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Committee: Appropriations

Testimony on: HB 806 – Building Standards and Emissions Reductions – High Performance, State, and Local Government Buildings, State Operations, and Eligible Projects

Position: Support with Amendments

Hearing Date: March 1, 2022

The Maryland Chapter of the Sierra Club urges a favorable report with amendments for HB 806. This bill charts a path for reducing greenhouse gas pollution from publicly-owned or -funded buildings in Maryland by requiring the use of emissions standards for existing buildings, all-electric construction for new buildings, and specified eligible materials for new construction. While we support the bill, we strongly recommend including the amendments appended at the end of the testimony.

Reducing greenhouse gas pollution is critical to limiting the damage from the climate crisis. The Maryland Commission on Climate Change has recommended a 50% reduction in greenhouse gas emissions by 2030 and net-zero emissions by 2045. According to the 2017 Maryland Greenhouse Gas Inventory, residential, commercial and industrial consumption of fracked gas in Maryland generates 13% of all greenhouse gas emissions. When you factor in emissions resulting from electricity consumed by our buildings, then buildings account for approximately 40% of greenhouse gasses emitted in the state.

In 2021 the Maryland Commission on Climate Change adopted specific recommendations on how to reduce pollution from the buildings sector. Among their 2021 recommendations were: adopting an all-electric building code; encouraging fuel switching to electric water and space heating; replacement of fossil fuel heating with heat pump or other electrical heating; targeting 50% of heating ventilation, air conditioning, and hot water heater sales to be heat pumps by 2025 and 95% by 2030. HB 806 enacts several of these recommendations in relation to public buildings.

All Electric Standards for New Construction

The first step to reducing pollution from our buildings is to ensure that we minimize pollution from any new buildings being constructed. HB 806 raises the standards for some public buildings, but we believe it must go further.

Our public buildings should be a model for the rest of society, leading the way in implementing environmental standards that not only reduce greenhouse gasses, but create healthier sustainable environments for government employees, students, and the public. With the current state budget surplus, potential influx of federal money, and planned expenditures for new schools, this is a critical time to put higher standards in place.

The Maryland Commission on Climate Change recommends: “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.” This means that instead of using a gas boiler for heat, a building would use a heat pump instead. Heat pumps are commonly used in large buildings, and are cost-competitive, and usually cheaper over the lifetime, compared to gas boilers.

For new construction of public buildings, we recommend the following for all public buildings that are 25% or more state-owned or state-funded:

- Meet the “all-electric” construction code.
- Achieve LEED silver certification by the US Green Building Council.
- Achieve “above-code” improvements in energy efficiency (details below).

HB 806 uses two mechanisms to address new construction. First, HB 806 requires that all public buildings funded at 50% of state funding, excluding schools, must follow the “all-electric code” which is established in HB 831, also introduced by Delegate Stein. The exemption for schools should be removed and the standard should be required for all buildings funded at 25% of state funding. All government buildings should, at a minimum, follow the same minimum standards required for new residential and commercial buildings.

Additionally, the legislation makes some changes to the “high-performance building” standards, which were designed to create higher standards for government buildings. HB 806 prescribes that LEED Silver certification be required to achieve the high performance code. Unfortunately, the high performance program is currently only required for buildings funded at 100% of state funding. Again, we recommend that the program apply to all buildings funded at 25% of state funding. Studies show that these standards can be achieved with no increase in cost, but when this is not feasible, a waiver can be requested.

Building Energy Performance Standard

HB 806 directs the Maryland Department of the Environment to create regulations for a “Building Energy Performance Standard” (BEPS) which would achieve a 50% reduction of greenhouse gasses by 2030 and net-zero by 2035. A BEPS is a set of policies which establish emission reduction goals for specific types of buildings, and those targets increase over time, leading building owners to improve the energy efficiency and conservation in their buildings, and ultimately switch from fossil fuel heating to all-electric alternatives.

Maryland Department of the Environment is tasked with developing the regulations for this program and will have some flexibility to design a program that works best for Maryland.

Contrary to some misinformation being circulated, a BEPS would **not** require the same reductions for every single building, regardless of its past efficiency investments.

In other jurisdictions (Washington, DC, St. Louis, New York and Boston) the process starts out with a baseline, where emissions are measured for each type of building. An emissions standard is then set for each type of building either in energy units or greenhouse gasses. Hospitals, for example, have much higher baseline emissions per square foot than multi-family housing. In the case of Washington, DC, a pathway is then laid out, typically in 4 or 5 year compliance periods, for buildings to reach the target emissions for each type of building, starting with each individual building's initial emissions rate. Other programs, including New York's, set out greenhouse gas emission targets per square foot by building type, showing improvements for each compliance period.

There are several viable approaches for Maryland. But we want to flag three important provisions that must be part of BEPS. First, BEPS should consider both on-site emissions (emissions coming from burning a fossil fuel, such as gas or propane, for space heating, hot water heating, or cooking) and emissions resulting from electricity. Second, emissions targets should be based on benchmarking similar buildings. Third, the data for buildings should be shared with the public in a usable format for third-party analysis and engagement.

We support the provisions of HB 806 that offer alternative compliance approaches by paying a penalty equal to the social cost of carbon emitted, though we must ensure that the cost of the payment is sufficiently high to drive the change needed.

In conclusion, we believe that reducing pollution from our public buildings is a critical step towards addressing our greenhouse gas goals. This legislation makes an important step, and with our proposed amendments strengthen the bill and align it with the recommendations of the Commission on Climate Change. We encourage a favorable report.

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Amendments coordinated by the Maryland Climate Partners

Goal: Our value is that government buildings, including schools, should be models for the rest of society and lead the way towards more sustainable, carbon-friendly practices. While HB 806 makes some steps in this direction, they are not sufficient. The provisions relating to public buildings should be strengthened to a) raise the standard, and b) apply that standard to more buildings.

That could be achieved by changes to the all-electric code, the high performance building code, or some combination thereof. We have offered amendments for each path.

1. Adjust the definition of high-performance buildings and when they are required.

The “high performance buildings” define a more environmentally friendly building standard and the conditions in which a public building is required to meet that standard. The standard should be strengthened and apply to more publicly funded buildings. Public buildings, as defined in HB 806, are those public buildings that are constructed with at least 50% of state funds. We believe this will be confusing and will arbitrarily exempt some schools. We should always set an example with our schools, and we should not have schools be at a lower standard than other buildings

Recommendation:

- *Redefine when the high-performance building standards are required to apply to buildings constructed with at least 25% of state or local government funds.*
- *Define high-performance as requiring a of LEED Silver certification (not just equivalency)*

2. Add language from SB 528 that requires high-performance buildings to acquire energy from renewable sources (wind, solar, geothermal, ocean, small hydro)

We believe that solving the problem of carbonization in buildings will require changes to the energy consumption that buildings get from the grid. If a building meets the standard of a high-performance building, it should not only be constructed and certified to a LEED Silver standard, but it should also ensure that it is not pulling dirty energy from the grid.

Recommendation:

- *Include schools in the requirement to be LEED Silver*
- *Include requirement for high-performance buildings to acquire energy from renewable sources*

3. Apply All-Electric Construction Code to All Public Buildings

HB 831 sets an all-electric construction code, which is referenced in HB 806, however, schools were exempted from the all-electric requirement and the requirement only applies to buildings funded 50% by the state.

Recommendation:

- *The all-electric requirement should be required for all buildings funded 25% or more by the state, and should include schools.*

4. Building Emission Performance Standards

While the bill currently includes requirements for direct emissions (*defined as “onsite fuel combustion, e.g., gas used onsite for water and/or space heating, cooking, and refrigerant leaks”*), the bill should be amended to include performance measures for improved energy efficiency, such as: maintaining and retro-commissioning building energy systems; implementing HVAC scheduling and other smart control systems; and making building shell and other energy efficiency improvements, as recommended by the Maryland Commission on Climate Change’s Building Energy Transition Plan (see p. 23). Improved building energy efficiency will reduce overall electricity demand (helping grid transition) and can result in smaller sized heating and cooling systems.

Recommendation:

- *Include all emissions (not just direct emissions) in the Building Emissions Performance Standards*
- *Add a requirement to “Measure and report direct building emissions and site electricity use to the Department (MDE) annually beginning in 2025”*