

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 ¹	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 ²	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 ³	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.	

¹ 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>.

² 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; *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.

³ 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.

State	Utility	Program	Compensation	Call Window
California ⁴	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 ⁵	Pacific Gas & Electric, Southern CA Edison, San Diego Gas & Electric	Demand Side Grid Support Program	<p>Option 1 - Energy Payment Only \$2/kWh of verified incremental load reduction provided during a dispatch period.</p> <p>Option 2 - Standby & Energy Payment \$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 & Bid 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 & 2- Dispatch events 1-5 hours.</p> <p>Option 3 - Dispatch events maximum of 4 hours.</p>

⁴ 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>.

⁵ 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 ⁶	SMUD	My Energy Optimizer Program	<u>Partner Level</u> \$150/kWh up to \$1,500 <u>Partner+ Level</u>	<u>Partner Level</u> Summer months only; peak period window & duration undefined <u>Partner+ Level</u> Year-round, peak period window & duration undefined
Colorado ⁷	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 ⁸	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 ⁹	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. <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. <u>Active Dispatch:</u> 1-3 hours between 12-9 PM, June 1 - Sept. 30, 30-60 events per summer season.

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

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

⁸ 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>.

⁹ 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 ¹⁰	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 ¹¹	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

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

¹¹ 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 ¹²	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 ¹³	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 ¹⁴	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 ^{15,16}	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,

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

¹³ 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.

¹⁴ 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>.

¹⁵ 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/>.

¹⁶ 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 (Commercial)		between 30-60 events per season
Massachusetts ¹⁷	Eversource, Cape Light Compact	Connected Solutions – Targeted Dispatch (Commercial)	\$100/kW-summer	3 hours, between 2-7 PM, June 1 – Sept. 30, up to 8 events
Massachusetts ¹⁸	Unitil, National Grid	Connected Solutions – Targeted Dispatch (Commercial)	\$35/kW-summer; \$10/kW weekend bonus.	3 hours, between 2-7 PM, June 1 – Sept. 30, between 1-8 events per season
New Hampshire ¹⁹	Unitil	Connected Solutions – Targeted Dispatch Pilot (Commercial)	\$35/kW-summer	3 hours, between 2-7 PM, June 1 – Sept. 30
New Hampshire ²⁰	Eversource	Connected Solutions – Daily Dispatch (Commercial)	\$200/kW for dispatch on a daily basis (summer only), locked in for five years.	2-3 hours, between 2-7 PM (non-holiday weekdays), June 1 – Sept. 30, up to 60 events per season
New Hampshire ²¹	Eversource	Connected Solutions – Targeted Dispatch (Commercial)	\$100/kW-summer	3 hours, between 2-7 PM (non-holiday weekdays), June 1 – Sept. 30, up to 8 events 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>.

¹⁷ 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/>.

¹⁸ *Id.*

¹⁹ 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.

²⁰ 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>.

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

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New York ²²	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. Minor \$/kWh payment during events.	4+ hours, May 1 – Sept. 30
New York ^{23,24}	PSEG LI	Dynamic Load Management Tariff: Commercial System Relief Program (CSRP) and Distribution Load Relief Program (DLRP)	\$/kW per monthly capacity reservation payment and \$/kWh performance payment for load relief. ^{25,26}	Up to 4 hours on weekdays, May 1 - Sept. 30 (CSRP) 4-6 hours, May 1 - Sept. 30. Load relief is not required between 12-6 AM. (DLRP)
Rhode Island ²⁷	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 ²⁸	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

²² 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.>

²³ PSEG LI, Commercial System Relief Program, <https://www.psegliny.com/businessandcontractorservices/businessandcommercialsavings/csrp>.

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

²⁵ Commercial System Relief Payment amounts are available at: https://www.lipower.org/wp-content/uploads/2016/09/Stat_CSrp3.pdf.

²⁶ Distribution Load Reduction Payment amounts are available at https://www.lipower.org/wp-content/uploads/2016/09/Stat_DLrp3.pdf.

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

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

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Rhode Island ²⁹	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 ³⁰	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 ³¹	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

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

³⁰ 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>

³¹ 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 ³²	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

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