6 March 2025

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

Written Testimony
SB908: Public Utilities - Electric Distribution System Plans - Establishment (Affordable Grid Act)
Position: Favorable

Chair Feldman, Vice Chair Kagan, Members of the Education, Energy, and the Environment Committee, thank you for the opportunity to testify on Senate Bill 908, Public Utilities - Electric Distribution System Plans - Establishment (Affordable Grid Act).

I am Robin Dutta, the Executive Director of the Chesapeake Solar and Storage Association (CHESSA). Our association advocates for our over 100 member companies in all market segments across 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 to realize a stable and affordable grid for all consumers.

I am here to provide favorable testimony on SB908, Public Utilities - Electric Distribution System Plans - Establishment (Affordable Grid Act).

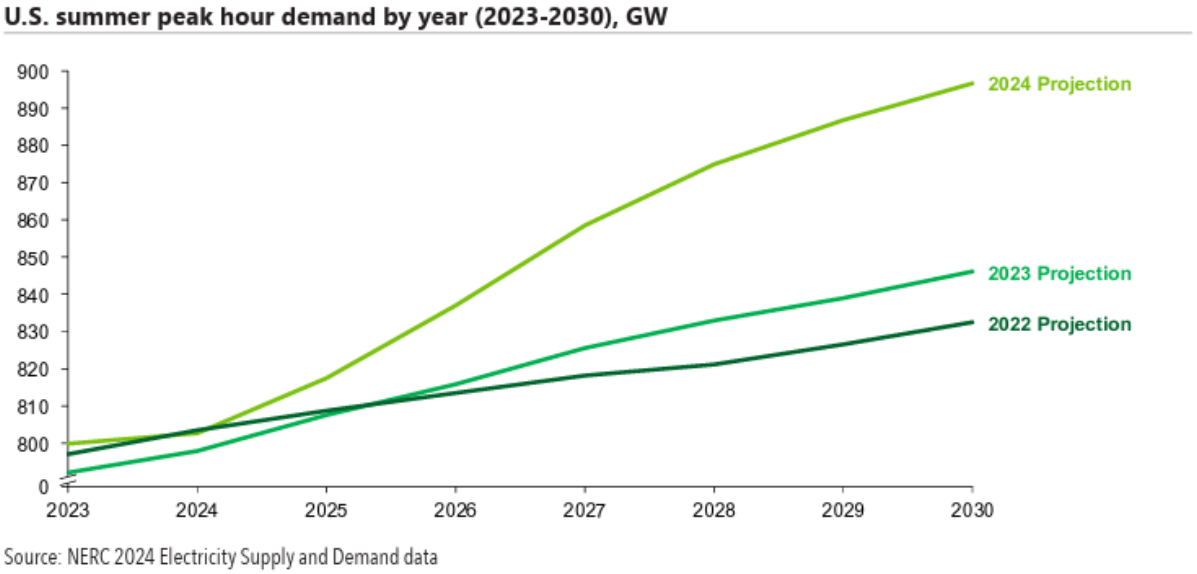
The Affordable Grid Act is designed to update the Public Service Commission dockets, processes, and considerations to include all advanced energy technologies and options. Maryland's widening energy gap, and the increasing competition for electricity in PJM, mean that all options must be on the table. The energy question in Maryland is not about choosing between fossil fuels or renewables. It is about modernizing and reinforcing an electric grid system so that it is affordable, reliable, and resilient in a world of extreme weather where Marylanders are increasingly reliant on that system.

The Problem: Maryland's Widening Energy Gap

Marylanders are becoming much more sensitive to grid disruptions and electric price spikes. The state is on the path to seeing increasing electric demand over the long term. And, there is already straining in its electric system. Maryland only generates about 60 percent of the electric

generation it demands[1]. But, importing electricity isn't an automatic solution. Nine of the 13 states in the PJM Interconnection (where Maryland resides) also must import electricity to serve their electric demand. And the Maryland Energy Administration (MEA) is projecting load growth, potentially as much as 2 percent per year[2]. There's growing demand and competition for an energy supply that needs to increase.

Contributing Problem: Higher Electric Demand Across the County



Source: NERC 2024 Electricity Supply and Demand data

The grid of the not-so-distant future will have the combined roles that today's electricity, natural gas system, and gas stations have. For the grid to serve those roles, it will need to look and act differently. It will have higher statewide electric loads, and greater electric demand in peak periods. And, the higher peak demand gets, the more expensive the electric grid becomes, due to expensive infrastructure expansion and higher peak energy pricing. By lowering peak demand, clean energy can lower the cost of the grid.

A January 2025 report from the U.S. Department of Energy shows that projected peak demand growth is only increasing, with electricity supply and demand data from the North American Energy Reliability Council showing the estimates being revised upwards each year since 2022.[3] If Maryland's electric future follows the projected national trend, it needs to step up the clean energy build-out throughout the state at the same time as handling fossil fuel retirements. That means scaling up statewide solar adoption of all kinds, as soon as possible.

Layering on the problem are the faults within the PJM Interconnection, both with their capacity markets and their interconnection processes. The recent PJM capacity auction could cause

[1] https://www.eia.gov/state/analysis.php?sid=MD
[2] Maryland Energy Administration. "Reaching 100 Percent Net Carbon-Free Electricity in Maryland". January 2025. p.19
[3] U.S. Department of Energy. "Pathways to Commercial Liftoff: Virtual Power Plants 2025 Update". January 2025. p.7

electric bills in Maryland to increase as much as 24 percent, according to an August 2024 report from the Maryland Office of People's Counsel. The MEA describes the Baltimore Gas & Electric service area as a "congested territory".[4] There are then certain generating units that must run and can drive up capacity prices, as it happened in the most recent PJM capacity auction. The way to relieve congestion and grid strain is to lower peak demand, offset consumer electric load, and build a lot of new local generating capacity.

Re-Thinking the Distribution Grid

It is essential that Maryland's distribution grid plans are approved at the lowest cost with the highest value. Not prioritizing such a path could burden already-burdened families with higher costs for electric grid projects that are unnecessary. That requires implementing a proactive strategy of deploying Distributed Energy Resources (DERs), such as distributed solar and storage, across all geographic areas and communities.

As illustrated in a 2023 study from the firm The Brattle Group, DERs can provide capacity resources to utilities at 40-60% of the cost of traditional utility methods. They can act as a "virtual power plant" as described and promoted by the U.S. Department of Energy. When there are more distributed clean energy systems in communities, there is greater potential for not only increased reliability and resiliency assets, but there are also key grid assets that can support local energy demand and help off-set peak demand. Coupled with a build-out of large-scale renewables in and near Maryland, the state can advance its clean energy future while prioritizing a stable and affordable electric grid.

A Better Process

Improving complex processes, such as regulatory proceedings, start by asking better questions and considering all relevant strategies. As current trends show, consumers in Maryland and the PJM region are using more electricity and becoming more reliant on the grid for digital communications, the internet, and everyday household tasks. That makes the goals of grid affordability, reliability, and resiliency even more important than it has historically been. Consumers are more sensitive to even small disruptions.

Distribution grid and utility plans all exist to serve the consumer/ratepayer. Any process for grid planning must first look at how and when consumers need energy. The Affordable Grid Act begins that way by requiring load growth forecasts and scenario planning. This must be the first question to start any grid planning process, including testing different assumptions and projections of load growth. That way, the Commission can essentially "stress test" the current grid, available resources, and grid services to determine what load can be served sustainably and then evaluate what additional infrastructure is needed to meet the state's anticipated needs.

[4] Maryland Energy Administration. "Reaching 100 Percent Net Carbon-Free Electricity in Maryland". January 2025. p.22

When evaluating different options, the Commission should have a docket that encourages a comprehensive analysis of the distribution grid and consumer needs. Often, regulatory dockets are narrowly focused. Individual dockets could deal only with electric vehicle charging infrastructure, the Renewable Portfolio Standard, distribution grid poles and wires, peak demand shaving, or any number of other topics. Creating a docket that allows for cross-cutting issues as it pertains to improving the distribution grid is extremely valuable to the ratepayer, without it becoming a full rate case. For example, in such a docket, the Commission could consider the range of benefits that distributed solar and storage resources can provide, in terms of local generation, grid services programs, and peak shaving. In a docket dealing only with the Renewable Portfolio Standard, the grid benefits of solar could easily be outside the scope. And then, all reasonable options should be considered when deciding what is in the best way to serve the ratepayer/consumer.

The concept of "load flexibility" which is defined in the Affordable Grid Act, is a perfect example what a cross-cutting docket can properly evaluate. Consumers can shape their energy consumption with the appliances they purchase, whether those are smart thermostats, rooftop solar, battery storage, electric vehicles, and more. Load flexibility potential can be harnessed and relied upon for the benefit of all ratepayers. It means that homeowners with a combination of advanced energy technologies (ie. solar, storage, smart thermostats) can reduce their demand from the grid, especially in peak grid strain events, without taking their homes offline. This is the same concept as industrial demand response, where manufacturing facilities with back-up power are asked to switch from grid power to backup power during critical events. Those facilities do not stop production when they move to backup generators but help the grid in those moments. Residential and commercial customer load flexibility, including community solar plus storage facilities, can provide that benefit across a wider geography and with more frequency. As the distribution grid's load curve flattens, fewer peak period power lines are needed. That is why virtual power plants are a viable option versus additional natural gas generation capacity. The Commission can better evaluate those strategies if the Affordable Grid Act is passed.

The Affordable Grid Act builds on legislation passed by the Economic Matters Committee, the General Assembly, and signed by the Governor: the DRIVE Act (HB1256 / SB959) and HB1393. The DRIVE Act establishes pilot programs for virtual power plants providing grid services and benefits to Marylanders. HB1393 requires the consideration of demand-side management strategies, such as virtual power plant deployment and enablement, for the benefit of the distribution grid.

Conclusion

Meeting resource adequacy needs and growing electric demand can be an expensive proposition for the ratepayer. Utility-centric solutions are fully funded by the ratepayer. Wholesale energy solutions do not address local resiliency and reliability needs. A better regulatory process, where the Commission can consider more information and better options for

modernizing the distribution grid, can unlock the means to create downward pressure on Maryland energy costs.

That includes creating strategies where private capital can be leveraged instead of directing ratepayers to foot the entire bill of a grid strategy.

CHESSA asks for a favorable report on SB908. Please reach out with any questions on solar and storage policy. CHESSA is here to be a resource to the committee.

Sincerely,

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