%20Hoc%20Group/E3%20Maryland%20Building%20Decarbonization%20Study%20-%20Final%20Report.pdf](https://mde.maryland.gov/programs/Air/ClimateChange/MCCC/Documents/MWG_Buildings%20Ad%20Hoc%20Group/E3%20Maryland%20Building%20Decarbonization%20Study%20-%20Final%20Report.pdf)

<sup>2</sup> Resource neutrality is central to avoiding some of the legal results in the Ninth Circuit where the ban on fossil fuels for heating was challenged on that basis.

<sup>3</sup> Cost Study of the Building Decarbonization Code: An analysis of the incremental first cost and life cycle cost of two common building types (April 2022) <https://newbuildings.org/wp-content/uploads/2022/04/BuildingDecarbCostStudy.pdf>

<sup>4</sup> Building Energy Transition Plan: A roadmap for decarbonizing the residential and commercial building sectors in Maryland (2021) <https://mde.maryland.gov/programs/air/ClimateChange/MCCC/Commission/Building%20Energy%20Transition%20Plan%20-%20MCCC%20approved.pdf>

<sup>5</sup> <https://rmi.org/now-is-the-time-to-go-all-in-on-heat-pumps/>; Maryland Building Decarbonization Study, [https://mde.maryland.gov/programs/Air/ClimateChange/MCCC/Documents/MWG\\_Buildings%20Ad%20Hoc%20Group/E3%20Maryland%20Building%20Decarbonization%20Study%20-%20Final%20Report.pdf](https://mde.maryland.gov/programs/Air/ClimateChange/MCCC/Documents/MWG_Buildings%20Ad%20Hoc%20Group/E3%20Maryland%20Building%20Decarbonization%20Study%20-%20Final%20Report.pdf)

<sup>6</sup> <https://homes.rewiringamerica.org/articles/heating-and-cooling/heat-pumps-cold-weather>

buildings using highly efficient cold weather heat pumps can avoid the need for back-up gas furnaces. In hot weather the average heat pump uses as much as 29 percent less electricity during periods of peak demand than a central AC unit. It just makes economic sense to install highly efficient electric appliances from the start.

Of course, not all electric appliances are highly efficient. Electric resistance heat is much less expensive than highly efficient cold weather heat pumps to install, but much more expensive to operate. Low income residents pay a higher share of their income on utility bills than Maryland residents as a whole. Installing electric resistance heat in housing for low income residents would be unjust, condemning those residents to high utility costs over the long run. The bill precludes use of electric resistance heat by precluding use of a type of heating would likely result in the building achieving a lower energy efficiency on average than a building relying on a fuel other than electricity.

Electric appliances for water heating and space heating and cooling improves indoor health. Pollution from comparable fossil fuels systems in Maryland is responsible for \$1.3 billion in annual health impacts and was a critical factor in 3,500 cases of asthma events and 163 premature deaths in 2017 alone. These results are not surprising as fossil fuel equipment in residential and commercial buildings in Maryland emits more than three times as much health-harming  $NO_x$  as all of the state's power plants together. These emissions contribute to the formation of small particulate matter which compromises lung and heart health, and in the presence of sunshine can combine with volatile organic compounds to form ozone.<sup>7</sup>

HB973 requires certain buildings to be electric ready and solar ready. The bill also does not preclude local jurisdictions from prohibiting the use of fossil fuels in certain buildings or enacting energy conservation and solar energy requirements for buildings that are more stringent than state requirements. These additional provisions all help the state meet its carbon emission and solar energy goals.

HB973 is a carefully constructed bill that protects the health of Maryland residents, supports Maryland in achieving its climate pollution reduction and solar energy goals, and creates appropriate flexibility for the building industry and building owners in achieving these building energy efficiency standards in new construction and major renovations.

For these reasons I respectfully request a favorable report on HB973.

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<sup>7</sup> [https://www.greenandhealthyhomes.org/wp-content/uploads/MD-NOx-Report-\\_V12\\_unembargoed.pdf](https://www.greenandhealthyhomes.org/wp-content/uploads/MD-NOx-Report-_V12_unembargoed.pdf)