Sunrun's Testimony in Favor of HB 1256

HB 1256- Distributed Renewable Integration and Vehicle Electrification Act (DRIVE Act)

Senate Education, Energy, and the Environment Committee
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To the Chairman and Honorable Members of the Committee:

Sunrun supports HB 1256 (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.[1] Nationally, this trend is clear, with headlines like "The Era of Flat Load Growth Is Over" appearing in electric industry trade publications.[2] 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%.[3] 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 ratepayer 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"[5] 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 HB 1256 and respectfully request a favorable report from this committee.

Respectfully submitted,

/s/

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