Climate Law & Policy Project

3405 Shepherd St. Chevy Chase, MD 20815
202-390-3050
www.clpproject.org
Contact: donald@clpproject.org

Committee: Education, Health, and Environmental Affairs
Testimony on: SB0835 Facilitating University Transformations by Unifying Reductions in Emissions (FUTURE) Act
Organization: Climate Law & Policy Project
Submitted by: Donald M. Goldberg, Executive Director
Position: Favorable
Hearing Date: March 9, 2021

Dear Chairman and Committee Members. Climate Law & Policy Project strongly supports SB835 and urges a favorable report.

HB835 requires Maryland public colleges and universities to become carbon neutral over time. One of the most important components of meeting this requirement will be achieving net-zero energy consumption in school buildings. CLPP has conducted research on the cost of achieving net-zero energy consumption in public schools and found, to the extent they exist at all, costs are relatively small and can more than be recouped in energy savings. We assume similar technologies, with similar costs, can be deployed at colleges and universities.

Numerous papers and articles, including from the U.S. Department of Energy (USDOE), say that net-zero schools can be built at comparable costs to conventional ones.[1] As a point of reference, construction cost for the net-zero Discovery School in Arlington, Virginia was $342/ft^2, including the solar array and site work.[2] A typical 2019 construction costs for high schools in 12 U.S. cities ranged from $325/ft^2 (Las Vegas) to $532.5/ft^2 (New York).[3] One company CLPP spoke with noted "unofficially" that its most recent venture, a net-zero mixed-use commercial building, cost the same as a comparable conventional building.

Because they are relatively new, cost of operating net-zero schools is limited, but there is ample evidence that, with cost recovery from energy savings, net-zero schools save school districts money. To the extent there is still some upfront cost increase to building a new net-zero energy school building, there are many financial options to finance upfront costs with savings achieved in operating costs.

In addition to cost-savings they can be achieved with new net-zero school buildings, there are cost-effective opportunities to retrofit existing buildings to achieve energy efficiency gains and potentially for on-site renewable electricity generation. Another company CLPP spoke with specializes in "turnkey" projects that cover all the design, financing, and installation of energy efficiency upgrades. The company takes over the buildings's utility bills and then bills the building owner directly at a guaranteed lower rate. According to this company, this arrangement can work for 70-90% of existing buildings — the older the building, the greater the savings.

Based on our research, CLPP believes SB835 will save schools money while reducing the State's GHG emissions. We urge a favorable report.

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[1] *See, e.g.,* National Renewable Energy Laboratory, *Technical Feasibility Study for Zero Energy K-12 Schools*, 2016, p. 1, https://www.nrel.gov/docs/fy17osti/67233.pdf
[2] USDOE, *Zero Energy Is an A+ for Education: Discovery Elementary*, https://www.nrel.gov/docs/fy17osti/68774.pdf
[3] Statista, *Average construction costs of educational buildings in the United States in 2019, by select city,* https://www.statista.com/statistics/830447/construction-costs-of-educational-buildings-in-us-cities/