SB0959_DRIVE_Act_MLC_FAV.pdfUploaded by: Cecilia Plante



TESTIMONY FOR SB0959

Electricity - Tariffs, Distributed Energy Resources, and Electric Distribution System Support Services (Distributed Renewable Integration and Vehicle Electrification (DRIVE) Act)

Bill Sponsor: Senator Feldman

Committee: Education, Energy, and the Environment **Organization Submitting:** Maryland Legislative Coalition

Person Submitting: Cecilia Plante, co-chair

Position: FAVORABLE

I am submitting this testimony in favor of SB0959 on behalf of the Maryland Legislative Coalition. The Maryland Legislative Coalition is an association of activists - individuals and grassroots groups in every district in the state. We are unpaid citizen lobbyists and our Coalition supports well over 30,000 members.

As a large part of Maryland's transition from fossil fuel to clean, renewable energy will depend on how efficient our energy grid is in accepting newer forms of energy, and ensuring that energy is available over peak usage hours. The overall efficiency of the grid can be enhanced if consumers are engaged.

This bill, if enacted, would direct the Public Service Commission (PSC) to work to engage the public by supporting customer-driven solutions to the expected impacts of the transition to full electrification. It also encourages the use of electric vehicles to provide home back-up power and vehicle-to-grid connections (bi-directional power) as well as creating a new program to allow consumers with battery storage and other on-site generating systems to be compensated for supporting the efficiency of the grid. Finally, it directs the PSC to transition customers of electric utilities to time-based rates to provide a discount if they shift electricity usage to off-peak periods.

Our members believe that the more the public is engaged and incentivized as part of our energy transition, the faster we will be able to fully transition. We support this bill and recommend a **FAVORABLE** report in committee.

Testimony SB959.pdfUploaded by: Debbie Cohn Position: FAV

Committee: Education, Energy and the Environment

Testimony on: SB959 Electricity – Tariffs Distributed Energy Resources, and Electric Distribution

Systems Support Services (Distributed Renewable Integration and Vehicle

Electrification – DRIVE Act)

Submitting: Deborah A. Cohn

Position: Favorable

Hearing Date: February 29, 2024

Dear Chair Feldman and Committee Members:

Thank you for allowing my testimony today in support of SB959.

Problem: With more frequent disruptions in the jet stream, intense winter storms, like Winter Storm Elliot, can destabilize the electric grid. Virtual power plants (VPPs) <u>significantly helped</u> the PJM system manage disruptions to the power grid during that storm. VPPs comprised of participating by Maryland would be wise to encourage and enable consumers, through time of use rates and an open-access platform for aggregating and, importantly, compensating distributed energy resources as virtual power plants. The mechanisms provided for in the DRIVE Act would allow customers to assist utilities in managing the grid during peak load periods.

Solutions: When I moved to Maryland in 1986 I asked PEPCO for time-of-use (TOU) rates, appreciating from my prior work at the FERC the benefit of that rate structure to curb use of expensive, typically older, inefficient and more polluting peaker power plants. I did not realize TOU rates were unusual. TOU rates will help consumers control electric utility bills, particularly as more business and residential customers electrify space and water heating and other appliances. Even though during the TOU pilot consumers across all income groups moved *some* discretionary uses to lower TOU rate periods, the current pricing differentials among the three TOU periods are not sufficient to induce most consumers to switch *significant* amounts of discretionary electricity use to the off-peak periods. Some switching will occur at all income groups, but a greater price differential, including options, as more space heating demand is electrified, to curb winter peak loads, would be helpful.

<u>VPPs</u> are also critical to increase the reliability of power supplies and serve as an efficient, non-polluting peaker plant. VPPs involve aggregation of controllable customer devices, such as EVs and residential solar when combined with battery storage, to inject power into the grid during peak load periods. Importantly, the DRIVE Act would ensure that DERs are compensated for these services. The DRIVE Act would require the Public Service Commission to streamline the process for bi-directional EV charging, and for net metered solar customers, compensation for these grid services would be in addition to compensation through net-metering.

Harnessing the power of community participation in curbing peak loads and increasing grid reliability will increase energy resilience during extreme weather.

For these reasons I urge a favorable report on SBB959, the DRIVE Act in Committee.

Thank you.

MD Testimony of Arcadia on SB959_February 2024.pdf Uploaded by: John Fiastro

SB959 Electricity – Net Energy Metering – Accrual of Net Excess Generation (Net Metering Flexibility Act)
Maryland Senate
446th Session of the General Assembly
February 29, 2024

Testimony of Arcadia on SB959

Thank you for the opportunity to submit testimony on this legislation. Arcadia urges the Senate Education, Energy and the Environment Committee to favorably report out this important legislation. Below is an introduction to Arcadia (or "the Company") and an explanation of why we support this legislation with amendment.

Introduction to Arcadia

Position: Favorable

Arcadia is building the software necessary for Marylanders to realize the full benefits of clean energy.

Today, customers face a bewildering assortment of energy technologies – ranging from energy efficiency and renewable energy to battery storage and electric vehicles (EVs) – all of which have unique capabilities, costs, and user experiences. Arcadia's software makes it possible for energy technology providers to delight their customers and move clean energy forward by enabling a simple user experience that saves people money.

The Company's software is revolutionizing community solar, making it easy for people to sign up with guaranteed savings and without any risk. Today, Arcadia manages more than 84 MW across 54 projects in Maryland and more than 2 gigawatt nationwide and 200,000 subscribers, making it the largest community solar subscriber manager in the country.

Support for SB959

Arcadia is proud to be a leader in community solar. In addition to providing bill savings and connecting customers to local solar farms, the Company views community solar as the launching point for many customers to begin their beneficial electrification journey. Intuitively, households that have a good experience participating in a community solar project and receiving regular bill savings are increasingly interested in pursuing additional electrification measures, like installing a heat pump, purchasing or leasing an electric vehicle, and investing in energy efficiency and weatherization efforts.

SB959 brings additional opportunities for electrification within reach of households looking to take the next step in their electrification journey and Arcadia provides the software and data necessary for climate technology companies serving that market. Most notably, this bill would spur innovation and beneficial electrification by:

- Launching a Virtual Power Plant (VPP) pilot. VPPs aggregate distributed energy
 resources across households and businesses, and stand to dramatically reduce peak
 load, which lowers electricity costs and reduces the greenhouse gas intensity of the
 state's power supply. Successful VPP pilots are underway across the country, from
 California to New York, and Maryland should not be left behind.
- Expanding time-of-use (TOU) rate participation. With proper consumer protections, all Marylanders stand to benefit from participation in a TOU rate both through lower energy bills and through reduced peak load and diminished grid congestion.
- Catalyzing bi-directional EV adoption and utilization. Allowing Maryland EVs to power homes will reduce peak demand and drive EV adoption.

Proposed amendment

Arcadia proposes that all new tariffs to increase TOU rate adoption, compensate VPPs, and compensate vehicle-to-grid and vehicle-to-home applications be based on historical data, grid conditions and prices as opposed to real-time market prices. While alluring, real-time market signals are incredibly complicated and provide marginal value beyond historic data. In addition, such signals are agonizingly difficult for customers to optimize around, increasing the risk of needlessly high energy bills and lower adoption rates. Arcadia's proposal will increase simplicity and make it easier for customers to understand how to optimize around peak load, maximizing adoption and savings.

This legislation with amendment, can help Maryland maintain its position as a national leader in innovative clean energy policy.

Conclusion

Arcadia asks for a favorable report on SB959 with amendment. I appreciate the opportunity to provide this testimony and would be happy to answer any questions you may have. Please do not hesitate to contact me at James.Feinstein@arcadia.com or 202 999 8916 if you would like to discuss further.

Sincerely,

James Feinstein Policy Director

Arcadia

Tesla written testimony in support of SB 959.pdfUploaded by: Jordan Graham



Testimony of Jordan Graham on Behalf of Tesla in Favor of SB 959 SB 959- Distributed Renewable Integration and Vehicle Electrification Act (DRIVE Act)

Senate Education, Energy, and the Environment Committee February 29, 2024

To the Chairman and Honorable Members of the Committee:

Tesla submits these written comments in **SUPPORT** of SB 959 (DRIVE Act). The DRIVE Act would enable and implement an important set of tools that can be used jointly by Maryland utilities and consumers to manage grid stress, improve the reliability of electric service, and cost-effectively leverage customer-sited energy assets for the benefit of all ratepayers. With the increasing adoption of customer-sited battery energy storage systems and electric vehicles, it is imperative that utilities implement programs that incentivize customers to volunteer the untapped value of their distributed energy resources (DER) to support state energy goals and the broader electric system.

Tesla's mission is to accelerate the world's transition to sustainable energy. Tesla is a leading original equipment manufacturer (OEM) of electric vehicles, and a leading OEM and installer of residential solar and battery energy storage systems, grid-scale battery energy storage systems, and electric vehicle charging equipment.

Tesla is particularly supportive of the DRIVE Act's direction for the Maryland Public Service Commission to establish a program to compensate owners and aggregators of DER on a pay-for-performance basis for the electric distribution system support services that they provide. Maryland residents have installed over 3,700 of Tesla's residential battery energy storage devices, the Tesla Powerwall. Customers purchase Powerwalls and other battery energy storage systems primarily to provide their own home with a source of backup power in the case of a grid outage. However, customers in the Northeast, California, Puerto Rico, Texas, and numerous other states have repeatedly shown that they will allow their batteries to be aggregated together and used collectively for the benefit of the grid if they are given the correct opportunity, compensation, and program design. The DRIVE Act directs the Maryland Public Service Commission and the state's utilities to implement programs to do exactly that.

The simple fact is that Maryland and other states cannot afford to forego using the untapped value that can be provided by distributed battery systems already deployed in the state. As more vehicles and appliances are electrified, as a glut of data centers come online, and as more industrial facilities are built, utilities are finding themselves increasingly strained to serve the new load and are often under-projecting their future energy needs. After years of flat peak electricity demand, data from the Federal Energy Regulatory Commission (FERC) released in December shows that utility load growth forecasts nationally had jumped 81% compared to projections from just two years ago. In January, PJM tripled its annual load growth forecast over the next decade, driven by data center growth and electrification. Georgia Power recently announced that its 2030 load growth projections are now roughly 17-times higher than what the utility projected just two years ago. Meanwhile, in Dominion Energy in Virginia, the utility estimates that its data center capacity could double in the next four years, despite already comprising roughly one-fifth of the utility's load.

As Maryland prepares for similar growth opportunities and scenarios, it is imperative that utilities and policymakers seek to fully leverage the energy resources that already are on the grid. The DRIVE Act would direct Maryland regulators and utilities to do exactly that. Not only would these programs put to use what would otherwise be untapped resources, but they also would allow residential customers to participate in the clean energy transition and to use the resources that they've already purchased and installed to benefit their state and community. Providing customers fair compensation for the services that their energy systems provide also improves the economics of owning such systems, and effectively decreases total system ownership costs. At a time when Maryland has set a target of brining online 3 gigawatts of battery energy storage capacity by 2033, these sorts of customer-focused VPP programs are essential to meeting those aims.

Tesla has experience managing aggregations of residential battery energy storage systems – often called virtual power plants (VPP) – in dozens of utility territories across the nation. The programs have a proven track record of providing ratepayer savings and increasing grid reliability. In the Northeast, the ConnectedSolutions battery VPP program has brought proven load reduction and ratepayer savings in Massachusetts, Connecticut, Rhode Island, and New Hampshire. In Vermont, Green Mountain Power's VPP program, has been saving ratepayers between \$2 million and \$3 million annually since 2018.⁵. In California, the Emergency Load Reduction Program launched in 2021, and in 2022 CAISO credited the utility program with helping to avoid the need for rolling

¹ "US electricity load growth forecast jumps 81% led by data centers, industry: Grid Strategies." Utility Dive. 13 Dec. 2022.

² "PJM triples annual load growth forecast to 2.4% driven by data centers, electrification." Utility Dive. 9 Jan. 2024.

³ Georgia Power 2023 Integrated Resource Plan Update. Oct. 2023.

⁴ "Dominion: Virginia's Data Center Cluster Could Double in Size." Data Center Frontier. 11 Oct. 2024.

⁵ "GMP's Energy Storage Programs Deliver \$3 Million In Savings for All Customers During 2020 Energy Peaks." 29 Sept. 2020.

blackouts.⁶ A recent Department of Energy report projected that multi-resource VPPs could address roughly 10-20% of peak demand by 20230, helping to avoid \$10 billion in annual grid costs.⁷

The other policies in the DRIVE Act also would work toward reducing peak demand and improving grid reliability. Time-of-use electricity rates help alleviate grid stress by incentivizing electricity use during times of lower demand. And facilitating installation or interconnection of bidirectional electric vehicle systems creates a pathway for EVs to provide backup power to customers or potentially to participate in the same type of VPP programs as stationary battery energy storage systems.

For all these reasons, Tesla offers its full support of SB 959 and respectfully requests a favorable report from this committee.

Respectfully,

/s/ Jordan Graham
Sr. Energy Policy Advisor
Tesla, Inc.
jordgraham@tesla.com

⁶ "Californians saved the grid again. They should be paid more for it." Canary Media. 15 Sept. 2022.

⁷ "<u>The Pathway to: Virtual Power Plants Commercial Liftoff.</u>" U.S. Department of Energy. September 2023.

SB 959 - MDLCV Support - The DRIVE Act.pdf Uploaded by: Kristen Harbeson



Kim Coble Executive Director February 29, 2024

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Support SB 959 - Electricity - Tariffs, Distributed Energy Resources, and Electric Distribution System Support Services (Distributed Renewable Integration and Vehicle Electrification (DRIVE) Act)

Mr. Chair and Members of the Committee:

Maryland LCV supports SB 959 and we thank Chair Feldman for his leadership on this issue. The DRIVE Act is designed with consumers and the grid of the future in mind. It directs the Public Service Commission (PSC) to:

- 1. Adopt a transition plan requiring each electric company to transition customers to a time-of-use system, to incentivize customers to use less electricity at peak demand on the grid,
- 2. Establish "virtual power plants," where customers can work with utilities and renewable energy and on-site storage companies to supply energy to the grid to meet demand and get compensated for it, and
- 3. Streamline the process for bi-directional electric vehicles to connect and operate with the grid.

The PSC conducted a pilot program exploring time-of-use (TOU) utility rates, and issued a report in July 2022. "The Pilot results indicated that both overall and low- and moderate-income customers responded to TOU rates by shifting a significant amount of consumption usage off-peak during both summer and winter months." In the pilot program, customers across all income groups saw reductions in both their on-peak usage and their monthly utility bill. We support components of the bill that require outreach to customers about these programs, and include provisions for protections and additional incentives for low and moderate income households.

The other two key programs in the bill, virtual power plants (VPP), and bi-directional EV charging are further innovations to stabilize the grid through consumer incentives. Although the direct financial gain will not be available to all Marylanders, "if developed and operated with environmental and energy justice in mind, VPPs also have the potential to reduce greenhouse gas emissions, improve indoor and outdoor air quality, support workforce and economic development, and address challenges faced by underserved communities, such as energy burden."²

As we transition to 100% clean energy by 2035, these kinds of win-win solutions in the near term that incentivize good consumer choices to stabilize the grid become increasingly important.

Maryland LCV urges a favorable report on SB 959.

¹ PSC Order90298 In the Matter of Transforming Maryland's Electric Distribution Systems to Ensure that Electric Service is CustomerCentered, Affordable, Reliable and Environmentally Sustainable in Maryland July 2022

² Virtual Power Plants and Energy Justice, National Renewable Energy Laboratory, October 2023

SB 959 Electricity - Tariffs, Distributed Energy R Uploaded by: Michelle Dietz



The Nature Conservancy Maryland/DC Chapter 425 Barlow Pl., Ste 100 Bethesda, MD 20814 tel (301) 897-8570 fax (301) 897-0858 nature.org

Thursday, February 29, 2024

TO: Brian Feldman, Chair of the Senate Education, Energy, and the Environment Committee, and Committee Members

FROM: Cait Kerr, The Nature Conservancy, State Policy Manager; Michelle Dietz, The Nature Conservancy, Director of Government Relations

POSITION: Support SB 959 Electricity - Tariffs, Distributed Energy Resources, and Electric Distribution System Support Services (Distributed Renewable Integration and Vehicle Electrification (DRIVE) Act)

The Nature Conservancy (TNC) supports SB 959 offered by Senator Feldman. SB 959 directs the Public Service Commission (PSC) to adopt a transition plan requiring each electric company to transition customers to a time-of-use system, in order to incentivize customers to reduce electricity use at peak demand on the grid. The PSC is also directed to establish "virtual power plants," (VPPs) where customers can work with utilities, renewable energy, and on-site storage companies to supply energy to the grid to meet demand and receive compensation for this. SB 959 also calls for streamlining the process for bidirectional electric vehicles (EVs) to connect and operate with the grid, which is consistent with the Maryland Commission on Climate Change's (MCCC) recommendations within the 2023 Annual Report.

The PSC has conducted a pilot program exploring time-of-use (TOU) utility rates and issued a report in July 2022. This report found that "both overall and low- and moderate-income customers responded to TOU rates by shifting a significant amount of consumption usage off-peak during both summer and winter months." In the pilot program, customers across all income groups saw reductions in both their on-peak usage and in their monthly utility bill. TNC supports components of the bill that require outreach to customers about these programs, and include provisions for protections and additional incentives for low- and moderate-income households.

The other two key programs in the bill, VPPs and bidirectional EV charging, represent further innovations to stabilize the grid through consumer incentives. VPPs can reduce emissions, support economic growth, and decrease energy burden. With regard to bidirectional EV charging, the MCCC's 2023 Annual Report recommends, "When setting standards, the state should require that the wiring installed for EV chargers be of a sufficient gauge to be ready for vehicle-to-grid (V2G) bidirectional charging. The current practice of installing 8 gauge wire for one-directional charging limits the ability of EVs with bidirectional charging to backflow power to the home/building/grid. Wire gauge standards should also be included in the requirements for projects that would be eligible to receive state funding for the EVSE installations. Installing the right gauge wire now could prevent expensive rewiring projects in the future." SB 959 aims to provide innovative market incentives to accelerate the process of connecting and operating bidirectional EVs with the grid.

TNC commends Senator Feldman on introducing this bill. As Maryland transitions to a clean energy economy, innovative, win-win solutions are increasingly important in the near-term to incentivize beneficial consumer choices and stabilize the grid.

Therefore, we urge a favorable report on SB 959.

CHESSA - DRIVE Act One Pager.pdf Uploaded by: Robin Dutta



The Distributed Renewable Integration and Vehicle Electrification (DRIVE) Act

SB959 Feldman HB1

HB1256 Fraser-Hidalgo

Innovation and consumer empowerment to create a more affordable, reliable, and cleaner electric grid

- * The DRIVE Act will create an open-access platform for aggregating and compensating consumer-facing advanced energy systems for their help in managing the electric grid.
- Advanced energy systems, aka Distributed Energy Resources (DERs) can be solar, battery storage,
 electric vehicles (EVs), smart appliances, and building energy management software.
- * Build off of the PSC's successful time-of-use (TOU) electric rate pilot program
 - Pilot found that consumers across all income groups saw reductions in both their on-peak electric demand and their total monthly bill using TOU rates
 - * DRIVE Act requires the utilities to transition their customers to TOU rates by 2028
- Create beneficial electrification programs, where consumer-facing advanced energy systems (ie. residential solar + storage + EV)
 - New commission programs would create "virtual power plants" which allow a group of DERs to act together and relieve grid strain at critical times
 - * Virtual Power Plants are being championed by the U.S. Department of Energy as low cost alternatives to traditional utility resources with the same or greater community benefits
 - * DERs would be compensated for reducing local electric demand and/or injecting power into the grid when needed.
- * Harness the power of EVs to power homes and reduce grid strain
 - * An EV can serve as a home battery back-up and be help the grid if it has a bi-directional electric charger (energy can flow both ways)
 - * DRIVE Act would require the PSC to streamline the process for bi-directional EV charging
- With active community participation in controlling the electric grid, Maryland can achieve its clean energy goals, reduce fossil fuel consumption, and provide consumers with improved energy resilience in the face of extreme weather and an increasingly volatile climate future.

CHESSA - MD - EEE Testimony SB959 Favorable 202402 Uploaded by: Robin Dutta



29 February 2024

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

Written Testimony

SB959: Electricity - Tariffs, Distributed Energy Resources, and Electric Distribution System Support Services (Distributed Renewable Integration and Vehicle Electrification (DRIVE) Act)

Position: Favorable

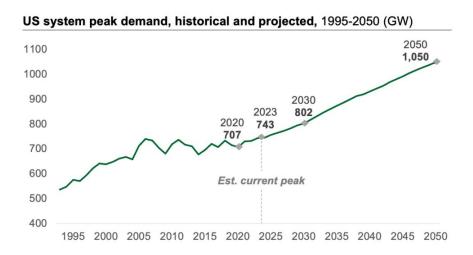
Chair Feldman, Vice Chair Kagan, Members of the Committee, thank you for the opportunity to testify on Senate Bill 959, Electricity - Tariffs, Distributed Energy Resources, and Electric Distribution System Support Services (Distributed Renewable Integration and Vehicle Electrification (DRIVE) Act). I am Robin Dutta, the Executive Director of the Chesapeake Solar and Storage Association (CHESSA). Our association has over 100 member companies in 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 SB959, Electricity - Tariffs, Distributed Energy Resources, and Electric Distribution System Support Services (Distributed Renewable Integration and Vehicle Electrification (DRIVE) Act. I'm very glad to be able to testify in support of the DRIVE Act. It's a critical piece of legislation to move Maryland to the next generation of consumer energy policy, improve resiliency and reliability when consumers need it most, and ensure that all of Maryland can unlock a low cost and equitable clean energy transition. This legislation is focused on people – how to empower and equip them with clean energy and back-up power, enable them to actively help utilities lower their costs, and lower their own energy costs.

The Changing Electric Grid

Maryland is not only undergoing a clean energy transition, but also changing how it is powered. As Marylanders make the move towards building and transportation electrification, they will become more reliant on the electric grid than at any previous point. The grid of the future will have the combined roles that today's grid, natural gas system, and gas stations have. In order for that grid to serve those roles, it will need to look and act differently. It willneed to account for 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. If clean energy policy lowers peak demand, it lowers the cost of the grid. For the

everyday Maryland consumer, this would mean that critical grid events and spiking wholesale energy prices would occur less frequently, in less duration, and in lower extremes.



States across the country, including Maryland, are just beginning to incorporate assumptions for building and transportation electrification into their projections. In a 2023 report, the U.S. Department of Energy estimates that nationwide peak demand will increase by over 40 percent by 2050. The above chart, from that report, illustrates that projection. However, there is a lag in Maryland data and modeling. The November 2023 report from the Public Service Commission to the Department of Natural Resources, "Ten-Year Plan (2023-2032) of Electric Companies in Maryland", does not even reference electric vehicles and their anticipated grid impact. The Maryland energy grid problem is vastly understated as a result. If Maryland's electric future follows anywhere near 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 and energy storage adoption of all kinds, as soon as possible.

Re-Thinking the Electric Grid

It is essential that Maryland's clean energy scale up comes at the lowest cost with the highest value. Put another way, Maryland needs to lower that runaway peak demand that could come from electric vehicle adoption. 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.

That is what makes the DRIVE Act so important – it would create foundational policies that modernize the electric grid and unlock the inherent benefits from a range of customer-facing advanced energy technologies.

- Time-of-use retail electric rates can influence consumer behavior, accurately reflect the cost
 of utility service, and encourage consumers to adopt technologies that will both save them
 money and help reduce the cost of the electric grid.
- The grid services program can lower peak demand locally and become a lower cost source of energy for utilities versus traditional methods of procuring wholesale electricity from the transmission grid.
- Advanced energy technologies can work together to increase consumer and grid benefits. A
 home can have smart appliances, solar and energy storage, and an electric vehicle and
 shape its own energy usage in a way that relieves strain on the grid.

Here's what this can mean for a homeowner – for consumers who adopt advanced energy technologies such as solar, battery storage, electric vehicles (EVs) and home chargers, and smart thermostats, they can lower their monthly utility bills and contribute to a lower cost grid (ie. fewer surcharges). Adopting those systems could be easier because of multiple state and federal incentive programs. And then, during normal use, they could apply settings to let their home energy system reduce their demand of the grid in response to utility needs without necessarily needing to conserve. During a summer heat wave, home batteries could discharge extra energy to the grid while those homes are still using air conditioning, saving the utility from rationing energy and creating rolling blackouts. Their EV could be charged from their solar and battery system, preventing further grid strain. And the utility could be lowering their costs – even when compensating these virtual power plants – because their customers are grid assets that provide a lower cost service than the current, traditional methods.

For these reasons, CHESSA asks the committee to issue a favorable report on SB959. Please reach out with any questions on solar and storage policy. CHESSA is here to be a resource to the committee.

Sincerely.

Robin K. Dutta

Executive Director (acting)

Rom K. Sulla

Chesapeake Solar and Storage Association

robin@chessa.org

Sunrun SB 959 Favorable Testimony.pdfUploaded by: Thadeus Culley Position: FAV

Sunrun's Testimony in Favor of SB 959

SB 959- Distributed Renewable Integration and Vehicle Electrification Act (DRIVE Act)

Senate Education, Energy, and the Environment Committee February 29, 2024

Thad Culley, Director of Public Policy
Sunrun

To the Chairman and Honorable Members of the Committee:

Sunrun supports SB 959 (DRIVE Act) because it provides consumers the tools that they will need to be active participants in solving the challenges of Maryland's energy transition. Well-designed time-variant electric rates and a platform for customer-sited distributed energy resources (DERs) to perform valuable support services for the electric grid are critical to mitigating the cost of meeting new load from widespread electrification and accommodating the addition of new distributed energy resources.

Sunrun is the nation's largest provider of residential solar and battery storage services, with nearly one million customers across twenty-two states, Puerto Rico, and the District of Columbia.

The DRIVE Act harnesses the power of consumers to reliably meet Maryland's future energy needs.

The Maryland PSC's recent Electrification Study (Brattle Group) informed the General Assembly that electric load growth is likely to occur over the next decade as more consumers switch to electric appliances from gas and continue to invest in electric vehicles. Nationally, this trend is clear, with headlines like "The Era of Flat Load Growth Is Over" appearing in electric industry trade publications. Utilities around the country are finding that their traditional approaches to load forecasting are inadequate to capture both anomalous weather events and the actual rate of load growth due to population and economic expansion. Thus, while the Brattle Group report on electrification might provide some initial comfort that the grid can handle what is coming, it does not examine the granular, local impacts of load growth on the cost of the electric system.

¹ https://www.brattle.com/insights-events/publications/brattle-electrification-study-for-maryland-shows-that-electricity-demand-growth-in-high-electrification-scenarios-would-be-comparable-to-or-lower-than-historical-growth-rates/

² https://www.utilitydive.com/news/electricity-load-growing-twice-as-fast-as-expected-Grid-Strategies-report/702366/

The grid of the future will put a premium on flexibility and resilience to hedge against the risks of climate change and load growth trends to electric reliability.

The DRIVE Act is intended to leverage the power of consumers to positively shape the load growth of the future to more effectively utilize existing grid infrastructure and to mitigate the amount and cost of future grid upgrades required to meet Maryland's clean energy and greenhouse gas reduction goals. The DRIVE Act accomplishes this in two ways. First, it encourages utilities to move to significant enrollment in time-of-use rates to help shift consumer electric usage to off-peak periods, which also tend to be times of lower carbon intensity. Second, it requires the Public Service Commission to establish an initial pilot program to encourage greater consumer adoption of local clean energy generation and battery storage to participate in demand response and grid support services programs, while developing regulations to govern the compensation of the full universe of controllable devices in consumers' homes and businesses.

The DRIVE Act establishes a pay-for-performance model that will create a retail program to compensate distributed energy resources (DERs) and those who aggregate these resources to operate to improve the efficient utilization of the grid. Currently there is no mechanism to compensate these resources outside of technology-specific, limited scale demand response programs. The DRIVE Act seeks to unlock consumer behaviors through time-of-use rates and consumer technologies through a pay-for-performance mechanism to make the future grid much more flexible and capable of adapting to dynamic conditions.

Greater emphasis on time-of-use pricing will help reduce electric system costs.

As the Public Service Commission's time-of-use rate design study found, participants (including low-income customers) in a time-of-use rate can reduce their peak-time consumption by as much as 10-15%. Despite these promising results, time-of-use rates remain at a pilot scale with low participation. Overcoming the inertia of the traditional approach to rate design will take an intentional push. The DRIVE Act does this by asking the Commission to align the incentives of the utilities and consumers to achieve system savings and bill savings by responding to lower cost off-peak power to shift discretionary consumption away from constrained, on-peak hours. The success of time-of-use in producing savings is likely to have a contagious effect as consumers learn of the savings that are possible and the utilities offer tools to demonstrate how time-of-use rates could benefit the customer's household or business.

Consumer-sited DERs, orchestrated to support the grid, will create significant ratepayers savings.

As the United States Department of Energy Loan Programs Office recently reported, controllable consumer devices (e.g., rooftop solar and battery storage, smart thermostats,

³ https://www.brattle.com/insights-events/publications/study-by-brattle-economists-evaluates-time-of-use-tou-pilots-for-maryland-utilities/

electric vehicles) hold the potential to significantly mitigate the cost of an electrified and clean energy future. The *Commercial Liftoff Report for Virtual Power Plants*⁴ estimates that the orchestration of these devices through "virtual power plants" could save the nation over \$10 billion dollars annually. That number could be conservative.

The DRIVE Act unlocks the power of virtual power plants for Maryland by creating an open-access model to allow consumers to bring their own devices—and to work through non-utility aggregators to help manage and deliver the performance of these devices according to utility needs—to be compensated for supporting the electric grid. Utilities will still conduct the orchestra of devices to meet the grid's needs, but they cannot artificially limit the size or potential of these consumer-driven programs to offset the need for utility infrastructure. The DRIVE Act unleashes the latent potential of consumer devices to obviate the need for certain utility investments and to drive down or eliminate the need to ever operate dirty peaker plants that are often located in communities that bear the environmental impact of their operation.

Rooftop solar + battery storage provides flexible, clean, and local generation.

Electric demand flexibility is paramount to balancing the needs of the grid as Maryland seeks to decarbonize and switches to deeper reliance on renewable energy resources sited in Maryland. Distributed generation has the additional benefit of avoiding the electricity losses that occur when electrons are transmitted long distances over grid infrastructure to serve the ultimate consumer. A consumer with rooftop solar and a battery storage device, on the other hand, can operate a "virtual power plant" with no emissions and with virtually no electric losses as the load is being served right where the electricity is generated. In the event that a customer with solar+storage exports power, the neighboring customers of the utility will get the benefit of this clean, local power. Aggregators, such as Sunrun, can operate the solar+storage system to meet the customer's preferences—preserving their experience of the product—while balancing the opportunities to participate in grid support. The intent of any grid support program is to make it seamless and easy for the consumer, while providing an additional revenue stream to make access to these products even more affordable.

The DRIVE Act is complementary to multiple ongoing PSC workstreams.

The Public Service Commission is currently examining many of the topics and challenges that the DRIVE Act seeks to solve. There are working groups examining time-of-use rates, the cost-effectiveness of DERs, the Maryland Energy Storage Program, electric vehicles, the interconnection of DERs, and distribution system planning, to name a few. The DRIVE Act will

⁴ https://liftoff.energy.gov/VPP/

⁵ Despite the popular term "virtual power plant," these aggregated resources are physical assets that perform tasks with temporal and locational value to the electric grid. In the DRIVE Act, these resources are located behind the meter of retail electric utility customers.

provide additional focus to these ongoing processes to create a more integrated approach to these workstreams.

The DRIVE Act puts consumers behind the wheel of Maryland's energy transition.

Sunrun believes that our consumers are the heroes of the energy transition story. They are making an investment or commitment to change how they consume electricity and they have the potential to utilize their own devices to provide a service to the grid and to all other consumers. Sunrun has direct experience leveraging and aggregating our consumers to deliver benefits to the grid and to create additional value for the customers. In the summer of 2023, Sunrun aggregated over 8600 customers with solar + storage to provide the nation's largest virtual power plant demonstration to date. These customers were able to deliver an average of 27 MW of capacity to the utility during the targeted time windows. Sunrun's deep belief in a consumer-led transformation of the electric sector is why we are enthusiastically supporting SB 959 and respectfully request a favorable report from this committee.

Respectfully submitted,

/s/

Thad Culley
Director, Public Policy
Sunrun
thad.culley@sunrun.com

2024- SB959- PHI- FWA.pdfUploaded by: Anne Klase Position: FWA





February 29, 2024

112 West Street Annapolis, MD 21401

FAVORABLE WITH AMENDMENTS – Senate Bill 959- Electricity - Tariffs, Distributed Energy Resources, and Electric Distribution System Support Services (Distributed Renewable Integration and Vehicle Electrification (DRIVE) Act

Potomac Electric Power Company (Pepco) and Delmarva Power & Light Company (Delmarva Power) support with amendments Senate Bill 959- Electricity - Tariffs, Distributed Energy Resources, and Electric Distribution System Support Services (Distributed Renewable Integration and Vehicle Electrification (DRIVE) Act. This legislation requires the Public Service Commission (PSC) to adopt a transition plan requiring each electric company to transition each customer rate class to a time of use (TOU) tariff by September 1, 2028. The electric companies transition plan shall include provisions to ease the transition to a TOU tariff for customers in low-and moderate-income households. Additionally, the TOU tariff shall include establishing a sufficient price reduction for off-peak hours compared to peak hours to encourage customers to adjust their electricity usage, adequate education for customers to adjust their usage.

Pepco and Delmarva Power support the concept of TOU rates and the ability for our customers to participate in TOU programs should they elect to do so. Properly designed and deployed, TOU rates can help customers save money by shifting their electricity usage away from high-priced time periods. Currently, Pepco and Delmarva Power offer a variety of TOU offerings, including a whole house EV TOU rate to residential customers that own or lease EVs with an electric range of greater than 30 miles. This EV TOU rate option is designed to incentivize customers to charge EVs off-peak and thereby reduce overall costs of owning an EV by utilizing higher electricity usage when costs are lower.

Pepco and Delmarva Power appreciate the collaborative efforts between all stakeholders to address questions and concerns pertaining to this legislation and we are committed to continuing to work on amendments. However, as drafted, Pepco and Delmarva Power are concerned with the requirement in Senate Bill 959 that requires electric companies to transition all customers to TOU rates in the form of an opt-out program. Pepco and Delmarva Power recently completed a pilot approved by the PSC to offer whole house TOU rates. The pilot program was opt-in for customers, meaning that they volunteered and consented to participate in the pilot. The PSC approved this limited program, however raised concerns about implementation costs as the program benefited a very small number of customers. The program allowed Pepco and Delmarva Power to assist customers in understanding and managing their EV charging load, collect data and information on EV charging patterns and behavior to enable the design of future rates, technology opportunities, and other EV programs, and collect data and information on grid impacts. Pepco and Delmarva Power found that while this small EV TOU program was challenging and expensive to market to customers, and it was difficult to quantify the information learned in a statistically significant way, overall, we did gain additional knowledge and collect data as the pilot was intended to do, therefore, we support the opportunity to gain additional learnings from an expanded pilot program under this legislation.

Additionally, while supportive of the overall concept, Pepco and Delmarva Power are concerned about being able to meet any sort of deployment goal given prior experience with the difficulty in enrolling customers in the TOU pilot approved by the PSC. While Pepco and Delmarva Power appreciate and support the idea of performance incentive mechanisms (PIMS) being included in the bill, given past experiences with low participation rates from customers, we suggest additional language be added that ensures utilities are not penalized for failing to meet the penetration targets. Additionally, Pepco and Delmarva Power note that Senate Bill 959 will have significant impacts on our billing systems, which will require time to implement and will result in costs to customers.

Finally, there are many nuances with legislation like Senate Bill 959 and there is likely benefit to letting the existing TOU working group under the PC44 docket at the PSC further opine on the topics up for consideration in this legislation as they have been in recent months.

Pepco and Delmarva Power have had productive discussions with the main proponents of this legislation as well as the bill sponsors and we look forward to continuing conversations with the bill sponsors and stakeholders involved.

Contact:

Anne Klase Senior Manager, State Affairs 240-472-6641 Annek.klase@exeloncorp.com Katie Lanzarotto
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BGE_ECM_SWA_Senate Bill 959 - Electricity - TariffUploaded by: Charles Washington, Vice-President of Government & Externa

Position Statement



Support with Amendment Education, Energy, and the Environment 2/29/2024

Senate Bill 959 - Electricity - Tariffs, Distributed Energy Resources, and Electric Distribution System Support Services (Distributed Renewable Integration and Vehicle Electrification (DRIVE) Act

Baltimore Gas and Electric Company (BGE) supports with amendments Senate Bill 959 – Electricity – Tariffs, Distributed Energy Resources, and Electric Distribution System Support Services (Distributed Renewable Integration and Vehicle Electrification (DRIVE) Act. Senate Bill 959 requires the Maryland Public Service Commission (Commission), on or before December 31, 2025, to adopt a transition plan requiring each electric company to transition each customer to a time-of-use (TOU) tariff rate by September 1, 2028.

Energy companies know when stress on the grid will be at its highest. To ensure all customers can be served, generation companies need to ensure that power plants are operational and meet the demand. When demand increases, generation companies will either generate more power in advance to meet the peak or purchase extra energy, which can cost more. TOU rates are one tool that can help manage peak demand growth better and the need for building additional generation. TOU rates are when the amount a customer pays is based on the time of day when the electricity is consumed. Customers are charged higher rates when using electricity during peak hours.

BGE supports our customer's ability to affirmatively choose TOU rates, i.e., they can opt-in to a TOU rate offering. In fact, time-of-use rates are available to BGE customers in many offerings today. We offer supply-only electric vehicle, supply, and distribution (whole bill) TOU rates, as well as other forms of time-varying rates. BGE strongly supports time-varying rates programs like our Smart Energy Rebate program. The program incentivizes customers to change their usage behavior by offering a credit per kilowatt hour that the customer reduces (compared to a recent baseline of their usage) during a peak event. This program has been successful and demonstrates how an opt-out TOU program that penalizes customers with higher prices during peak periods may not be necessary.

BGE, headquartered in Baltimore, is Maryland's largest gas and electric utility, delivering power to more than 1.3 million electric customers and more than 700,000 natural gas customers in central Maryland. The company's approximately 3,400 employees are committed to the safe and reliable delivery of gas and electricity, as well as enhanced energy management, conservation, environmental stewardship and community assistance. BGE is a subsidiary of Exelon Corporation (NYSE: EXC), the nation's largest energy delivery company.

Position Statement



BGE believes that TOU rates can help some customers on their electrification journey, it is not a complete solution for all customers. We are working with the sponsor to amend the provisions requiring all customers to be on TOU rates in the form of an opt-out program. BGE recently completed a pilot approved by the Commission to offer whole bill TOU rates. The pilot program was opt-in for customers, meaning that they volunteered and consented to participate in the pilot. Throughout the pilot, BGE provided educational information and helpful tips to promote bill savings by changing their usage behavior. For the pilot, which included an incentive for participation and resulted in participants generally seeing savings, BGE had less than a 2% enrollment rate and by the end of the pilot many of those customers chose to leave the program. We have additional concerns with this legislation and are working with the bill sponsor to come up with language that provides customer choice and gives the Public Service Commission flexibility to explore time-varying offerings for the future.

Based our discussions, BGE is encouraged that this concern, amongst others, will be addressed with forthcoming amendments. For these reasons, BGE respectfully requests that the Committee issue a favorable report with amendments for Senate Bill 959.

BGE, headquartered in Baltimore, is Maryland's largest gas and electric utility, delivering power to more than 1.3 million electric customers and more than 700,000 natural gas customers in central Maryland. The company's approximately 3,400 employees are committed to the safe and reliable delivery of gas and electricity, as well as enhanced energy management, conservation, environmental stewardship and community assistance. BGE is a subsidiary of Exelon Corporation (NYSE: EXC), the nation's largest energy delivery company.

SB0959 OPC Testimony.pdf Uploaded by: David Lapp Position: FWA

DAVID S. LAPP PEOPLE'S COUNSEL

——— OPC —

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CARISSA RALBOVSKY
CHIEF OPERATING OFFICER

BILL NO.: Senate Bill 0959 - Electricity - Tariffs, Distributed Energy

Resources, and Electric Distribution System Support Services

(Distributed Renewable Integration and Vehicle

Electrification (DRIVE) Act)

COMMITTEE: Education, Energy, and the Environment

HEARING DATE: February 29, 2024

SPONSOR: Senator Feldman

POSITION: Favorable with amendments

The Office of People's Counsel ("OPC") supports Senate Bill 959 with the amendments described below. With these amendments, SB 959 has the potential to help the State achieve its energy and climate goals at least cost to utility customers.

As technology, economics, and climate policy drive utility customers away from reliance on fossil fuels and towards electrification, well-designed time-of-use ("TOU") electricity pricing and the deployment of distributed energy resources ("DERs") can both help to reduce the need for new electric infrastructure—and so minimize increases in electricity rates. A December, 2023 analysis by the Public Service Commission ("PSC") bears this out. That analysis, which the General Assembly directed in the Climate Solutions Now Act, found that demand-side management ("DSM") programs—including managed electric vehicle charging, behind-the-meter battery storage, and expanded time-varying rates—have the potential to reduce electricity load growth by 0.2 to 1.2% per year. Reducing load growth reduces the likelihood of costly electric system upgrades that might otherwise be needed to meet increased demand—in turn, reducing the revenue electric companies will seek to recover from their customers.

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¹ Serigici, Ramakrishnan, et al., *An Assessment of Electrification Impacts on the Maryland Electric Grid*, prepared by the Brattle Group for the Maryland Public Service Commission with support from Applied Energy Group and Mondre Energy (Dec. 19, 2023), at p. 3, *available at* https://www.psc.state.md.us/wpcontent/uploads/MD-PSC-Electrification-Study-Report.pdf.

With amendments, SB 959 has the potential to reduce load growth and utility customer costs in at least two ways: first, by directing each electric company to offer at least one time-of-use rate, designed to encourage customers to adjust electricity usage to off-peak hours; and second, by directing the PSC and each electric company to develop a pilot program or temporary tariff to incentivize customers' adoption of DERs.

OPC supports the bill's intent to encourage customers to shift their energy usage to off-peak times through the implementation of time-of-use rates. As introduced, SB 959 would require each electric company to transition each customer to a TOU rate before September 1, 2028, unless the customer opts out. While OPC agrees that widespread behavior change will eventually be required, certain groups of customers will have difficulty in successfully shifting their energy usage. Low- and moderate-income customers, along with the elderly and medically challenged customers, are especially likely to face challenges. For this reason, OPC strongly supports an amendment—which we understand to be forthcoming—to drop the current language establishing an opt-out model in favor of an opt-in model with enrollment targets. We understand that the amendment will also require electric companies to report on their efforts to drive enrollment in TOU rates, which will bolster current efforts at the PSC to study the feasibility and merits of transitioning all customers to TOU rates.

OPC also supports the bill's intent to incentivize more customer adoption of DERs, such as residential solar and battery storage, and more customer participation in load management programs. Although it is unclear to us whether the additional incentives called for in the bill—pay-for-performance compensation or upfront incentives or rebates—are necessary given the other incentives currently available, SB 959 includes important protections for non-participating customers against excessive costs, including (1) authorizing but not requiring the PSC to approve any pilot program or temporary tariff proposed by an electric company and (2) directing that costs be recovered by the electric company within the calendar year in which those costs were incurred to the extent feasible. We understand that a forthcoming amendment will limit the cumulative capacity of the DERs participating in a pilot program or temporary tariff to no more than two percent of the electric company's historic coincident peak demand.

As introduced, SB 959 authorizes an electric company to "pursue and use a performance incentive mechanism to cover the cost of using distributed energy resources or an aggregator of distributed resources under this subtitle." OPC respectfully requests that the Committee adopt an amendment to clarify that any proposal for a performance incentive mechanism is subject to PSC review and approval:

NOTWITHSTANDING ANY PROVISION OF THIS SUBTITLE, AN ELECTRIC COMPANY MAY <u>PROPOSE</u> <u>PURSUE AND USE</u> <u>AND THE COMMISSION MAY APPROVE IF IT FINDS THAT IT IS IN THE PUBLIC INTEREST</u>, A PERFORMANCE INCENTIVE MECHANISM TO COVER THE COST OF USING

DISTRIBUTED ENERGY RESOURCES OR AN AGGREGATOR OF DISTRIBUTED RESOURCES UNDER THIS SUBTITLE.
Recommendation : OPC requests a favorable Committee report on SB 959 with the amendments described above.

SB 959 - MoCo DEP - Fitzgerald_FWA (GA 24).pdf Uploaded by: Garrett Fitzgerald

Position: FWA

ROCKVILLE: 240-777-6550 ANNAPOLIS: 240-777-8270

SB 959 DATE: February 28, 2024

SPONSOR: Senator Feldman

ASSIGNED TO: Education, Energy, and the Environment Committee

CONTACT PERSON: Garrett Fitzgerald (garrett.fitzgerald@montgomerycountymd.gov)

POSITION: Favorable with Amendments (Department of Environmental Protection)

Electricity - Tariffs, Distributed Energy Resources, and
Electric Distribution System Support Services
(Distributed Renewable Integration and Vehicle Electrification (DRIVE) Act)

This legislation would require the Maryland Public Service Commission (PSC) to engage electric utilities to transition customers to time-of-use electricity rates, and to develop pilot programs to compensate the owners of distributed energy resources for providing demand response services that contribute to the efficient and reliable operation of the electric distribution system.

We support the general intent of this bill. Time-of-use rates and demand response services have the potential to benefit customers and shift the timing of certain energy uses to reduce peak demand on the grid. Reducing peak demand can help to avoid outages, costly investments in transmission and distribution infrastructure, and greenhouse gas emissions and air pollution associated with the operation of peaker plants.

However, we have concerns with certain aspects of the bill which we hope will be addressed through amendments. First, we would prefer that the time-of-use rates required by the bill be fully developed and evaluated before a decision is made regarding whether customers should be defaulted into those rates with the opportunity to opt out, as stated in the bill, or instead receive education and be given the opportunity to opt in to using those rates. Second, we encourage the Committee to consult with the PSC to ensure the bill includes proper requirements for noticing and agreements that a customer should have in place with their electric provider regarding potential charging from a bidirectional electric vehicle (see language on page 6, lines 18-20).

With amendments to address those issues, we would respectfully encourage the Education, Energy, and the Environment Committee to give Senate Bill 959 a favorable report.

Advanced Energy United SB 959 Testimony.pdf Uploaded by: Nick Bibby

Position: FWA



SB 959 – Distributed Renewable Integration and Vehicle Electrification (DRIVE) Act

Senate Education, Energy, and Environment Committee February 29th, 2024

Nicholas Bibby, Maryland State Lead, Advanced Energy United

Position: Favorable with Amendments

Mr. Chairman and Honorable Members of the Committee:

Advanced Energy United ('United') is writing in support of Senate Bill 959, the Distributed Renewable Integration and Vehicle Electrification (DRIVE) Act. This legislation is crucial for Maryland's transition to electrified transportation and increased grid reliability.

United is a national business association, dedicated to educating and advocating for policies that empower our member companies to lead the transition towards a cleaner, reliable, and affordable energy economy. We represent over 100 businesses working across the energy sector, including large-scale and distributed renewables, geothermal, energy storage, energy efficiency and demand response providers, transmission developers, electric vehicle (EV) manufacturers, and charging infrastructure providers.

Advancements in EV and Grid Integration

The DRIVE Act represents a critical, forward-thinking strategy for energy management and grid preparedness. By requiring the Public Service Commission (PSC) to implement a default time-of-use (TOU) tariff transition plan, the legislation facilitates energy consumption during off-peak hours, reducing strain on the grid and lowering costs for customers.

The requirement for the PSC to adopt expedited processes for interconnecting bidirectional EV systems to the electric grid is essential for Maryland's energy future. These provisions will pave the way for EVs to not only draw energy from the grid, but also supply energy back to the grid, turning these vehicles into mobile energy storage units. Streamlining the interconnection process for this technology will encourage wider adoption of EVs and is critical for enhancing grid resilience and flexibility, especially as EV adoption rates increase. These provisions also

promote a smoother integration of distributed energy resources (DERs), including EVs, thereby enhancing the grid's stability and resilience.

Moreover, the DRIVE Act offers benefits to Maryland businesses, particularly through the establishment of pilot programs and temporary tariffs to compensate owners and aggregators of DERs. By providing reasonable compensation on a pay-for-performance basis, the bill incentivizes businesses to develop and deploy technologies that contribute to grid support and efficiency.

Proposed Amendments

Advanced Energy United also advocates for the inclusion of amendment language that would mandate the use of flexible interconnection agreements and automated load management as utility offerings for customers. These additions will ensure that the transition to a more renewable and EV-friendly grid is not only smooth but also adaptable to future technological advancements and consumer needs.

Flexible Interconnection Agreements: These agreements are pivotal as they allow customers to connect DERs, such as bidirectional EV systems, to the grid in a cost-effective and expedient way. Traditional interconnection processes can be cumbersome and expensive, posing significant barriers to the integration of renewable energy resources and the adoption of EVs. These agreements also facilitate a more dynamic interaction between DERs and the grid, enhancing grid stability and enabling a more responsive energy supply system.

Automated Load Management: This technology is crucial for managing the complexities associated with the increasing number of DERs and controllable devices connected to the grid. ALM systems enable real-time balancing of supply and demand, reducing the risk of grid overloads, and reducing the need for costly infrastructure upgrades.

For these reasons, United strongly supports SB 959. We respectfully request a favorable vote, with friendly amendments, from this Committee.



SB 959 Electricity – Tariffs- Distributed Energy R Uploaded by: Tammy Bresnahan

Position: FWA



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SB 959 Electricity – Tariffs- Distributed Energy Resources, and Electric Distribution System Support Services (Distributed Renewable Integration and Vehicle Electrification (Drive) Act)

Senate Education, Energy, and Environment Committee February 29, 2024

Good Afternoon Chair Feldman and members of the Senate Education, Energy, and Environment Committee I am Tammy Bresnahan, Senior Director of Advocacy for AARP Maryland. AARP, which advocates for the more than two million Marylanders age 50 and older. AARP MD has reviewed the bill respectfully request an amendment to SB 959.

SB 959 requires the Public Service Commission, on or before December 31, 2025, to adopt a transition plan requiring each electric company to transition customers to a certain time-of-use tariff on or before September 1, 2028. SB 959 also requires the Commission to adopt regulations on or before April 1, 2025, regarding the interconnection of the electric distribution system and prohibits an electric company from requiring a customer to enter a contract by opting out.

Home energy costs make up a sizable portion of household budgets. In Maryland, 41% of the 400,000 low-income households are older adults sixty and older. Since the pandemic, residential prices for natural gas, electricity, and fuel oil have increased significantly.

According to Forbes in a 2020 article and the National institute for Retirement Security that "A plurality of older Americans, 40.2 percent, only receive income from Social Security in retirement.

And according to the Social Security Administration, as of December 2023, the average check was \$1,767.00. Additionally, about one out of four cases, low-income older households whose income is less than \$16,000 a year devote 15 percent or more of their income to home energy bills. Too often low-income seniors face heat and eat decisions, even in Maryland.

For older people in low- and moderate-income households, high and unpredictable energy prices jeopardize stable home heating and cooling.

AARP believes that policymakers should prohibit any time-of-use metering and billing program that is likely to:

- have an adverse impact on residential customers generally;
- have an adverse impact on customers who cannot shift usage, for example because of necessary medical equipment; or
- shift costs to those who use less than the average amount of electricity.

If you decide to pass this bill, we respectfully ask that customers be able to opt in, rather than opt-out.

We also ask that time-of-use metering and billing programs have an individualized consumer education component. This should include a projection of the impact on a customer's bill based on historical usage and current prices.

And finally, we would ask that if this bill passes, please ensure that any time-of-use pilot program for residential customers includes and identifies customers with low incomes and measures the program's impact on customers who do not or cannot take actions to avoid the higher peak-time prices.

AARP is working hard to ensure that Marylanders can age in place without going broke. We respectfully If you have questions, please contact Tammy Bresnahan at tbresnahan@aarp.org or by calling 410-302-8451.

SB 959_Information_PSC.pdf Uploaded by: Frederick Hoover Position: INFO

STATE OF MARYLAND

FREDERICK H. HOOVER, JR.

MICHAEL T. RICHARD ANTHONY J. O'DONNELL KUMAR P. BARVE BONNIE A. SUCHMAN



PUBLIC SERVICE COMMISSION

February 27, 2024

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

RE: SB 959 – Information - Electricity – Tariffs, Distributed Energy Resources, and Electric Distribution System Support Services (Distributed Renewable Integration and Vehicle Electrification (DRIVE) Act)

Dear Chair Feldman and Committee Members:

Senate Bill 959 impacts the Public Service Commission (PSC) in various different ways and the comments provided in this testimony address the various provisions of this legislation. The PSC provides the following informational comments on SB 959 for your consideration.

First, SB 959 describes the intent and implementation considerations of requiring the PSC to approve transition plans by December 31, 2025 for the electric companies to transition all customers to an optout Time of Use (TOU) rate on or before September 1, 2028. The PSC notes that the opt-out nature of this TOU rate has consumer protection concerns associated with it. While opt-out TOU rates will likely increase participation in a TOU rate class, it may catch some customers by surprise, and may prove harmful and costly to the customer if they do not wish to participate in this TOU rate or are not properly informed on how to benefit from this TOU rate, even with adequate notification. Additionally, developing the electric companies' transition plans by December 31, 2025 and transitioning all customers to a TOU rate by September 1, 2028 will likely require extensive research to understand all of the impacts associated with switching all customers to an opt-out TOU rate. A Commission rulemaking would need to occur and the rulemaking process may take a year or more to develop new regulation based on stakeholder input. The Commission notes that it may be more appropriate to mandate an extensive study on the transition of all electric utility customers to TOU rates instead of a legislatively mandated transition being enacted.

Second, SB 959 creates §7-1004 which requires the Commission to adopt regulations for the interconnection of bidirectional electric vehicles. An interconnection process for Bi-Directional Electric Vehicles does not currently exist as this is a developing technology and as such, a comprehensive feasibility study may inform program development to a greater extent than has been presently realized. The April 1, 2025, due date to have the Commission adopt regulations to establish expedited process'

for interconnecting bidirectional electric systems to the electric distribution system, may not provide enough time to have sufficient stakeholder discussion to adopt optimal regulations.

Third, the proposed legislation establishes §7-1005 which requires the Commission to develop a pilot for each electric company to compensate owners and aggregators of distributed energy resources on or before April 1, 2025. A requirement for a positive benefit to ratepayers through a cost-benefit analysis should be a condition of DER deployment under this section and would help to ensure that viable, effective projects are installed. The Commission further notes that providing additional performance incentives for DER owners and aggregators may not align well with TOU rate development because grid support would typically be needed during peak periods when behind the meter storage would be used by customers to shift peak loads. In order to alleviate this conflict, performance payments would have to reliably correspond to realized distribution system savings. Establishing a pilot would require the Commission to convene workgroups and initiate a rulemaking. This will likely occur over one or more years and requires dedication of significant Commission resources including consulting expenses.

Fourth, SB 959 creates §7-1006 which allows the Commission the ability to approve or require electric companies to offer upfront incentives or rebates to customers to install renewable-onsite generating systems. This section is unclear about how the Commission should prioritize program goals with costs passed on to customers. Clarity should be added allowing the Commission to consider the balancing of the different incentives and deployment goals of the various programs with consideration of the cumulative customer bill impacts.

Fifth, the proposed legislation establishes §7-1007 which allows electric companies to recover all reasonable costs associated with the pilot program and incentives in the same calendar year they were incurred, as well as allowing the electric companies to request a Performance Incentive Mechanism (PIM) for cost recovery. Typically, an electric company may need a few months to complete the recording of expenses prior to determining cost allocation and rate recovery, and it may not be feasible, without forecasting program costs, to establish rates for recovery in the same calendar year in which the electric company incurred program costs. Regarding the section on PIM's, a PIM is often designed as a means to boost the rate of return that a company earns on its invested capital. This would therefore conflict with the stated goal in other subsections which implies that all cost recovery would be as annual expenses, on which the utility would not earn a return on the investment, because the expense is fully recovered each year.

The Commission asks that you consider these comments when reviewing SB 959. The Commission will continue to engage with stakeholders on the language of SB 959. Please direct any questions you may have to Christina Ochoa, Director of Legislative Affairs, at christina.ochoa1@maryland.gov.

Sincerely,

Frederick H. Hoover, Chair

Maryland Public Service Commission

Frederich Al House

_SB959 LOI.pdf
Uploaded by: Landon Fahrig
Position: INFO



TO: Chair Feldman, Vice Chair Kagan, and Members of the Education, Energy, and the

Environment Committee

FROM: MEA

SUBJECT: SB 959 Electricity - Tariffs, Distributed Energy Resources, and Electric Distribution

System Support Services (Distributed Renewable Integration and Vehicle Electrification

Act)

DATE: February 29, 2024

MEA Position: LETTER OF INFORMATION

This bill requires that utilities adopt certain time-of-use (TOU) plans; launch pilot programs or temporary tariffs to support net metering and distributed energy resources (DERs) such as demand response and/or load shifting; and expedite interconnections for electric vehicles with bidirectional flow, and, requiring the Public Service Commission (PSC) to coordinate rebates for DERs with MEA to ensure they supplement current efforts.

Should the bill progress, MEA has two amendments for consideration:

- 1) TOU rates should be opt-in, not opt-out. TOU rates have variable bill impacts, traditionally on some low to moderate income customers, who may not be able to change their schedules to accommodate peak pricing. While MEA supports TOU rates to the extent they promote grid resiliency and support DER deployment, MEA does not support mandatory opt-out TOU rates at this time. MEA supports the proposed sponsor amendments changing TOU rates to opt-in.
- 2) Performance incentive mechanisms (PIMs) should not be legislatively mandated (p. 9:25-28). MEA generally supports the use of PIMs, but their use is under a wider stakeholder review of alternative ratemaking at the PSC. The correct and appropriate use of PIMs has been debated in at least two rate cases, and is still under review. (See Case No. 9692, BGE rate case, Order No. 90948, (December 14, 2023)). Mandating this important but complicated form of alternative rate-making may be premature, and may lead to excess ratepayer costs where none are warranted.

Thank you for your consideration of this testimony. For questions or additional information, please contact Joyce Lombardi at joyce.lombardi1@maryland.gov or 443.401.1081.

¹ See e.g., "Key Findings from California's Recent Statewide TOU Pricing Pilots." *The Electricity Journal*, vol. 31, no. 8, 2018, pp. 52–56 (finding variable bill impacts on LMI customers); but see, e.g., Faruqi, et al, "PC44 Time of Use Pilots: Year One Evaluation," Brattle Group (2020)(finding that LMI customers responded to price signals and experienced bill reductions similarly to non-LMI customers)