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THE MARYLAND HOUSE OF DELEGATES
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Delegate C. T. Wilson
Chairman, House Economic Matters Committee
House Office Building – Room 231
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Mr. Chairman,

I am writing in favor of HB 1256 – Electricity – Tariffs, Distributed Energy Resources, and Electric Distribution System Support Services (Distributed Renewable Integration and Vehicle Electrification (DRIVE) Act)

Today's electric grid cannot adequately support the integration of new clean energy sources, growing transportation, and building electrification while remaining resilient in the face of climate change and its impacts.[1] Improving how and when we use electricity would help to relieve pressure on our grid as demands increase, such as through data centers.[2] Time of use utility rates can help to reduce stress on our electric grid, prevent the use of polluting "peaker" power plants, and give consumers the opportunity to save money on their energy bill.[3]

Time of use rates (also called time variable pricing)–in which electricity prices vary at different times of the day–create discounted rates to provide equitable savings for energy usage. The Maryland Public Service Commission is currently conducting a pilot program exploring time of use utility rates; the program found that customers across all income groups saw reductions in both their on-peak usage and their monthly utility bill.[4] HB 1256 (the DRIVE Act) requires the Public Service Commission (PSC) to begin the transition to discounted (time of use) rates by 2026, ensuring customers in all service territories have the potential and options to save money on their electric bill.

HB 1256 will also simplify the interconnection process for bi-directional electric vehicle (EV) charging. Through bi-directional charging, EVs have the potential to serve as battery backups for

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[1] U.S. Department of Energy (2023), "National Transmission Needs Study," *Grid Deployment Office, Enhanced Transmission Planning*.
Available at: https://www.energy.gov/gdo/national-transmission-needs-study
[2] Popovich, Nadja and Plumer, Brad (2023) "Why the U.S. Electric Grid Isn't Ready for the Energy Transition: To start with, there is no single U.S. electric grid," *The New York Times, Climate*.
Available at: https://www.nytimes.com/interactive/2023/06/12/climate/us-electric-grid-energy-transition.html
[3] Kavulla, Travis (2023) "Why is the Smart Grid so Dumb: Missing Incentives in Regulatory Policy for an Active Demand Side in the Electricity Sector," *Energy Systems Integration Group's Retail Pricing Task Force*.
[4] State of Maryland. Public Service Commission, PC44 Rate Design Work Group Leader's Report and Recommendations on Full-Scale Time of Use Rate Offerings, (2022).

a consumer's home and provide critical services to the electric grid through peak shaving. EVs that are capable of bi-directional charging can help families keep the lights on during power outages.[5] HB 1256 requires the PSC to streamline the process for bi-directional capable EVs to connect and operate with the grid. By promoting bi-directional charging, EVs can also make renewable energy generation more reliable and sustainable, reduce peak energy demands, provide important ancillary services to the electric grid, and help Maryland achieve its energy storage goals like the ongoing EV School Bus program.[6]

HB 1256 pairs stationary and vehicle battery storage with renewable energy generation to supercharge Maryland's electric grid. The bill requires the PSC to establish programs and incentives to pair renewable energy systems with storage systems via stationary batteries and EVs. To ensure that we receive the most value from wind and solar projects, we must ensure that power from these projects is available when consumers turn on the lights. Stationary batteries and EVs can store energy generated by wind and solar, or off peak energy, and discharge it when consumer demand requires–helping to ensure grid stability, reliability, and sustainable grid decentralization.[7] Projects like this, called Virtual Power Plants (VPPs), use software to combine the power of small-scale renewable and battery systems to mimic traditional power plants.[8]

Ratepayers and consumers who invest in clean energy systems should see financial benefits when they help provide meaningful grid services. VPPs allow ratepayers to utilize their energy savings, battery storage, and renewable production as a business opportunity. Financial incentivization of renewable energy paired with storage can further support increased adoption of electric vehicles with bi-directional capabilities, battery storage in homes, and thus encourage ancillary grid services.

Time of use rates are already in effect in over twenty states across the U.S.: California, Texas, Arizona, Kansas, Massachusetts, Vermont, Virginia, and other states all offer time of use rates as an option for their ratepayers. In Vermont, the utility company Green Mountain Power is offering time of use rates paired with battery storage to ensure that customers never go without power.[9] California is considering expanding the VPP presence in the state to limit the use of polluting "peaker" plants and capture the potential of existing residential solar panels and storage systems.

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[5] Valentine, Alyssa (2023) "The Value of Vehicle-to-Grid Systems in the Clean Energy Transition: Policy and Regulatory Issues," *Seattle Journal of Technology, Environmental and Innovation Law*: Vol. 13: Iss. 1, Article 3. Available at: https://digitalcommons.law.seattleu.edu/sjteil/vol13/iss1/3

[6] Vehicle Grid Integration Council (2022) "V2X Bidirectional Charging Systems: Best Practices for Service Connection or Integration" Available at: vgicouncil.org.

[7] Hledik, Ryan and Peters, Kate (2023), " Real Reliability: the Value of Virtual Power," *The Brattle Group, prepared for Google Inc*.

[8] Id., at 6

[9] Penn, Ivan (2023), "Vermont Utility Plans to End Outages by Giving Customers Batteries," *The New York Times*. Available at: https://www.nytimes.com/2023/10/09/business/energy-environment/green-mountain-home-batteries.html

Pairing battery storage with renewable generation will help Maryland achieve its clean energy goals, reduce our dependence on fossil fuels, and mitigate the negative impacts of climate change.[10]

[10] See also: U.S. Department of Energy, "Demand Response and Time-Variable Pricing Programs," Federal Energy Management Program. Available at: https://www.energy.gov/femp/demand-response-and-time-variable-pricing-programs.
Vehicle Grid Integration Council (2022), "Unlocking EVs at a Strategic Grid Resource," Available at: vgicouncil.org
St. John, Jeff (2024), "California's Patchwork Push to Scale Up Virtual Power Plants," Canary Media. Available at: https://www.canarymedia.com/articles/grid-edge/californias-patchwork-push-to-scale-up-virtual-power-plants