



February 28, 2023

Honorable C. T. Wilson, Chair  
Economic Matters Committee  
Room 231  
House Office Building  
Annapolis, Maryland 21401

Re: CHESSA Letter of Support for HB 839, Maryland Resilient and Clean Energy Homes Act

Dear Chair Wilson and Members of the Economic Matters Committee:

The Chesapeake Solar and Storage Association (CHESSA)<sup>1</sup> appreciates the opportunity to testify in support of HB 839, the Maryland Resilient and Clean Energy Homes Act. CHESSA is proud to support HB 839 and asks the Committee for a favorable report.<sup>2</sup>

The Maryland Resilient and Clean Energy Homes Act is a nation-leading bill. By passing HB 839, Maryland will turn the future challenges of expensive upgrades to the electric grid driven by transportation and home electrification into a present opportunity to fund customer-driven clean energy solutions that can offset and mitigate the future need for additional grid infrastructure. HB 839 looks to create partnerships among utilities, consumers, and clean energy vendors to innovate and provide solutions to the grid that are seamlessly integrated into customers' lives.

But at the bottom line, this bill pilots a new approach to incenting customers and investor-owned utilities to work together to make the grid more efficient and less costly for all ratepayers. Electrification, if managed well, represents an opportunity to spread grid costs across more units sold, producing a downward pressure on rates. Without intervention and early attempts to establish such a framework, the financial impact of electrification on ratepayers could grow large and increase energy inequities among ratepayers.

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

<sup>2</sup> Representatives of Maryland League of Conservation Voters and Chesapeake Physicians for Social Responsibility have given CHESSA consent to represent that those organizations endorse and support CHESSA's letter of support for HB 839.

Numerous studies in the past year have shown that widespread electrification of vehicles and use of heat pumps—a cornerstone of President Biden’s climate mitigation strategy as reflected in the Inflation Reduction Act—could represent an unprecedented increase in electric demand in the United States if left unmanaged.<sup>3</sup> This represents a substantial and foreseeable future cost to ratepayers that could be in the tens of billions in Maryland alone.<sup>4</sup> CHESSA applauds Delegate Qi’s leadership for bringing a bill that proposes a solution to this looming issue. It is important that this solution relies on customer investments and behaviors that also further the state’s clean energy deployment and energy efficiency goals. CHESSA appreciates the fact that HB 839 will provide additional incentive support to low-to-moderate-income customers and residents of affordable multifamily housing, in an effort to leave no one behind in the energy transition.

That is the **why** of HB 839. What about the **how**?

There are two core provisions of HB 839 that get customers into the game: (1) upfront rebates for electrical work and equipment needed to facilitate an electrification investment; and (2) a commitment for recipients to participate in a “load management” program for a set period of two years where customers can earn additional compensation by helping the utility during critical peak events or otherwise managing the demand placed on the grid to avoid the need for grid upgrades.

Importantly, the two-year commitment is a carrot, not a stick, which is necessary to pilot different approaches to achieving demand reductions through customer response. With the emergence of new technologies like smart main electric panels and the growing prevalence of battery storage devices, CHESSA believes these customer behavioral changes could be made seamless from the customer experience perspective. As the saying goes, change begins at home and HB 839 is a customer-centric approach to empowering residential consumers to be the solution.

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<sup>3</sup> See, e.g., “Global Energy Perspective 2023,” McKinsey & Co., *available at* <https://www.mckinsey.com/industries/oil-and-gas/our-insights/global-energy-perspective-2022> (projecting that global electric demand could triple by 2050 due to electrification); <https://www.icf.com/insights/climate-electric-vehicle-revolution> (projecting a 40% increase in energy demand from electric vehicles); “Grid of the Future: PJM RTEP Perspective (5/10/22), *available at* [https://urldefense.com/v3/https://www.pjm.com/-/media/committees-groups/committees/pc/2022/20220510/item-12---grid-of-the-future-rtep-perspective.ashx\\_!!OKj0nms!P0cNV-olYqM5nP1zu220qBZeGJBCTfG8FDT-nHPz-RylubcGoxpKVUQGLogtdpFCing5H9coQQJ7Blutdi1sBg\\$](https://urldefense.com/v3/https://www.pjm.com/-/media/committees-groups/committees/pc/2022/20220510/item-12---grid-of-the-future-rtep-perspective.ashx_!!OKj0nms!P0cNV-olYqM5nP1zu220qBZeGJBCTfG8FDT-nHPz-RylubcGoxpKVUQGLogtdpFCing5H9coQQJ7Blutdi1sBg$) (EV charging could account for ~10% of total PJM energy over next 15 years).

<sup>4</sup> BGE Supplemental Testimony to Howard County Council re: Bill 5-2023 (2/20/23), *available at* <https://apps.howardcountymd.gov/olis/GetFile.aspx?id=34009> (stating that “BGE projects that it will need to build or expand 250 substations and roughly double its feeder system to support building and transportation electrification in its service territory...”)

## **Upfront rebates for main electrical upgrades caused by home electrification**

A make-ready credit, capped at \$3,000 for general market customers and net of any additional sources of state or federal funding, is provided to any residential customer of an IOU that is undertaking a beneficial electrification investment that requires an upgrade to the main electrical service of the home. With beneficial electrification and increased use of DERs like EVs, rooftop solar, and battery storage, it is becoming apparent that the costs of accommodating additional loads within the existing housing stock will require significant electrical upgrades for most residential customers.<sup>5</sup> The typical range of a main panel upgrade, including the cost of electrical work performed, can range between two to five thousand dollars. For a homeowner that may be on the fence about the timing of an electrification or clean energy investment, this could dissuade or defer the decision to proceed. Many states have already adopted make-ready for electric vehicles for residential customers.<sup>6</sup> Pepco has proposed a robust make-ready “heavy up” program in Washington, D.C., but participation in that program would not be coupled with required participation in demand response or demand flexibility programs. Similarly, BGE has proposed in their most recent rate case filing a rebate program to cover make-ready investments, but that proposal is currently not connected to any form of load management.

### *Additional make-ready rebate available for low-to-moderate-income households*

Cutting or eliminating this upfront cost barrier is even more important in delivering electrification and clean energy benefits to low-to-moderate income consumers. HB 839 provides additional flexibility to cover up to \$6,000 for qualifying low-to-moderate-income customers. This should ensure that the entirety of the make-ready electrical work and equipment is covered to dramatically reduce the barrier to beneficial electrification to households that would benefit the most.

## **Load management and grid services support structure**

The unique and innovative feature of HB 839 is that it seeks to create a “load management program” that will provide participating consumers additional compensation for providing value to the electric grid by helping address critical peak events and managing load and demand to prevent the need for upgrades to the grid.

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<sup>5</sup> Walton, Robert, “Residential electric panels represent a nearly \$100B ‘roadblock’ to full electrification, report finds,” Utility Dive (August 31, 2021), *available at*, <https://www.utilitydive.com/news/residential-electric-panels-represent-a-nearly-100b-roadblock-to-full-el/605829/>.

<sup>6</sup> Make-ready programs exist, in some form, in Alabama, California, Connecticut, DC, Georgia, Hawaii, Massachusetts, Michigan, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Oregon, Utah, Virginia, and Washington. Additional make-ready programs are pending approval in several states.

### **Encouraging on-site clean energy systems to provide grid support and customer resilience**

As a complement to the “load management program,” HB 839 provides for at least a quarter of the pilot program budget to be reserved to encouraging customers to install “on-site clean energy systems” (i.e., solar plus battery storage systems).

Encouraging these systems provides assurance and resilience to homeowners—which can be especially critical for customers that are dependent on an electrically-powered medical device or that require refrigeration for medication—and provides an ongoing value stream to encourage these home batteries to participate in grid support. As the entire East Coast experienced with the recent Winter Storm Elliott, the electric grid is vulnerable to extreme weather and the demands put on the grid by electric heating load. Increasing the flexibility of customer demand, by dispatching and aggregating residential battery storage devices during these peak winter mornings, can mitigate the risk of rolling blackouts. Many states have already moved forward with similar battery programs (often called Bring Your Own Device or BYOD programs), as outlined in Attachment A.

### **Aligning utility and consumer interests in a more efficient, less costly grid**

Under the current regulatory paradigm, utilities earn a rate of return on capital assets and have a natural incentive to want to build and place into rate base infrastructure investments. While there are efficiency standards and other directives to avoid waste and promote conservation, there are currently few guardrails in place for mitigating the increased grid costs that could come from widespread home electrification. HB 839 pilots an approach that allows investor-owned utilities to seek a portion of shared savings (if any are achieved) by demonstrating that successful operation of pilot projects has helped defer or avoid quantifiable grid costs. Providing some incentive for utilities to leverage customer-sited resources and customer programs such as this to avoid building assets that are otherwise in the interest of shareholders creates a potentially new paradigm where utilities could be encouraged to lean in on the approach to empowering more and more customer-driven solutions. Creating helpful regulatory mechanisms for shared savings and respecting the utility’s cost of capital is necessary to align interests and achieve win-win results for all.

### **Require utilities to allow meter collar adapters to expedite battery storage installation**

As Maryland and other states seek ways to make the installation of solar and battery storage faster and cheaper, one of the easiest and no-cost ways to facilitate this is to allow for the use of customer-owned meter collars. Meter collars are devices installed between the utility meter and the meter socket, which can allow for residential clean energy systems to be installed 10-times faster, at a discount to customers, and which bypass the need for expensive panel upgrades and rewiring due to where the devices are situated on a home. Meter collars already are being installed safely in scores of utility territories throughout the U.S. and consistently reduce the cost of solar and storage installation by hundreds to thousands of dollars.

**Create a stakeholder group to design a multifamily program to extend the benefits of the program to low-to-moderate-income customers living in qualifying multifamily dwelling.**

CHESSA recognizes that many low-to-moderate-income customers do not own their own home and may not directly benefit from programs that are largely helpful to single-family homeowners. CHESSA applauds HB 839 for including a multifamily program that can both extend the benefits of resilience to these residents while charting a path to incorporating beneficial electrification at these facilities. It is critically important that all informed and interested stakeholders have a seat at the table to fashion programs that will meet the unique needs of the residents. Crucially, the provisions of HB 839 align with the provisions of the Inflation Reduction Act that provide the opportunity for an additional 20% bonus to the federal investment tax credit for solar and battery storage systems. Additionally, as the General Assembly is poised to make the community solar program permanent, it is entirely possible that the stakeholder group might identify special modifications to the community solar subscription model that could be streamlined for qualifying multifamily dwellings (i.e., community solar subscriptions could be limited to onsite residents). The community solar structure, or some streamlined adaptation for the multifamily onsite setting, could help deliver the requirement that participating low-to-moderate-income customers living in qualifying multifamily dwellings will receive at least 25% bill savings.

**Conclusion**

CHESSA greatly appreciates the opportunity to submit these comments and is proud to voice our strong support for a favorable recommendation from this Committee. We appreciate the leadership of the Delegate Qi and the list of co-sponsors in bringing this important and innovative legislation forward and look forward to opportunities to collaborate with all interested parties in building a clean energy transition that works for everyone.

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

/s/  
Stephanie Johnson  
Executive Director, CHESSA

**Attachment A**  
**Aggregated Distributed Energy Resources, Virtual Power Plants, and Bring-Your-Own-Device**  
**Programs as of December 2022**

| State                   | Utility  | Program  | Compensation  | Call Window   |
|-------------------------|--|--|---|---|
| Arizona <sup>1</sup>    | Arizona Public Service (APS)   | Residential Energy Storage Pilot                                 | This pilot provided a \$500/kW upfront performance payment with total available payment of \$2,500-\$3,7500 per home (lower incentive for providing data only, higher incentive for providing data + allowing APS to manage battery). 10-year program commitment. *Pilot program filled and closed as of January 2023.  | 1-4 hours; 6-9 PM (non-holiday weekdays) or 9AM – 9PM (weekends/holidays) |
| California <sup>2</sup> | Pacific Gas & Electric, Southern CA Edison, San Diego Gas & Electric | Distribution Investment and Deferral Framework Partnership Pilot | Tiered payment structure based on value of distribution infrastructure avoided or deferred by use of DERs.  | TBD   |
| California <sup>3</sup> | Pacific Gas & Electric, Southern CA Edison, San Diego Gas & Electric | Demand Response Auction Mechanism                                | A pay-as-bid solicitation issued by each IOU for monthly demand response capacity. Winning bidders from each auction are required to bid aggregated demand response directly into the CAISO energy market. IOUs acquire the capacity and receive resource adequacy credit from the bids, but have no claim to the revenues that bidders may receive from the energy market. |   |

<sup>1</sup> Arizona Public Service Commission, Docket No. E-01345A-19-0148, Decision No. 77762, p. 7 (Oct. 2, 2020). *See also* <https://www.solaredge.com/us/aps-residential-program>.

<sup>2</sup> Pacific Gas & Electric, Distribution Investment and Deferral Framework Partnership Pilot, *available at* [https://www.pge.com/en\\_US/for-our-business-partners/energy-supply/electric-rfo/wholesale-electric-power-procurement/didf-partnership-pilot.page](https://www.pge.com/en_US/for-our-business-partners/energy-supply/electric-rfo/wholesale-electric-power-procurement/didf-partnership-pilot.page); *see also* California Public Utilities Commission, Decision 21-02-006 (Feb. 11, 2021) *available at* [https://www.pge.com/pge\\_global/common/pdfs/for-our-business-partners/energy-supply/electric-rfo/wholesale-electric-power-procurement/DIDF%20Partnership%20Pilot/365628213.PDF](https://www.pge.com/pge_global/common/pdfs/for-our-business-partners/energy-supply/electric-rfo/wholesale-electric-power-procurement/DIDF%20Partnership%20Pilot/365628213.PDF).

<sup>3</sup> California Public Utilities Commission, Decision 19-12-040 (Dec. 23, 2019), *available at* <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M322/K796/322796293.PDF>. *See also*, Pacific Gas & Electric, 2022 Demand Response Auction Mechanism (DRAM), *available at* [https://www.pge.com/en\\_US/large-business/save-energy-and-money/energy-management-programs/demand-response-programs/2022-demand-response/2022-demand-response-auction-mechanism.page?WT.mc\\_id=Vanity\\_dram](https://www.pge.com/en_US/large-business/save-energy-and-money/energy-management-programs/demand-response-programs/2022-demand-response/2022-demand-response-auction-mechanism.page?WT.mc_id=Vanity_dram).

| State                   | Utility  | Program                          | Compensation  | Call Window  |
|-------------------------|--|----------------------------------|---|--|
| California <sup>4</sup> | Pacific Gas & Electric, Southern CA Edison, San Diego Gas & Electric | Emergency Load Reduction Program | \$2/kWh for every kWh of electricity consumption the customer reduces voluntarily during an ELRP event.   | 1-5 hours between 4-9PM; May to October. Up to 60 hours per year.  |
| California <sup>5</sup> | Pacific Gas & Electric, Southern CA Edison, San Diego Gas & Electric | Demand Side Grid Support Program | <p>Option 1 - Energy Payment Only<br/>\$2/kWh of verified incremental load reduction provided during a dispatch period.</p> <p>Option 2 - Standby &amp; Energy Payment<br/>\$2/kWh of verified incremental load reduction provided during a dispatch period + \$0.25/kWh standby payment for each hour or portion thereof in which the committed load reduction during the standby period is not dispatched.</p> <p>Option 3 - Capacity Payment &amp; Bid<br/>Monthly capacity payments at the following rates, up to \$76.50/kW-year: \$10.50/kW (June), \$17.50/kW (July), \$18.50/kW (August), \$19.50/kW (Sept.), and \$10.50/kW (October). To be eligible, resources must be registered as proxy demand resources and be bid into the CAISO day-ahead market in 4 consecutive hours between 4-9 PM at a rate no greater than \$0.50/kWh during each participating month until the participant has been dispatched the maximum 20 hours/month or 60 hours/year.</p> | <p>4-9 PM (7 days a week), June - October</p> <p>Options 1 &amp; 2- Dispatch events 1-5 hours.</p> <p>Option 3 - Dispatch events maximum of 4 hours.</p> |

<sup>4</sup> California Public Utilities Commission, Emergency Load Reduction Program, *available at* <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/electric-costs/demand-response-dr/emergency-load-reduction-program>.

<sup>5</sup> California Energy Commission, Demand Side Grid Support (DSGS) Program Guidelines - First Edition (Aug. 2022), *available at* <https://www.energy.ca.gov/publications/2022/demand-side-grid-support-dsgs-program-first-edition>.

| State                    | Utility       | Program  | Compensation   | Call Window  |
|--------------------------|---------------|--|--|--|
| California <sup>6</sup>  | SMUD          | My Energy Optimizer Program                      | <u>Partner Level</u><br>\$150/kWh up to \$1,500<br><br><u>Partner+ Level</u>   | <u>Partner Level</u><br>Summer months only; peak period window & duration undefined<br><br><u>Partner+ Level</u><br>Year-round, peak period window & duration undefined  |
| Colorado <sup>7</sup>    | Xcel          | Battery Connect                                  | \$1,250 upfront incentive in exchange for discharge of up to 80% of battery energy up to 100 times per year. *In 2023, terms are being updated to include increased upfront incentive and lower battery commitment. (See 21A-0625EG)   | Year-round, 1-4 hours; no specific window but generally afternoon and early evening.   |
| Connecticut <sup>8</sup> | Eversource    | Connected Solutions – Targeted Seasonal          | \$225/kW-summer (avg. per peak event), locked in for five years.   | 3 hours, between 2-7 PM, June 1 – Sept. 30, between 30-60 events per season  |
| Connecticut <sup>9</sup> | Eversource UI | Energy Storage Solutions (ESS) Program for Homes | <u>Upfront Incentive</u> : \$200/kWh (Standard), \$300/kWh (Underserved), \$400/kWh (Low-Income) for 10-year commitment.<br><br><u>Performance Payment</u> : \$200/kW (summer), \$25/kW (winter), based on average kW-AC contribution during the season, determined by actual system performance during called events. | <u>Passive Dispatch</u> : 5 hours between 3-8 PM, each non-holiday weekdays from June to August. Passive events are canceled on days in which an active event is called.<br><br><u>Active Dispatch</u> : 1-3 hours between 12-9 PM, June 1 - Sept. 30, 30-60 events per summer season. |

<sup>6</sup> SMUD, Battery Storage for Homeowners, *available at* <https://www.smud.org/en/Going-Green/Battery-storage/Homeowner>.

<sup>7</sup> Xcel Energy Colorado. Battery Connect, *available at* <https://co.my.xcelenergy.com/s/renewable/battery-connect>.

<sup>8</sup> Eversource Connecticut. Application for Connected Solutions: Small Scale Batteries, *available at* <https://www.eversource.com/content/ct-c/residential/save-money-energy/manage-energy-costs-usage/demand-response/battery-storage-demand-response>.

<sup>9</sup> Energy Storage Solutions - Contractor Resources, Program Manual (Jan. 1 2023), *available at* <https://energystoragect.com/contractor-resources/>.



| State                     | Utility                     | Program   | Compensation  | Call Window  |
|---------------------------|-----------------------------|---|---|--|
|                           |                             |   |   | 1-3 hours between 12-9 PM, Nov. 1 - March 31, 1-5 events per winter season.  |
| Connecticut <sup>10</sup> | Eversource UI               | Energy Storage Solutions (ESS) Program for Businesses | <p><u>Upfront Incentive:</u> \$200/kWh (Small Commercial), \$175/kWh (Medium Commercial), \$100/kWh (Large Commercial) for 10-year commitment.</p> <p><u>Performance Payment:</u> \$200/kW (summer), \$25/kW (winter), based on average kW-AC contribution during the season, determined by actual system performance during called events.</p>   | <p><u>Passive Dispatch:</u> 5 hours between 3-8 PM, each non-holiday weekdays from June to August. Passive events are canceled on days in which an active event is called.</p> <p><u>Active Dispatch:</u> 1-3 hours between 12-9 PM, June 1 - Sept. 30, 30-60 events per summer season.</p> <p>1-3 hours between 12-9 PM, Nov. 1 - March 31, 1-5 events per winter season.</p> |
| Hawaii <sup>11</sup>      | Hawaiian Electric Companies | Scheduled Dispatch Program / Battery Bonus Program    | <p>50 MW cap on Oahu. Upfront payment of \$850/kW for first 15 MW, \$750/kW for next 15 MW, and \$500/kW for last 20 MW.</p> <p>15 MW cap on Maui with upfront payment \$850/kW for the entire 15 MW cap. Monthly bill credit of \$5/kW. Non-NEM customers receive a fixed bill credit equivalent to the retail rate for electricity exported during the two-hour dispatch period. Allows additional solar installation of up to twice the capacity of the participating battery.</p> | Daily 2 hour dispatch as determined by utility between peak window of 6:00 -8:30 PM  |

<sup>10</sup> Energy Storage Solutions - Contractor Resources, Program Manual (Jan. 1, 2023), *available at* <https://energystoragect.com/contractor-resources/>.

<sup>11</sup> Hawaiian Electric Company, Customer Renewable Programs – Battery Bonus, *available at* <https://www.hawaiianelectric.com/products-and-services/customer-renewable-programs/rooftop-solar/battery-bonus>.

| State                          | Utility                           | Program                           | Compensation  | Call Window  |
|--------------------------------|-----------------------------------|-----------------------------------|---|--|
| Hawaii <sup>12</sup>           | Hawaiian Electric Companies       | Bring Your Own Device             | BYOD Level 1: Scheduled Capacity Load Reduction Service; BYOD Level 2: Remote Dispatch Capacity Load Reduction Service; and BYOD Level 3: (a) Remote Dispatch Capacity Load Reduction Service and (b) Capacity Load Build Service. Program commitment of 10 years under each level. Compensation for each level consisting of an upfront payment and monthly payment is currently under development along with final program participation parameters. Program launch: August 14, 2023. | Level 1: Daily 2-hour dispatch during a window selected by the customer from options provided by utility. Level 2: 1-2 hour dispatch with minimum 24-hour day-ahead notice for up to 156 events per year. Customers may opt out of up to 3 events. Level 3: 2-4 hour dispatch with minimum 24-hour day-ahead notice for up to 365 events per year. |
| Massachusetts <sup>13</sup>    | National Grid, Cape Light Compact | Connected Solutions – Residential | \$275/kW-summer, locked in for five years.  | 3 hours, between 2-7 PM, June 1 – Sept. 30, between 30-60 events per season  |
| Massachusetts <sup>14</sup>    | Eversource                        | Connected Solutions – Residential | \$225/kW-summer, locked in for five years.  | 3 hours, between 2-7 PM, June 1 – Sept. 30, between 30-60 events per season  |
| Massachusetts <sup>15,16</sup> | Eversource, Cape Light Compact    | Connected Solutions – Daily       | \$200/kW for dispatch on a daily basis (summer only), locked in for five years.   | 2-3 hours, between 2-7 PM, June 1 – Sept. 30,  |

<sup>12</sup> Hawaii Public Utilities Commission, Docket No. 2019-0323, Decision and Order No. 38681 (Oct. 30, 2022), Order No. 38787 (Dec. 22, 2022).

<sup>13</sup> National Grid Massachusetts. Program Materials for Connected Solutions for Small Scale Batteries, *available at* [https://www.nationalgridus.com/media/pdfs/resi-ways-to-save/ma\\_resi\\_battery\\_program\\_materials.pdf](https://www.nationalgridus.com/media/pdfs/resi-ways-to-save/ma_resi_battery_program_materials.pdf).

<sup>14</sup> Eversource Massachusetts East. Application for Connected Solutions: Small Scale Batteries, *available at* <https://www.eversource.com/content/ema-c/residential/save-money-energy/energy-efficiency-programs/demand-response/battery-storage-demand-response>.

<sup>15</sup> Eversource Massachusetts East Program Materials for Connected Solutions for Commercial / Industrial Customers, *available at* <https://www.eversource.com/content/ema-c/business/save-money-energy/manage-energy-costs-usage/demand-response>; Cape Light Compact, Program Materials for Connected Solutions for Commercial / Industrial Customers, *available at* <https://www.capelightcompact.org/business/commercial-connectedsolutions/>.

<sup>16</sup> Unitil, Program Materials for Connected Solutions for Commercial / Industrial Customers, *available at* <https://unitil.com/sites/default/files/2022-05/CI-DemandResponse-ProgramMaterials-Unitil-FINAL-04-04-2022.pdf>;

| State                       | Utility                              | Program   | Compensation   | Call Window   |
|-----------------------------|--------------------------------------|---|--|---|
|                             |                                      | Dispatch<br>(Commercial)  |  | between 30-60 events<br>per season  |
| Massachusetts <sup>17</sup> | Eversource,<br>Cape Light<br>Compact | Connected<br>Solutions –<br>Targeted Dispatch<br>(Commercial)       | \$100/kW-summer  | 3 hours, between 2-7<br>PM, June 1 – Sept. 30,<br>up to 8 events  |
| Massachusetts <sup>18</sup> | Unitil,<br>National Grid             | Connected<br>Solutions –<br>Targeted Dispatch<br>(Commercial)       | \$35/kW-summer; \$10/kW weekend<br>bonus.  | 3 hours, between 2-7<br>PM, June 1 – Sept. 30,<br>between 1-8 events per<br>season                          |
| New Hampshire <sup>19</sup> | Unitil                               | Connected<br>Solutions –<br>Targeted Dispatch<br>Pilot (Commercial) | \$35/kW-summer   | 3 hours, between 2-7<br>PM, June 1 – Sept. 30   |
| New Hampshire <sup>20</sup> | Eversource                           | Connected<br>Solutions – Daily<br>Dispatch<br>(Commercial)          | \$200/kW for dispatch on a daily basis<br>(summer only), locked in for five years. | 2-3 hours, between 2-7<br>PM (non-holiday<br>weekdays), June 1 –<br>Sept. 30, up to 60<br>events per season |
| New Hampshire <sup>21</sup> | Eversource                           | Connected<br>Solutions –<br>Targeted Dispatch<br>(Commercial)       | \$100/kW-summer  | 3 hours, between 2-7<br>PM (non-holiday<br>weekdays), June 1 –<br>Sept. 30, up to 8 events<br>per season    |

National Grid, Program Materials for Connected Solutions for Commercial / Industrial Customers, *available at* <https://www.nationalgridus.com/MA-Business/Energy-Saving-Programs/ConnectedSolutions>.

<sup>17</sup> Eversource Massachusetts East Program Materials for Connected Solutions for Commercial / Industrial Customers, *available at* <https://www.eversource.com/content/ema-c/business/save-money-energy/manage-energy-costs-usage/demand-response>; Cape Light Compact, Program Materials for Connected Solutions for Commercial / Industrial Customers, *available at* <https://www.capelightcompact.org/business/commercial-connectedsolutions/>.

<sup>18</sup> *Id.*

<sup>19</sup> Unitil, Program Materials for Connected Solutions for Commercial / Industrial Customers, Appendix A, *available at* [https://unitil.com/sites/default/files/2022-04/CI-DemandResponse-ProgramMaterials-Unitil-FINAL-04-04-2022\\_0.pdf](https://unitil.com/sites/default/files/2022-04/CI-DemandResponse-ProgramMaterials-Unitil-FINAL-04-04-2022_0.pdf).

<sup>20</sup> Eversource New Hampshire Program Materials for Connected Solutions for Commercial / Industrial Customers, *available at* <https://www.eversource.com/content/ema-c/business/save-money-energy/manage-energy-costs-usage/demand-response>.

<sup>21</sup> Eversource New Hampshire East Program Materials for Connected Solutions for Commercial / Industrial Customers.

| State                      | Utility                | Program  | Compensation   | Call Window  |
|----------------------------|------------------------|--|--|--|
| New York <sup>22</sup>     | Consolidated Edison NY | Commercial Demand Response Programs  | \$/kW-month capacity reservation payment (May – September) differentiated by location & number of event calls per peak season. Rates may change annually.<br>Minor \$/kWh payment during events. | 4+ hours, May 1 – Sept. 30   |
| New York <sup>23,24</sup>  | PSEG LI                | Dynamic Load Management Tariff:<br>Commercial System Relief Program (CSRP) and Distribution Load Relief Program (DLRP) | \$/kW per monthly capacity reservation payment and \$/kWh performance payment for load relief. <sup>25,26</sup>  | Up to 4 hours on weekdays, May 1 - Sept. 30 (CSRP)<br><br>4-6 hours, May 1 - Sept. 30. Load relief is not required between 12-6 AM. (DLRP) |
| Rhode Island <sup>27</sup> | Rhode Island Energy    | Connected Solutions – Residential  | \$400/kW-summer season (avg. per peak event), locked in for five years.  | 3 hours, between 2-7 PM, June 1 – Sept. 30, no more than 60 events per season  |
| Rhode Island <sup>28</sup> | Rhode Island Energy    | Connected Solutions – Summer Targeted Dispatch (Commercial)  | \$35/kW-summer season (avg. per peak event), locked in for five years. Extra \$10/kW-summer for weekend events.  | 3 hours, 2-7 PM, from June 1 – Sept. 30, 2-8 events per season   |

<sup>22</sup> Consolidated Edison New York. Schedule for Electric Delivery Service, Rider T, *available at* <https://cdnc-dcxprod2-sitecore.azureedge.net/-/media/files/coned/documents/save-energy-money/rebates-incentives-tax-credits/smart-usage-rewards/rider-t.pdf?rev=18549e020a5541409438bcee9f77b186> and Demand Response (Rider T) Program Guidelines, *available at* <https://www.coned.com/-/media/files/coned/documents/save-energy-money/rebates-incentives-tax-credits/smart-usage-rewards/smart-usage-program-guidelines.pdf?la=en#:~:text=The%20Commercial%20System%20Relief%20Program,their%20respective%20assigned%20call%20window.&text=CSRP%20Unplanned%20Event%2C%20and%20participation%20is%20voluntary.>

<sup>23</sup> PSEG LI, Commercial System Relief Program,

<https://www.psegliny.com/businessandcontractorservices/businessandcommercialsavings/csrp>.

<sup>24</sup> Long Island Power Authority, Electric Tariff, pp. 470-496, *available at* <https://www.lipower.org/about-us/tariff/>.

<sup>25</sup> Commercial System Relief Payment amounts are available at: [https://www.lipower.org/wp-content/uploads/2016/09/Stat\\_CSRP3.pdf](https://www.lipower.org/wp-content/uploads/2016/09/Stat_CSRP3.pdf).

<sup>26</sup> Distribution Load Reduction Payment amounts are available at [https://www.lipower.org/wp-content/uploads/2016/09/Stat\\_DLRP3.pdf](https://www.lipower.org/wp-content/uploads/2016/09/Stat_DLRP3.pdf).

<sup>27</sup> Rhode Island Energy, Residential ConnectedSolutions Battery Program, *available at* <https://www.rienergy.com/RI-Home/ConnectedSolutions/BatteryProgram>.

<sup>28</sup> Rhode Island Energy, Business ConnectedSolutions Battery program, *available at* <https://www.rienergy.com/RI-Business/Energy-Saving-Programs/ConnectedSolutions>.

| State                      | Utility              | Program   | Compensation  | Call Window  |
|----------------------------|----------------------|---|---|--|
| Rhode Island <sup>29</sup> | Rhode Island Energy  | Connected Solutions – Daily Dispatch (Commercial) | \$300/kW-summer season (avg. per peak event), locked in for five years.   | 2-3 hours from June 1 – Sept. 30 (Primarily July and August), approximately 50 events per season |
| Texas <sup>30</sup>        | ERCOT                | Aggregated DER Pilot                              | 80 MW System wide pilot, with no more than 40 MW of ADERs to be used for axillary, non-spin services. DERs to be aggregated through Load Serving Entities (LSEs), with values to customers determined by participating LSEs.  | 4 hours as enrolled and called on  |
| Vermont <sup>31</sup>      | Green Mountain Power | Bring Your Own Device (Grid Charging)             | Up-front payment of \$850/kW for 3-hour storage discharge capability or \$950/kW for 4-hour discharge capability (10% event performance tolerance subject to clawback, \$100/kW adder for systems installed in grid-constrained locations). 10-year program commitment. | 3-6 hours  |

<sup>29</sup> National Grid, Daily Dispatch, *available at* <https://www.rienergy.com/RI-Business/Energy-Saving-Programs/Daily-Dispatch>.

<sup>30</sup> Aggregated Distributed Energy Resource ERCOT Pilot Project, Public Utility Commission of Texas Project 53911. Available at: <https://interchange.puc.texas.gov/search/filings/?UtilityType=A&ControlNumber=53911&ItemMatch=Equal&DocumentType=ALL&SortOrder=Ascending>

<sup>31</sup> Green Mountain Power. BYOD – Terms and Conditions, *available at* <https://greenmountainpower.com/rebates-programs/home-energy-storage/bring-your-own-device/battery-systems/>, *see also* <https://greenmountainpower.com/wp-content/uploads/2020/11/BYOD-Customer-Agreement-11-2-20.pdf>.

| State                 | Utility              | Program                                     | Compensation  | Call Window |
|-----------------------|----------------------|---|---|-------------|
| Vermont <sup>32</sup> | Green Mountain Power | Bring Your Own Device (Solar Only Charging) | Up-front payment of \$650/kW for 3-hour storage discharge capability or \$750/kW for 4-hour discharge capability (10% event performance tolerance subject to clawback) for systems installed for backup power only option;; \$650 (no kW multiplier) for systems installed under solar self-consumption option, additional \$100/kW for systems installed in grid-constrained locations. Additional \$100 (no kW multiplier) for for systems installed in grid constrained areas. 10-year program commitment. | 3-6 hours   |

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<sup>32</sup> Green Mountain Power, BYOD – Solar Charging Program Tariff, V.P.S.B. No. 9, *available at* <http://epuc.vermont.gov/?q=downloadfile/576554/167385>.