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

Written Testimony of GoodLeap, Sunrun, Tesla, and Enphase

FAVORABLE WITH AMENDMENTS Re: Senate Bill 596 Large Load Customers - Electric System Interconnection and Demand Response Program

Dear Chairman Feldman and Members of the Committee,

On behalf of GoodLeap, Sunrun, Tesla, and Enphase we are submitting favorable with amendments testimony on SB 596, "Large Load Customers - Electric System Interconnection and Demand Response Program"

Maryland is experiencing rapid load growth at the same time the electric system faces long lead times for traditional infrastructure. Interconnection studies, substation upgrades, feeder rebuilds, transmission additions, and new generation can take years to plan, permit, and construct. Yet large-load projects often advance on much shorter timelines. That mismatch creates real risk: utilities must plan for increased peak demand and system stress, and customers can ultimately see higher rates as the costs of incremental capacity and grid upgrades work their way into bills. SB 596 offers a balanced framework by requiring large-load interconnections to procure 25% of their needed capacity through one of four eligible options.

Although we strongly support SB 596, the cosigned companies believe that targeted changes to the bill language can strengthen its ambition, while ensuring ratepayers are protected from rising costs and empowered to take control of their utility bills through the adoption of residential behind-the-meter ("BTM") battery storage. SB 596 does not mandate any single compliance pathway. That flexibility is a strength. But it is crucial that the eligible options include solutions that are scalable, deployable quickly, and that deliver tangible benefits to Maryland ratepayers, especially as data center growth continues to accelerate.

In addition to this submission, we would also like to endorse testimony submitted by QCells.

I. Residential BTM storage can advance goals of SB 596

Customer-sited residential storage can be deployed far faster than most traditional grid solutions. Unlike large, centralized projects that require extensive siting, permitting, and network upgrades, residential batteries can be installed on existing homes using standardized equipment and established installation practices. This approach allows capacity to come online quickly, an important advantage when the grid is under near-term pressure from large-load additions.

While residential batteries are small individually, they are powerful in aggregate. Widespread adoption across service territories can reduce peak demand, ease local distribution constraints, and lessen the need for expensive "build-out" solutions that customers pay for over decades. Including residential BTM storage as an eligible capacity procurement option ensures that large-load growth can be paired with a resource that can deliver benefits broadly, rather than only at the point of interconnection.

Third party asset owners can play a crucial role in targeting development and aggregate residential storage devices close to the large-load customer. Third party owners can manage the device on behalf of the customer of record through sophisticated and innovative grid software, ensuring capacity is available to the large-load interconnection when needed. This is common practice in residential storage, retail demand response and Virtual Power Plant ("VPP") programs. Except in this case the end beneficiary would be the large-load customer rather than the investor owned utility.

Although this bill does not exempt residential customer sited BTM storage, the bill could be interpreted as solely referring to onsite storage at the large load. A clear acknowledgment that offsite residential BTM storage that is engaged in a related demand response program or a VPP qualifies as part of the 25% capacity procurement would send a strong market signal to large load customers to seek out this asset class amongst their other pathways. To achieve this, the cosigned companies recommend the following addition to Section (D)(1)(II) allowance for proximal energy storage facilities:

> (II) PURCHASING CAPACITY WITH NEWLY INTERCONNECTED ENERGY STORAGE FACILITIES WITHIN THE LOAD ZONE OR LOCAL DELIVERY AREA, **INCLUDING FRONT-OF-THE-METER ENERGY STORAGE AND BEHIND-THE-METER ENERGY STORAGE OPERATED AS AN AGGREGATED RESOURCE**;

Furthermore, as drafted, the bill casts capacity procurement requirements (or opportunities) for large load customers in terms of customers meeting varying percentages of their overall load with on-site or off-site resources. Eligible resources identified in Section (D)(1) are energy limited by nature and would struggle to provide a continuous 24x7 generation profile, akin to baseload resources. These resources nevertheless provide highly valuable capacity services that can offset large load customers' incremental contributions to system peak load, which drive capacity cost increases in PJM and the EDCs' allocation of PJM's capacity costs. For the avoidance of doubt, the cosigned companies recommend the following revision to Section (D)(1) to ensure that large load customers can meet their capacity procurement requirements based on the peak capacity attributes of eligible resources:

> (D) (1) A LARGE LOAD CUSTOMER MAY NOT INTERCONNECT TO THE ELECTRIC SYSTEM UNLESS THE CUSTOMER PROVIDES ~~**INTERCONNECTION**~~

CAPACITY **TO MEET** 25% OF THE CUSTOMER'S **PEAK** LOAD **REQUIREMENTS** THROUGH:

Additionally, we are supportive of bill language in Section 7–1008 (G)(1) that opens the door for new VPP aggregations to be considered when evaluating large load performance within the prospective demand response program. This appears to open the door for large load customers to fund the development of offsite VPPs, that deploys and manages storage and solar on residential and commercial residences. Particularly those who are most vulnerable to data centers driving up energy costs. VPPs give customers the tools to lower their bills while simultaneously making the grid more reliable and cost effective.

VPPs are not foreign to Maryland, as the Public Service Commission in accordance with the DRIVE Act, is standing up VPP pilot programs that will be operated by the Utilities. This bill could provide another avenue for accelerating and expanding VPPs as a tool in the state.

II. Residential storage provides multifaceted benefits to customers

Data centers and other large loads can drive substantial new infrastructure needs—new substations, upgraded feeders, reconductoring, transmission enhancements, and additional capacity to meet peak conditions. Even where large-load customers contribute to interconnection costs, the system-wide effects of accelerated load growth can still put upward pressure on rates through planning reserves, congestion, and broader grid reinforcement.

Residential storage provides a direct customer affordability buffer in two key ways:

a. Reducing a household's exposure to peak prices

Many of the costs residential customers are subjected to are embedded in electric rates are driven by when the system is most constrained and most expensive to operate otherwise known as peak demand. A home battery allows a customer to draw less from the grid during peak periods by discharging stored energy. This can reduce household usage when prices are highest and when the grid is under the most stress. Mitigating customer exposure to peak prices is accomplished through load shifting–charging when the grid is less constrained (and often less expensive) and discharging during peak periods. This is especially impactful as Maryland's system faces sharper peaks from growing demand. Widespread load shifting can flatten the system peak, lowering the need for costly marginal resources that drive rates upward.

b. Pairing with rooftop solar to maximize customer benefit.

When paired with rooftop solar, storage becomes even more effective. Solar can reduce daytime grid demand, and batteries can store excess solar production for use in the evening when demand and costs are typically higher. Solar plus storage reduces customer load, decreases reliance on the grid during peak hours, and increases the value of clean onsite generation—helping families better manage energy costs even as grid expenses rise.

SB 596's inclusion of residential BTM storage as a compliance option creates a pathway for large-load growth to be accompanied by customer-side tools that can offset cost pressures rather than amplify them. If data center growth contributes to higher system costs, residential storage helps ensure Maryland households have practical ways to reduce and shift their load and soften the impact on their bills.

III. Broader grid benefits of residential storage

Beyond customer affordability, residential storage supports a healthier, more reliable electric system.

a. Peak reduction and infrastructure deferral.

Lowering peak demand reduces the scale and frequency of investments in wires and substations. Deferring even a portion of these upgrades can have meaningful long-run ratepayer benefits.

b. Improved reliability during system stress.

During extreme weather and grid emergencies, reducing net load at the household level can lessen strain on the system. Storage can help reduce demand during critical hours when the grid is most vulnerable.

c. Reduced reliance on the most expensive generation.

Peak periods often require dispatching the costliest generators. By lowering demand at those times, residential storage can reduce dependence on high-cost peaking resources, supporting both affordability and cleaner outcomes.

d. Local resilience.

For individual families, residential storage can provide backup power during outages improving safety and continuity for critical needs. Resilience benefits are especially important as storms and heat events become more disruptive.

IV. Conclusion

SB 596 is a forward-looking response to Maryland's large-load interconnection challenge. The inclusion of residential BTM storage in the bill's 25% capacity procurement requirement would help ensure that rapid load growth does not outpace reliability or unfairly burden ratepayers. Residential BTM storage is scalable, can be deployed quickly, and directly supports customer affordability—particularly when paired with rooftop solar—while delivering meaningful grid reliability and cost benefits.

Sincerely,

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