

2023 Testimony in Support of SB 0697.pdf

Uploaded by: Joseph Jankowski

Position: FAV

**Testimony in SUPPORT of SB697 Energy Storage-Targets and
Maryland Energy Storage Program-Establishment**

Dear Chairman Feldman and members of the Education, Energy and the Environment Committee,

Maryland's Electrical Power Grid contains many generating facilities which have the disadvantage of contributing greenhouse gas emissions but the advantage of generating electricity during times when the current clean energy systems cannot operate. To implement additional clean energy solutions using the current technology requires energy storage facilities tied to the electrical grid to store the energy from clean energy systems for use during periods when they cannot operate. These storage facilities are needed at this stage of technology development so that those generating facilities which contribute greenhouse gas emissions can be replaced.

The Eastern Shore of Maryland will be impacted by sea level rise before most of the rest of Maryland and it is essential for Maryland to do everything possible to reduce greenhouse gas emissions which cause global warming that will contribute significantly to sea level rise.

My waterfront home is located on the coastal bays of the Eastern Shore of Maryland. My home's existence and value are threatened by rising sea levels. Your passage of this bill will help protect me and my family from future harm.

Respectfully,

Joseph Jankowski

Berlin, Maryland 21811

SB697_MDSierraClub_fav 28Feb2023.pdf

Uploaded by: Josh Tulkin

Position: FAV

Committee: Education, Energy, and the Environment

Testimony on: SB697 “Energy Storage – Targets and Maryland Energy Storage Program – Establishment”

Position: Favorable

Hearing Date: February 28, 2023

The Maryland Chapter of Sierra Club submits this testimony in support of SB697. This bill will require the Public Service Commission (PSC) to establish minimum targets for energy storage capacity in the state by specified dates along the pathway to Maryland’s ambitious Greenhouse Gas Reduction goals, establish an actual Energy Storage Program, and through that program develop market-based incentives and procurement mechanisms that will achieve “a robust, cost-effective energy storage system in the state.”

SB697 builds upon the Energy Storage Pilot Program established in 2019. We believe SB697 is warranted at this time to accelerate the rate of deployment of energy storage capacity in our state and set targets beyond those in the Pilot Program. The cherry blossoms are coming out earlier every year, the most Antarctic ice ever has melted, weather is increasingly erratic, and increasing numbers of lives, homes, and farms are being lost each year to the floods, drought, wildfires, and storms associated with this climate disruption. When the Energy Storage Pilot Program started, it seemed reasonable to have the program conclude and provide a final report by the end of 2026, and potentially take next steps in 2028. We now have a Greenhouse Gas Reduction goal of 60% by 2031, and the rapid expansion of clean renewable energy is an essential part of achieving that goal.

Likewise, the deployment of energy storage capacity is essential to achieving the full impact of that expansion, adding substantial value to investments in clean renewable resources.

- Energy storage solves the intermittency problem of wind and solar power generation, which can only provide electricity when the wind is blowing or when sunshine is available. By storing extra energy produced by wind or solar generators for use later, battery storage adds stability to these variable energy sources and maximizes their effectiveness.
- Energy storage will also improve electricity grid resilience and reliability, bridging potential electrical power shortfalls or outages.
- Energy storage can reduce transmission and distribution line losses.
- By storing and later releasing energy generated by clean wind and solar, energy storage will further reduce air and water pollution from dirty or inefficient energy generation facilities, and lower emissions of carbon dioxide and other greenhouse gases.

Since 2019, there have been major advances in energy storage technology, attendant decreases in cost, and a rapid increase in the amount of battery storage brought online by utilities themselves as well as other large and small private-sector entities. The U.S. Energy Information Agency recently reported that while battery storage was “negligible” (less than 2 gigawatts, GW) before 2020, the amount had increased to roughly 9 GW at the end of 2022 and is projected to reach 30

GW by the end of 2025.¹ The National Renewable Energy Laboratory projects that battery storage costs will drop by over 30 percent by 2025 and by almost 45 percent by 2030.²

Maryland cannot afford to sit by while these important advances are happening – especially with the incentives provided by new federal funding. While the evaluation of the different models being developed under the energy Storage Pilot Program will be worthwhile, the rapid development of storage capacity countrywide offers multiple models and examples to learn from as well. It is essential that the critical steps laid out in SB697 – establishment of minimum targets, development of an Energy Storage Program within the PSC, and the identification of appropriate market-based incentives and procurement/contracting mechanisms – be carried out as soon as possible, building upon the pilot program’s experience.

For these reasons, the Sierra Club Maryland Chapter finds SB697 to be an important component of our efforts to reach our clean energy and Greenhouse Gas Reduction targets, and we urge a favorable report.

Alfred Bartlett, M.D.
Clean Energy Team Member
alfredbartlett@msn.com

Josh Tulkin
Chapter Director
josh.tulkin@mdsierra.org

¹ U.S. Energy Information Agency, “Today in Energy;” “*U.S. battery storage capacity will increase significantly by 2025;*” Dec. 8, 2022

² Cole, Wesley, A. Will Frazier, and Chad Augustine. 2021. Cost Projections for Utility Scale Battery Storage: 2021 Update. Golden, CO: National Renewable Energy Laboratory. NREL/TP-6A20-79236. <https://www.nrel.gov/docs/fy21osti/79236.pdf>.

SB 697 - Support - Key Capture Energy.pdf

Uploaded by: Julian Boggs

Position: FAV



Maryland Senate Committee on Education, Energy, & the Environment

Written Testimony of Key Capture Energy on SB 697: Energy Storage

Position: SUPPORT

Dear Chair Feldman, Vice Chair Kagan, and members of the Senate Education, Energy, and the Environment Committee,

Key Capture Energy (“KCE”) supports the passage of SB 697 to establish an energy storage target investigate opportunities to procure energy storage systems. This bill will take an important step towards putting Maryland on track to meeting its energy storage goals.

KCE is an Albany, New York-based battery energy storage developer, owner, and operator, focusing on development of utility-scale, stand-alone energy storage projects at both the distribution and transmission level. KCE currently has over 500 MW in operation and under construction and a development pipeline of over 6,500 megawatts.

Energy storage will provide a number of critical services as Maryland pursues its clean energy and climate goals, most importantly shifting energy from times of high renewable energy production and low energy demand to periods of low energy renewable production and high energy demand.

Utility-scale (also called “large-scale” or “front-of-the-meter”) energy storage systems will play a major role if Maryland is to capture the benefits of energy storage. Nationally, utility-scale storage makes up the vast majority of new deployments, accounting for 84% of the total capacity of energy storage installed in the US in the first three quarters of 2022.¹ Utility-scale energy storage systems have several advantages, including lower costs from economies of scale and the ability to leverage revenues from direct participation in wholesale electricity markets. Moreover, utility-scale storage systems require a tiny fraction of the land necessary for renewable energy facilities such as solar farms and can be sited where the energy is needed most.

KCE strongly supports SB 697 and encourages the committee to advance the bill.

Sincerely,

Julian Boggs
Senior Manager, Regulatory & Policy Affairs
Key Capture Energy
julian.boggs@keycaptureenergy.com

¹ US Energy Storage Monitor: Q4 2022, Wood Mackenzie, December 2022
<https://www.woodmac.com/reports/power-markets-us-energy-storage-monitor-q4-2022-150088121/>

Maryland EEE SB0697_ECA Solar.pdf

Uploaded by: Kaitlin Kelly O'Neill

Position: FAV

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

February 27, 2023

RE: Please pass SB0697 establishing the Maryland Energy Storage Program

Dear Chair Feldman,

ECA Solar respectfully submits this testimony in support of SB0697- Targets and Maryland Energy Storage Program, currently before the Maryland State Legislature. The Climate Solutions Act Now of 2022 sets Maryland as a national leader in establishing clean energy targets, achieving a 60% reduction in carbon emissions by 2030 and economy wide net zero greenhouse gas emissions by 2045. Maryland's bold stance on climate mitigation through these newly established targets set the destination, and the passage of SB0697 will provide a necessary tool in completing the roadmap to get there. Energy storage has become increasingly critical for policy makers and regulators in achieving clean energy and carbon reduction targets, for it allows for greater integration of renewable resources, higher grid efficiency, improved electric supply, and cheaper grid improvements as a non-wires alternative solution. It is the key to unlocking our distributed, clean, energy grid of the future, and the passage of SB0697 is critical to efficiently maximizing the potential of our grid infrastructure and the continued deployment of distributed energy resources.

ECA Solar develops, engineers, installs, and operates large scale solar facilities across the US. ECA Solar takes an institutional approach to the solar energy industry. Our goal is to deploy the highest quality of solar power and energy storage projects to diversify the electric grid, while remaining risk averse and prioritizing safety. We value diversity and creativity to achieve the common goal of making solar energy more accessible to everyone. We're proud to have developed hundreds of acres of ground - mounted solar and over 6 million square feet of rooftop solar in 7 states.

Depending on the use, energy storage provides both significant customer side benefits as well as system wide benefits. On the customer side, storage allows for demand management and energy arbitrage, in addition to increased resiliency for instances of system outages. Storage can also provide grid facing benefits such as peak demand reduction. System peak hours are usually both expensive and dirty, with peaker plants deployed to meet demand. Battery storage increases the flexibility of deploying clean, intermittent resources, allowing grid operators to maximize the efficiency of the grid from both the supply and demand side. Customer side peak shaving combined with renewably charged battery deployments mean lower cost and lower emissions for all.

The establishment of storage targets and the creation of an Energy Storage Program in Maryland is a crucial step towards the decarbonization of the entire economy as the state moves toward a net zero 2045 target. For these reasons, ECA solar files these favorable comments on the passage of SB0697. If you have any questions, please feel free to contact me at ko@ecasolar.com

Sincerely,

Kaitlin Kelly O'Neill
Director of Policy
ECA Solar

SB0697_Energy Storage Targets & Maryland Energy St

Uploaded by: Laurie McGilvray

Position: FAV



Committee: Education, Energy, and the Environment
Testimony on: SB0697 - Energy Storage – Targets and Maryland Energy Storage Program
Organization: Climate Justice Wing of the Maryland Legislative Coalition
Submitting: Laurie McGilvray, Co-Chair
Position: Favorable
Hearing Date: February 28, 2023

Dear Chair and Committee Members:

Thank you for allowing our testimony today in support of SB697. The Maryland Legislative Coalition Climate Justice Wing, a statewide coalition of over 50 grassroots and professional organizations, urges you to vote favorably on SB697.

As Maryland transitions to renewable energy, electricity storage will need to play a greater role in grid reliability. SB697 requires the Public Service Commission (PSC) to establish the Maryland Energy Storage Program (Program) and set targets for the deployment of new energy storage devices. The bill's targets are: at least a cumulative total of 750 megawatt-hours (MWh) by the end of the 2027 PJM Interconnection, LLC (PJM) delivery year; 1,500 MWh by the end of the 2030 PJM delivery year; and 3,000 MWh by the end of the 2033. The bill calls for a PSC report to the General Assembly by December 31, 2023 on pending Program design and any statutory changes needed to fully implement an effective Program to meet energy storage targets.

Wind and solar energy generation are not constant like traditional power plants. Wind and solar can work well together, with onshore wind usually strongest at night, offshore wind strongest in the afternoon and evening, and solar strongest during the day. However, excess power at peak times of wind and solar generation can be stored, and batteries can kick in to supply electricity at times of high consumer demand (and low points for wind and solar generation). The intent of the bill is to ensure that Maryland has an effective energy storage program.

There are however, several safety considerations that should be addressed either in the bill or during implementation of the Program. Battery storage facilities can catch fire and often local fire departments are not sufficiently equipped and trained to deal with battery fires. In addition, battery storage facilities must be located far enough away from populations and other facilities to mitigate any safety hazards. These health and safety measures must be addressed, including proper pre-incident planning by fire departments, appropriate fire-fighting equipment, and

training. Battery storage facility siting must take into account the neighboring community and facilities must be built sufficiently far away from residential areas, schools, hospitals, and other such facilities.

With these safeguards properly addressed, we support SB697 and urge a **FAVORABLE** report in Committee.

SB0697-113120-01.pdf

Uploaded by: Malcolm Augustine

Position: FAV



SB0697/113120/1

AMENDMENTS
PREPARED
BY THE
DEPT. OF LEGISLATIVE
SERVICES

24 FEB 23
15:54:30

BY: Senator Augustine
(To be offered in the Education, Energy, and the Environment
Committee)

AMENDMENTS TO SENATE BILL 697
(First Reading File Bill)

AMENDMENT NO. 1

On page 1, in line 9, strike “without” and substitute “with”.

AMENDMENT NO. 2

On page 2, in line 11, after “purpose” insert “, INCLUDING:”

1. THERMAL STORAGE;
2. ELECTROCHEMICAL STORAGE;
3. VIRTUAL POWER PLANTS; AND
4. HYDROGEN-BASED STORAGE”;

and in lines 27 and 29, in each instance, strike “MEGAWATT-HOURS” and substitute “MEGAWATTS”.

On page 3, in line 1, strike “MEGAWATT-HOURS” and substitute “MEGAWATTS”; strike beginning with the colon in line 7 down through “(I)” in line 8; in line 10, strike the semicolon and substitute a period; after line 10, insert:

“(4) THE PROGRAM MAY INCLUDE:”;

in lines 11 and 21, strike “**(II)**” and “**(IV)**”, respectively, and substitute “**(I)**” and “**(III)**”, respectively; and strike in their entirety lines 17 through 20, inclusive, and substitute:

“(II) A REQUIREMENT THAT INVESTOR-OWNED ELECTRIC COMPANIES:

1. INSTALL OR CONTRACT FOR ENERGY STORAGE DEVICES; OR

2. CONTRACT FOR CREDITS FROM AN ENERGY STORAGE PROJECT UNDER § 7-216 OF THIS SUBTITLE; OR”.

SB 697 ACP FWA.pdf

Uploaded by: Moira Cyphers

Position: FAV



February 28, 2023

SB 697 – Energy Storage – Targets and Maryland Energy Storage Program – Support

Chair Feldman, Vice Chair Kagan, and members of the Senate Education, Energy, and the Environment Committee:

The American Clean Power Association (ACP) is uniting the power of wind, solar, transmission and storage companies and their allied industries, to champion policies that enable the growth of renewable energy in the United States.

ACP strongly supports SB 697, which will establish a 10-year goal to bring storage projects into Maryland and on to our grid. Energy storage refers to a technology class unlike any other electric grid technology or infrastructure. Energy storage has the unique capability to capture energy at one point in time, store the energy, and release the energy later when it is needed or when it is most useful to do so. It can provide electricity during times of peak demand, absorb excess energy from renewables during peak supply, reduce energy waste and increase grid efficiency, alleviate transmission congestion, serve as backup power for homes, businesses, and broader communities, and will be an essential component of our modernizing electric grid.

Energy Storage Enables a Clean Energy Future

The passage of Climate Solutions Now makes storage critically important. Maryland's commitment to net-zero greenhouse gas emissions by 2045 means we need to clean up our grid. As we bring on new sources of generation like wind and solar, we need to ensure that we get serious about cleaning up our capacity to back up these resources.

Not only are energy storage technologies commercially viable and scalable, but they have also become a leading grid-enhancing technology in states across the country with modernized policy frameworks. Over 4,000 megawatts of energy storage capacity were added in the United States in 2022. According to the U.S. Energy Information Administration, in 2023 the United States is expected to install more energy storage capacity than gas-fired power plants.

Energy Storage Strengthens Reliability

Energy storage, at its core, is a reliability enabling and reliability enhancing technology. Across the country, states are choosing energy storage as the best and most cost-effective way to improve grid resilience and reliability. Energy storage systems provide a wide array of unique grid benefits and services designed to increase grid reliability, including:

- I. *Frequency Response and Regulation* – always ensuring the moment-to-moment stability of the electric system.
- II. *Peaking Capacity* – meeting short-term spikes in electric system demand that can otherwise require use of lower-efficiency, higher-cost generation resources.
- III. *Maximizing Renewable Energy Resources* – reducing curtailment of renewable generation resources and maximizing their contribution to system reliability.



- IV. *Grid Infrastructure Support* – relieving transmission and distribution infrastructure congestion, preventing reliability violations on power lines, enhancing the resilience of wires infrastructure, and creating a more flexible power system.
- V. *Increasing Operational Flexibility* – facilitating efficient integration of a diversity of generation resources and improving the ability of the electric grid to adapt rapidly to changes in demand and generation.
- VI. *Improving Grid Resilience* – serving as back-up power for individual homes, businesses, communities, and the broader grid system to minimize and prevent power outages and service interruptions from extreme weather.

Energy Storage Lowers Costs

By optimizing the grid, bolstering reliability, and enabling a clean grid, energy storage technologies are uniquely positioned to reduce energy system costs and over the long-term, lower rates for consumers. There are myriad ways that energy storage can reduce energy costs, including:

- I. *Supporting the integration of more wind and solar generation* — Wind and solar are the cheapest sources of electricity. Energy storage supports the integration of higher and higher shares of renewables, enabling the expansion and incorporation of the most cost-effective sources of electricity generation.
- II. *Reducing energy waste* — Energy storage can help eliminate energy waste and maximize the benefits of renewable energy. Energy storage is the only grid technology that can both store and discharge energy. By storing energy when there is excess supply of renewable energy compared to demand, energy storage can reduce the need to curtail generation facilities and use that energy later when it is needed.
- III. *Improving grid efficiency* — Energy storage is instantly dispatchable to function both as generation and load, so it can help the grid adjust to fluctuations in demand and supply, optimizing grid efficiency, alleviating transmission congestion, and increasing grid flexibility. This reduces overall system costs.
- IV. *Limiting costly energy imports and increasing energy security* — As an in-state resource built and operated in Maryland, energy storage can limit the need to utilize often more costly and more-fossil fuel intensive balancing resources from the broader grid. Energy storage improves energy security and maximizes the use of affordable electricity produced in Maryland.
- V. *Preventing and minimizing power outages* — Energy storage can help prevent or reduce the risk of blackouts or brownouts by increasing peak power supply and by serving as backup power for homes, businesses, and communities. Disruptions to power supply can be extremely costly and hazardous to health and safety. Energy storage makes the grid more resilient and reliable.

We thank Senator Augustine for introducing this legislation. Senate Bill 697 will accelerate Maryland's clean energy transition, generate more than \$3 billion investment in the Maryland economy and creating as many as 1,500 family-supporting jobs.

The American Clean Power Association requests a favorable report.

Moira Cyphers
Director, Eastern Region State Affairs
American Clean Power Association
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Noah Roberts
Director, Energy Storage
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SUPPORT SB 697 - Energy Storage_MDLCV.pdf

Uploaded by: Rebecca Rehr

Position: FAV



February 28, 2023

Kim Coble
Executive Director

2023 Board of
Directors

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The Hon. Nancy Kopp,
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The Hon. Steve Lafferty
Patrick Miller
Bonnie L. Norman
Katherine (Kitty)
Thomas

**SUPPORT: SB 697 - Energy Storage – Targets and Maryland Energy Storage Program
– Establishment**

Chairman Feldman and Members of the Committee:

Maryland LCV supports SB 697 establishing a statewide energy storage program, and we thank Senator Augustine for his leadership on this issue.

This bill directs the Public Service Commission to establish a Maryland Energy Storage Program, to be able to reach a minimum of 3,000 megawatts of energy storage by the end of delivery year 2033.

Energy storage is an important component of a clean energy future , and thus far underutilized in Maryland. Although wind and solar are both increasingly more reliable at generating electricity under myriad conditions¹, greatly increased deployment of storage facilities will be needed to supplement these renewable sources of generation. Storage will allow for surplus electricity generated during optimal or near-optimal conditions to be allotted during times of low generation, and thus ensure continuous power delivery. By combining storage with renewable generation, electric grids can reap the numerous environmental benefits of renewables, while controlling for the reliability and continuous deliverability concerns of using renewables for base load generation. Importantly, this program will help meet a goal of 100% clean energy generation in Maryland by 2035.

We strongly urge a favorable report on SB 697.

¹ https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_6_07_b

SB697_FAV_CHESSA.pdf

Uploaded by: Thadeus Culley

Position: FAV



February 27, 2023

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

Re: CHESSA Letter of Support for SB 697, Energy Storage- Targets and Maryland Energy Storage Program

Dear Chair Feldman and Members of the Education, Energy, and Environment Committee:

The Chesapeake Solar and Storage Association (CHESSA)¹ appreciates the opportunity to testify in support of SB 697, addressing energy storage targets for the State.

Energy storage is going to be an essential tool to effectively decarbonize the Maryland energy mix. Even as leaders like Governor Moore contemplate moving Maryland to a pure 100% clean energy or renewable energy standard, those efforts will not necessarily achieve decarbonization aspirations if reliance is put on fossil-fired power generation to help balance and integrate a high renewables scenario. The best way to maximize the actual use of clean energy resources within the Maryland energy mix is to dramatically increase the amount of clean, flexible resources, including stand-alone energy storage, demand-side management and energy efficiency, and customer-sited distributed energy resources such as colocated solar+storage facilities.

CHESSA applauds Delegate Augustine for recognizing the importance of energy storage in supporting the decarbonization of the grid and applauds the entire General Assembly for taking important policy actions over the last decade including passing first-in-the-nation energy storage tax credits (SB 758, 2017), a cost-benefit study for energy storage (HB 773, 2017), and an energy storage pilot program (HB650/SB 573, 2019). CHESSA sees the energy storage targets outlined in SB 697 as the natural next step in that policy progression towards realizing substantial deployment of energy storage. SB697 describes the tools that we want to have in the toolbox for the future energy mix, even if it stops short of spelling out exactly what the system we are building will look like. CHESSA agrees that it is appropriate for the Public Service

¹ CHESSA is a member organization that represents over 120 companies engaged in all facets of the solar and battery storage industry throughout Maryland, Virginia, and the District of Columbia.

Commission, as the expert agency, to pool together the best available information about the technical capabilities of the current market and the applications of these assets that will drive the value streams reflected in RFPs or other program designs. The PSC must also balance its duties with existing law, existing goals, and existing obligations to consider climate change, all of which give CHESSA confidence that SB 697 would be implemented with a holistic approach.

While CHESSA does not qualify its support with any proposed amendments at this time, we note that in order to drive meaningful deployment, energy storage targets must include specific programs including procurement, customer-sited tariffs, and non-wires alternatives. CHESSA underscores that a near-term overhaul of the clean energy policy and mechanisms that drive the renewable energy market will be required to achieve a more efficient and cleaner grid. With beneficial electrification creating massive opportunities to decarbonize the economy, this wave of electrification will create upward pressure on structures like the Renewables Portfolios Standard to install more and more resources to keep up with the growth in retail electric sales. CHESSA intends to seek to create additional opportunities for customer-sited battery storage systems—as reflected in our strong support for SB 663 (Maryland Resilient and Clean Energy Homes Act)—and will encourage the PSC to consider the full range of potential use cases for battery storage programs and procurement options if SB 697 becomes law.

CHESSA supports laying down the ambitious marker to rapidly deploy 3,000 MW of storage capacity over the next ten years. There are several PJM states with aggressive energy storage targets, including New Jersey (2,000 MW) and Virginia (3,100 MW) that are vying for the attention of energy storage companies. Such a storage target is a critical tool in our toolbox in Maryland. It sends a strong market signal to the development community to invest resources in the State. CHESSA, thus, asks for a favorable report on SB 697 but asks the Committee to keep in mind the growing role that customer-sited energy storage resources can play in providing clean, flexible generation to help mitigate the impacts of electrification and creating a cleaner, more efficient energy system for the State.

Respectfully submitted,

/s/
Thadeus B. Culley
Sr. Manager, Public Policy, Sunrun
CHESSA Maryland Policy Committee Chair

/s/
Stephanie Johnson
Executive Director, CHESSA

2023-SB 697-FWA-PHI-.pdf

Uploaded by: Anne Klase

Position: FWA



February 28, 2023

112 West Street
Annapolis, MD 21401

Favorable with Amendments – Senate Bill 697 – Energy Storage – Targets and Maryland Energy Storage Program – Establishment

Potomac Electric Power Company (Pepco) and Delmarva Power & Light Company (Delmarva Power) support *Senate Bill 697 – Energy Storage – Targets and Maryland Energy Storage Program – Establishment* with the sponsor’s amendments. As it relates to electric companies, Senate Bill 697 authorizes the Public Service Commission (PSC) to establish targets for the deployment of new energy storage devices with a goal of 3,000 megawatts of cumulative energy storage capacity by the end of delivery year 2033.

Pepco and Delmarva Power are constantly evaluating new technologies and services to build a smarter, reliable energy grid to withstand the impacts of climate change and ensure our customers have reliable service. We believe energy storage systems provide benefits to the electric grid and utility customers by enabling the transition to a clean grid with distributed renewable resources. Additionally, energy storage systems create system efficiencies that can reduce costs and save money for utilities and ratepayers, bolster grid reliability and resilience, improve system capabilities to withstand shocks and stressors and promote economic development and job creation in Maryland communities. Finally, energy storage devices can help to smooth the peak loads on the system.

The sponsor’s amendments address concerns that Pepco and Delmarva Power had with a few provisions of the bill as originally drafted. Pepco and Delmarva Power had concerns with the power purchase agreement (PPA) language that was in the bill. Rating agencies treat long term power purchase contracts as imputed debt on our balance sheet and can raise the cost of borrowing which can result in increased costs to customers. In recent years, supply chain and inflation have led to increased project development costs creating uncertainty in pricing. PPAs may lock customers into paying high rates for these resources even as supply chain and inflation constraints resolve, technology improves, and the cost of storage decreases over time.

Additionally, the sponsor’s amendments add more flexibility in how programs can be structured. Allowing for program flexibility will allow customization of program offerings to specific community needs, provide for a robust, cost-effective energy storage system strategy, and enable agility should new technologies become available.

Pepco and Delmarva Power respectfully request a favorable report on Senate Bill 697 with the sponsor’s amendments and we thank Senator Augustine for sponsoring this legislation and addressing our concerns.

Contact:

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Katie Lanzarotto
Manager, State Affairs
202-428-1309
Kathryn.lanzarotto@exeloncorp.com

BGE - SB697 - EEE - SWA - Energy Storage - Targets

Uploaded by: David Wright

Position: FWA

SB 697 – Energy Storage – Targets and Maryland Energy Storage Program - Establishment

Baltimore Gas and Electric Company (BGE) supports with amendment *Senate Bill 697 – Energy Storage – Targets and Maryland Energy Storage Program - Establishment*. Senate Bill 697 would require the Public Service Commission to establish a target for the deployment of 3,000 megawatt-hours of energy storage devices in the State by the end of 2033.

BGE understands and supports the need for new, diverse technology to support our grid in the future as the State moves further towards electrification. Energy storage systems not only support community resilience, they also may alleviate the need for costly and disruptive distribution upgrade projects, support the inclusion of renewable energy resources, and support the State’s economy through job creation and opportunities for local businesses. In fact, BGE’s first battery storage facility became operational early this year. The 2 megawatt-hour system located at Chesapeake Beach in Calvert County will discharge power at high-demand periods and, when not required, the power will be bid into the wholesale power market. BGE is also in the process of building a similar system in southern Anne Arundel County.

There are, however, two concerning areas in the bill where BGE seeks to amend language.

BGE respectfully requests that the power purchase agreement (PPA) provision be removed from the bill. PPA pricing can be uncertain because energy storage systems are capital-intensive and significant investments. Because the cost of storage system implementation naturally drops as the technology matures, under a PPA arrangement, customers could be locked into paying commodity costs above what might be found in the open market.

In addition, BGE respectfully requests that Maryland’s Public Service Commission be allowed flexibility in determining which battery storage incentives to include in the program.

BGE looks forward to continuing conversations with the bill sponsor and respectfully requests that the Committee issue a favorable committee report with amendments to address the concerns described above.

SB 697 - Information - Stanek.pdf

Uploaded by: Jason Stanek

Position: INFO

STATE OF MARYLAND



OFFICE OF THE CHAIRMAN

JASON M. STANEK

PUBLIC SERVICE COMMISSION

February 28, 2023

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

RE: SB 697 – INFORMATION – Energy Storage – Targets and Maryland Energy Storage – Establishment

Dear Chair Feldman and Committee Members:

I write today to provide information regarding SB 697. This bill requires the Commission to establish an Energy Storage Program, including competitive procurement mechanisms and a system of energy storage credits, to deploy 3000 Megawatts of storage by 2033. The Commission must establish the program no later than July 1, 2024. The Commission has concerns about (1) obtainability of the goals, (2) the lack of cost-effective limits required of the targets, and (3) the required timeline. The Commission has been in communication with the bill sponsor to address some of our concerns.

The Commission is currently studying the deployment of energy storage systems as required by the Energy Storage Project Act (2019) amended Section 7-216 of the Public Utilities Article (“PUA”), Annotated Code of Maryland. From this Act about 9 MW of capacity that enables about 30 Megawatt-hours of energy across 8 energy storage projects that are in construction or operation. The pilot utilities currently face challenges and delays to the current energy storage pilot project operational dates due to various technical and supply chain challenges. SB 697 requires a 300x increase in Maryland’s utility energy storage Megawatt capacity by 2033 and a 75x increase in capacity in 2027, only one year after the current pilot project is scheduled to end. This escalation in deployment may be aspirational. The Commission requests additional time to develop and deploy the program. Also the Commission requests an amendment that only cost effective energy storage be permitted under this aggressive deployment to protect customers as discussed next.

SB 697 does not permit the Commission to limit deployment of energy storage to only cost-effective resources. A benefit/cost calculation greater than 1.0 will ensure customers are paying for useful projects and establish program guardrails for the aggressive targets. Several of the current pilot storage projects underway are not projected to be cost effective, but these are part of a legislatively required pilot program. The program envisioned by SB 697 is much larger than the existing pilot. Energy storage is a tool that can assist Maryland obtaining a clean energy future, but it would be most cost effective for the electric markets and needs of the distribution system to dictate the State’s deployment of energy storage. SB 697 requires competitive procurement of these energy storage

resources, but competitive procurement does not guarantee cost effectiveness, and could result in ratepayers paying for uneconomic or unnecessary projects.¹ **The legislation should be amended to permit the Commission flexibility to limit deployment of energy storage to cost effective projects.**

The Commission is concerned with the timeline of the proposed legislation for several reasons, as follows:

First, the Commission is required by December 31, 2026, to report to the General Assembly its findings and recommendations for the continued development of energy storage in the state as part of the energy storage pilot program.² These pilots are required legislatively to collect a significant amount of information, some of which could be useful for designing the energy storage program. Establishing targets and program design without this information may be premature.

Second, the requirement that the Commission include a system of energy storage credits will be difficult and costly ratepayers. The market for renewable energy credits (“RECs”) is well established. Maryland operates in the PJM market where RECs are tracked in PJM’s Generation Attributes Tracking System (“GATS”). Currently, there is no system that provides the same service for energy storage. The Commission would need to initiate a rulemaking to develop regulations for energy storage credits, including but not limited to developing application processes and determining the fuel qualifications for each energy storage facility. Accomplishing this before July 1, 2024 will be expensive and difficult. Notably, the workload created by SB 697 cannot be absorbed within existing resources. Additional permanent staff, including an Engineer and an Regulatory Economist will be needed to evaluate energy storage benefits in addition to handling processing of energy storage credit applications. Therefore, a shift in the implementation schedule and the corresponding target dates is requested for the reasons discussed.

Finally, SB 697 should be clarified if the target is a Megawatt-hour (energy) target or a Megawatt (capacity) target as this will result in different amounts of deployment. Currently, the wording is used interchangeably in the bill and will result in confusion.

I appreciate the opportunity to provide information on SB 697. Please contact Lisa Smith, Director of Legislative Affairs, at (410) 336-6288 if you have any questions.

Sincerely,



Jason M. Stanek
Chairman

¹ The Commission agrees that any energy storage program in Maryland should include competitive procurement mechanisms provided that no ownership model (utility vs 3rd party) is precluded.

² Order No. 89240 (Case No. 9619)

SB0697(HB0910) - LOI - Energy Storage – Targets an

Uploaded by: Landon Fahrig

Position: INFO



TO: Members, Senate Education, Energy, and the Environment Committee
FROM: Paul Pinsky - Director, MEA
SUBJECT: SB 697 - Energy Storage – Targets and Maryland Energy Storage Program – Establishment
DATE: February 28, 2023

MEA Position: Letter of Information

Senate Bill 697 establishes the Maryland Energy Storage Program within the Public Service Commission (PSC), and sets goals for battery storage deployments in the State. While the Maryland Energy Administration (MEA) appreciates the intent of the sponsor and recognizes the benefits of energy storage, our review of the legislation produced the following information.

The minimum requirements for battery electric storage in the State may be better suited as aspirational goals. Three (3) gigawatt-hours of battery storage within the state in a period of ten years, may be difficult or expensive to achieve. It is equivalent to more than 220,000 Tesla Powerwalls, which could come at an expense exceeding \$2.75 billion.

There are existing, upward pressures on utility bills: commodity prices, transmission and distribution upgrades needed to support growth and electrification, and geopolitical conflict, amongst others. Additionally, there are several other bills before the General Assembly that could also add to ratepayer costs.

Alternative approaches that could be considered would be greater discretion for the PSC to craft the parameters of such a program, and requirements to make utility-scale battery deployments shared purpose; providing a utility the ability to flow electricity for ratepayer consumption when needed, and providing ancillary grid services (frequency modulation, etc.) when not being utilized by the utility. This dual use model could limit ratepayer impacts by providing a reliable revenue stream to offset upfront costs.

MEA urges the committee to consider the forgoing prior to rendering its report.