6 February 2025

Delegate C.T. Wilson, Chair
Economic Matters Committee
Room 231
House Office Building
Annapolis, Maryland 21401

Oral and Written Testimony
HB398: Abundant Affordable Clean Energy – Procurement and Development (AACE Act)

Position: Favorable

Chair Wilson, Vice Chair Crosby, Members of the Economic Matters Committee, thank you for the opportunity to testify on House Bill 398, Abundant Affordable Clean Energy – Procurement and Development (AACE 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 HB398, Abundant Affordable Clean Energy – Procurement and Development (AACE Act). This bill is laser focused on helping Maryland consumers avoid energy cost increases by increasing Maryland clean energy generation, reducing the need to overbuild the electric grid, creating downward pressure on Maryland energy prices, and side-stepping the problems in the PJM Interconnection in the process. The solar and energy storage sections of the bill will help with this by creating:

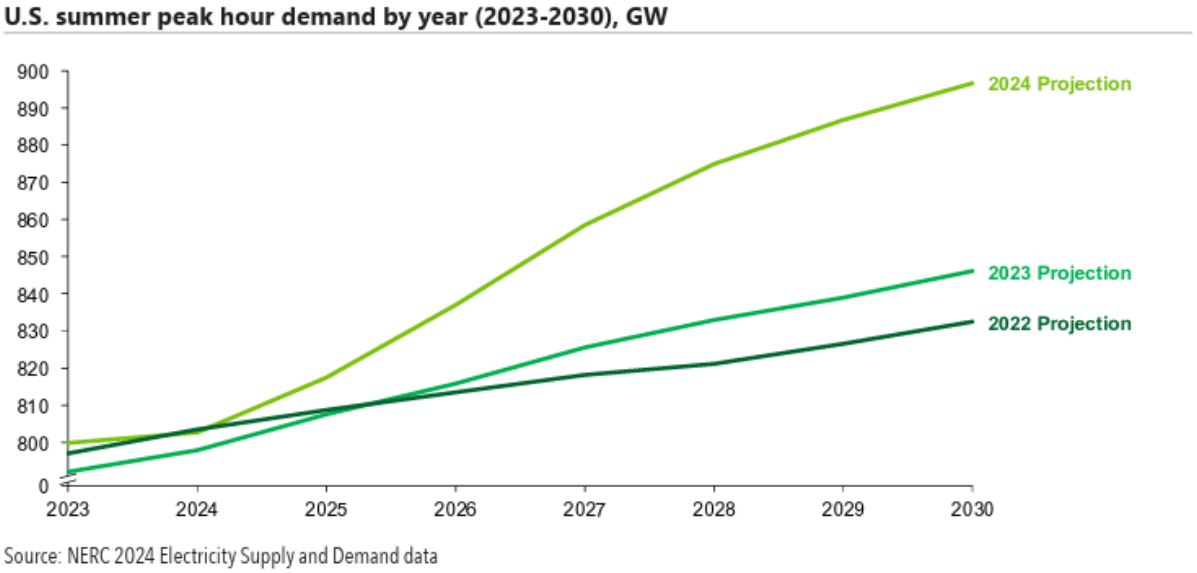
- A new distributed solar program to install at least 3 GW of new capacity on the Maryland distribution grid
- A new large-scale solar procurement to install at least 3 GW of new wholesale energy capacity in Maryland
- New energy storage procurements and programs to deploy over 1,700 MW of mostly transmission-connected battery storage

This practical piece of legislation understands that not only is clean energy is a resource adequacy solution, but using clean energy to solve Maryland's widening energy gap will help avoid unnecessary ratepayer costs and energy bill increases.

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 see 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

[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

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 electric bill 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.

The Solution: Firm Clean Energy Does the Job at a Good Price

Firm capacity and generation to be relied upon does not have to come from incumbent generation technologies, such as coal, natural gas, or nuclear energy. Solar and wind technologies are ready to scale up at an increasing rate, when part of a portfolio that includes battery storage, to provide firm, reliable generation when consumers need it.

For starters, large-scale solar and land-based wind now represent the cheapest new electric generating sources in the United States, according to the firm Lazard. New clean energy generation can be built and energized to generate when electricity demand is greatest during the day. When building portfolios of energy storage, those cheap solar and wind facilities can charge those assets to be used day or night.

The data shows that distributed solar and storage strategies are scalable and help the electric grid. According to a study from The Brattle Group, distributed resources, which include a range of advanced energy technologies (such as local solar, storage, smart appliances, internet-connected thermostats, and energy management software) provide the *same* resource adequacy as a natural gas plant at 40-60 percent lower cost. The firm Deloitte analyzed the benefits that distributed energy resources including rooftop solar could deploy throughout local distribution grids in a 2024 report. Their conclusion was that scaling up the deployment and adoption of residential solar and related distributed resources would contribute to improved resiliency, reliability, and resource adequacy. Key takeaways from the Deloitte residential distributed resource report are in the infographic below.

[3] U.S. Department of Energy. "Pathways to Commercial Liftoff: Virtual Power Plants 2025 Update". January 2025. p.7

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

Key takeaways

01

Distributed energy resources offer solutions to utility challenges

Distributed energy resources (DER) at the DERstribution level are **transforming the grid** and could help meet **rising demand** while advancing **decarbonization, affordability, and resilience goals.**

02

Households can help meet peak demand

Household power capacity from DER could surpass peak demand by 2035 in a decarbonized scenario: Households could wield more than **1,500 gigawatts** of generation, storage, and flexible demand capacity.

03

Integrated plans can maximize DER value

Utilities should prepare for electrification by developing integrated grid plans that take a **DER-first approach to investment.**

04

Regulators can align stakeholders to goals

Performance-based regulation, grid **data-sharing**, and **opt-out time-of-use rates** can help align regulators, utilities, developers, and customers with state targets.

05

DER can advance equity

If building sector decarbonization targets were met starting with lower-and-moderate income customers, all **energy insecure households in every state could benefit from retrofitted, energy-efficient, and cost-saving homes** by 2035.

06

DER need a data-efficient architecture

Successful execution of integrated plans to achieve state targets requires a data-efficient architecture with **technical, operational, and regulatory capabilities.**

Note: DER stands for distributed energy resources.

Source: Deloitte analysis.

Deloitte. Insights | deloitte.com/insights.com

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. All-of-the-above solar and storage strategies mean creating incentives that leverage private capital instead of directing ratepayers to foot the entire bill. Maryland has an energy problem that clean energy is ready to solve.

The Solution: Build More Firm, Clean Energy Resources in Maryland Despite PJM

The AACE Act is designed to increase in-state solar generation and relieve grid congestion by unlocking deployment potential for Maryland solar and storage assets that either do not need PJM approval or are in economic limbo after receiving PJM interconnection approval.

This legislation leverages the nearly 20 years of Maryland investment in solar energy through the Renewable Portfolio Standard, and the federal policy investments mostly through the Investment

Tax Credit. According to a 2021 National Renewable Energy Laboratories (NREL) study, residential rooftop, commercial rooftop, and large-scale solar systems achieved cost reductions of 64, 69, and 82 percent, respectively, since 2010. And, in the last ten years, as measured the Solar Energy Industries Association and the research firm WoodMackenzie, solar costs have declined by nearly 40 percent[5].

By creating deploy-first solar programs, AACE Act is recognizing the massive cost declines int eh solar industry and tackling head-on the generation shortfall in Maryland:

New Distributed Solar. AACE proposes creating a new distributed solar program that calibrates incentives based on different market segments and project types. It pre-sets them to make financing these projects easier and cheaper. This new program locks in the incentive through administrative action, which will mean that ratepayer dollars are used more efficiently. And it creates discretion at the Public Service Commission so that if there are significant changes in economic conditions (ie. supply chain or labor disruptions) or federal policy (ie. tariffs and/or repealing the Solar Investment Tax Credit), they can adjust incentive levels accordingly without requiring subsequent legislative approvals.

It means that at least 3 Gigawatts of new distributed solar can meet Maryland energy demand, providing low-cost resource adequacy needed for consumers to avoid unnecessary transmission build-out and improve local resiliency and reliability. And, local distributed solar does not need to go through the PJM interconnection process, so these projects are not held up by the current delays. At the end of 2035, there can be new distributed solar that increases in-state generation, offsets Maryland peak demand, and reduces electricity imports into the state.

New Large-Scale Solar Procurement. AACE would also create new competitive procurements starting in 2025 for large-scale solar, creating a pathway for mature and ready-to-build utility-scale solar projects to lock in financing, get built, and then energized in Maryland's grid. There are already over 900 MW of Maryland-sited solar plus storage projects in the PJM queue. By creating a clear procurement pathway, the Maryland PSC can create an onramp from the PJM interconnection queue for newly approved projects to quickly secure financing and move into the construction phase. This competitive process also allows for the prospect that if there are changes to federal clean energy policies (ie. tariffs, repealing the Investment Tax Credit), they can automatically be account for.

In the near-term, the procurement can enable mature and ready-to-build solar projects can be built throughout Maryland. In the longer term, when the PJM interconnection process is approving new projects, there will be a pipeline of ready-to-build projects ready to participate in this procurement process. And by 2035, there can be at least 3 Gigawatts of new large-scale

[5] SEIA/Wood Mackenzie Power & Renewables U.S. Solar Market Insight Q4 2024. https://seia.org/research-resources/solar-industry-research-data/#:~:text=The%20cost%20to%20install%20solar,deploy%20thousands%20of%20systems%20nationwide.

solar in Maryland, serving Maryland's consumers, and reducing the need for importing electricity.

Energy Storage. Coupled with small and large solar, battery storage is poised to help the Maryland grid as soon as projects can be built. There are currently over 1,600 MW of energy storage in the PJM queue. There is a concentration of activity in the Baltimore Gas & Electric territory, which is congested and in need of local energy solutions, to deploy new storage assets. This is another case of a common sense proposal designed to deploy beneficial energy assets that will directly help Maryland's electric grid.

Conclusion

In conclusion, the Abundant Affordable Clean Energy Act is designed to deploy new clean energy projects in Maryland, leveraging private capital, avoiding fully funded ratepayer projects, avoiding unnecessary transmission expansion projects, and creating downward pressure on energy costs for Maryland consumers. It has the added benefit of helping meet Maryland's decarbonization goals, which shows that clean energy has matured to the point where it can solve today's grid issues and contribute to environmental solutions.

CHESSA urges a favorable report on HB398.

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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