

Committee: Appropriations

Testimony on: HB 806 - “High Performance, State, and Local Government Buildings, State Operations, and Eligible Projects”

Organization: Climate Parents of Prince George’s

Person Submitting: Joseph Jakuta, Lead Volunteer

Position: Favorable, with Amendments

Hearing Date: March 1, 2022



Dear Ms. Chairwoman and Committee Members:

Thank you for considering our testimony in support of HB 806 - “High Performance, State, and Local Government Buildings, State Operations, and Eligible Projects.” 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 are currently working directly with Prince George’s County Public Schools (PGCPS) technical staff and other advocates to develop a Climate Action Plan for PGCPS

The 2018 Intergovernmental Panel on Climate Change (IPCC) Special Report found that limiting global warming to 1.5°C above pre-industrial levels by 2100 would require human-caused emissions of carbon dioxide (CO₂) to fall by about 45 percent from 2010 levels by 2030 and reach ‘net zero’ by 2050 as a planet. Science gives us the end date for burning fossil fuels and as blessed as we are in Maryland we must lead, we must get there sooner.

We are generally supportive of the efforts to require but are greatly concerned over the lack of inclusion of schools and other government buildings in the requirements of § 3–602.3.

In a 2019 Report from the US Green Building Council that looked at net-zero buildings in a northeastern state, a variety of different buildings were examined, but most germane to HB 806, schools.¹ The study looked at a life cycle cost analysis of various building types, including schools. This study assumed an upfront cost of \$365/GSF based on an existing net-zero school, which is slightly higher than \$320/GSF, which is what the net-zero Wilde Lake was constructed for. Despite the upfront costs, the energy use at the net-zero school decreased by 45% compared to a conventional school, and they projected that net-zero schools would break-even after 13-16 years with a 3-9% decrease in the total cost of ownership over 30 years. This is proof that wise upfront costs pay dividends to the taxpayer and should be encouraged through legislation.

But is this transferable to Maryland? PGCPS has shown that nearly fossil fuel free schools are not just possible, but are often the best decision financially. PGCPS is relying on a new financing model for six new schools. Of these six schools five will be heated and cooled using geothermal systems rather than fossil fuel, and geothermal was chosen because it was the option that made the most economic sense in light of the 30 year total cost of ownership calculations required by the IAC. It is not just alternatively financed schools where this is possible, PGCPS constructed six elementary schools, one middle school, and one high school with geothermal heating using conventional financing.²

Also important is to consider the lifetime of equipment in new schools. Just looking at fossil-fuel fired boilers in PGCPS, of the approximately 450 boilers in use they are on average about 20 years old, about 15 percent are

¹ US Green Building Council. “Zero Emissions Buildings in Massachusetts: Saving Money from the Start” <https://builtenvironmentplus.org/wp-content/uploads/2019/09/ZeroEnergyBldgMA2019.pdf>

² PGCPS Climate Change Action Plan (CCAP) Focus Work Group. <https://www.pgcps.org/climate/>

older than 25 years, and one is from 1962. It is not unreasonable to expect that boilers installed in 2025 will still be in use in 2050. That means if we are installing fossil-fuel fired boilers going forward we are either deciding not to meet zero emission climate goals or we are planning on investing in infrastructure that will not be used for its full useful life and require costly retrofits in 20 years thus wasting taxpayers money.

Concerning additional amendments, we support the Climate Partners' Priority Amendments for HB 806 that are attached.

We must get to net-zero. We are at an inflection point when it comes to our children's future. We can see from thoughtful, in-depth numbers that in the long-term electric buildings will save taxpayers money and we know the alternative fossil-fuel powered buildings produce harmful pollution that will harm our children's lungs³ and learning⁴ as well as their future planet. We implore you to enact this legislation, with amendments to include governmental buildings, that will require holistic changes in the way we consume energy in Maryland and to make our schools resilient for years to come, for our children's sake.

We encourage a **FAVORABLE** report, with **AMENDMENT**, for this important legislation.

³ Lee YL, Wang WH, Lu CW, Lin YH, Hwang BF. Effects of ambient air pollution on pulmonary function among schoolchildren. *Int J Hyg Environ Health*. 2011 Sep;214(5):369-75. doi: 10.1016/j.ijheh.2011.05.004. Epub 2011 Jun 15. PMID: 21680243.

⁴ Allen, J L et al. "Cognitive Effects of Air Pollution Exposures and Potential Mechanistic Underpinnings." *Current environmental health reports* vol. 4,2 (2017): 180-191. doi:10.1007/s40572-017-0134-3

Attachment - Climate Partners' Priority Amendments

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 enough. The provisions relating to public buildings should be strengthened to A) raise the standard and B) apply that standard to more buildings.

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 where 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 HB0806, are those public buildings that are constructed with at least 50% of state or local government 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
 - 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 SB0528 that requires high-performance buildings to acquire energy from renewable resources (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.
 - 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 Buildings

HB0831 set an all-electric construction code, which is referenced in HB0806, however, schools were exempted from the all-electric requirement.

- Schools should not be exempted from the all-electric construction requirement
 - Our public buildings, including our schools, should be models for the rest of society, and should be stronger, or at a minimum comparable, to other building standards.
 - It is our understanding that HB 806 addresses construction standards for new public buildings, potentially based on levels for state funding. We support stronger goals for state buildings, but the new construction codes laid out in HB 806 should apply to all buildings, regardless of level of state funding.
 - If we don't apply the all-electric standard to all buildings, every time we build a building that is not all-electric, it is one more building we will have to retrofit. Retrofitting is far more expensive than building the all-electric in the first place.
 - With a state surplus and plans to spend significant money on schools through the Built to Learn funding, this is the ideal time to pay-it-forward. Building schools with fossil fuel infrastructure will require far more funds in the future to operate and eventually retrofit.

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 (e.g., site electricity use), 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 MD 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.

- Include all emissions (not just direct emissions) in the Building Emissions Performance Standards
- Set the baseline for achieving reductions from 2025 to 2023 levels
- Add a requirement to 'Measure and report direct building emissions and site electricity use to the Department (MDE) annually beginning in 2025'
- Set a baseline and Building Emission Standard by building type to make it easier to manage from a building owner standpoint

5. Reduce the reasons to waive the requirement to acquire eligible materials

- Having only one source to acquire an eligible material should not be a reason to get a waiver

6. Additions to Ensure that HB 806 is Equivalent to SB 528

- Add a pilot for a net zero schools program that will utilize a Net Zero Pilot grant fund
- Add a requirement for the MCEC Climate Catalytic Capital Fund (C3).
- For Building Emission standards, include a requirement for the same reduction for 'site energy use intensity' as requested in SB 528