2024
CLEAN &
RENEWABLE
ENERGY
REPORT



February 19, 2025

Connecticut Public Utilities Regulatory Authority



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About This Report

The following report details the status of the current clean and renewable energy programs and contracts administered by the electric distribution companies (EDCs), The Connecticut Light and Power Company d/b/a Eversource Energy (Eversource) and The United Illuminating Company (UI), and overseen by the Connecticut Public Utilities Regulatory Authority (the Authority or PURA).

The clean and renewable energy programs and relevant market segments include, but are not limited to:

- Residential solar photovoltaic (PV) systems;
- Non-residential clean energy systems, including solar PV and fuel cell energy systems;
- Shared Clean Energy Facility (SCEF) Program;
- Public policy contracts and Power Purchase Agreements (PPAs) selected through Department of Energy and Environmental Protection (DEEP) procurements;
- Voluntary renewable offers, including the Clean Energy Options Program (CEOP) and Voluntary Renewable Options (VRO) Program; and
- Compliance with Connecticut's Renewable Portfolio Standard (RPS).

This report is intended to act as a centralized document for tracking key performance metrics associated with these programs and contracts. The publicly available data used to generate this Report can be accessed via Docket No. 24-08-01, <u>2024 Clean and Renewable Energy Program Data and Report</u>. Any publicly available data used to generate future reports will be made available through the corresponding proceeding using the same numbering convention, Docket No. XX-08-01, where XX is the last two digits of the year (e.g., "24" for 2024). Information on the program eligibility requirements, additional documents and resources, and an acronym glossary can be found in the appendices.

II. Generation and Emissions

A. Statutory Renewable Energy and Emissions Goals

In May 2022, the Connecticut General Assembly passed <u>Public Act No. 22-5</u>, <u>An Act Concerning Climate Change Mitigation</u>, (PA 22-5), which established ambitious statutory renewable energy goals for the state of Connecticut. PA 22-5 amended Section 22a-200a of the General Statutes of Connecticut, which requires the state to reduce the level of emissions from greenhouse gases to at least 45% below 2001 levels by 2030 and 80% below 2001 levels by 2050, to also require all electricity supplied to customers in Connecticut to come from zero-carbon sources by January 1, 2040.

Electricity supplied to electric customers can be thought of as the electricity consumed in the state, otherwise known as the electric load, typically measured in megawatt-hours (MWh) or gigawatt-hours (GWh). The below graph displays Connecticut's net electricity load over time

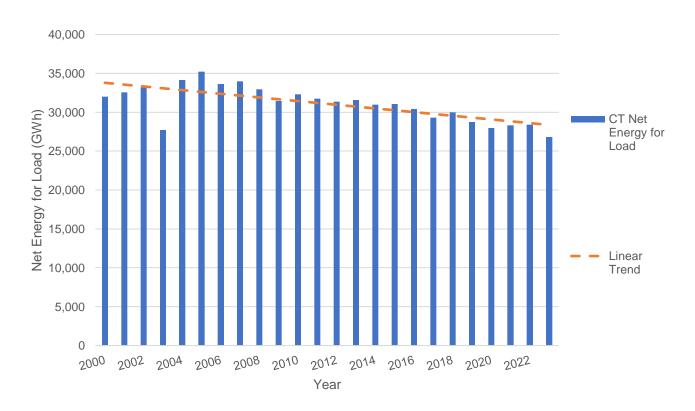
WHAT IS A MEGAWATT-HOUR?

A megawatt-hour (MWh) is the amount of energy produced if a 1 megawatt (MW) electric generation unit ran for 1 hour. As an example, if a 3 MW capacity solar panel installation ran at full capacity (3 MW) due to optimal operating conditions (perfect weather) for 2 hours, it would generate 6 MWh of energy (i.e., 3 MW x 2 hours = 6 MWh). Conversely, a MWh is the amount of energy consumed if a 1 MW engine ran for 1 hour. Per EIA estimates, the average Connecticut household uses 7.8 MWh per year, or 650 kWh per month (vs. national average of 10.6 MWh per year).

("net", in this context, indicates the inclusion of reductions in load attributable behind-the-meter to distributed generation). As can be seen in the chart below, Connecticut's electricity load requirement has been steadily decreasing (by about 14% between 2015 and 2023), in part due to proliferation of increased energy efficiency and distributed generation. While this trend in reduced consumption is laudable, increasing electrification of transportation and space heating, as well as increasing energy demand from data centers, will likely lead to a reversal in this trend, with electricity consumption growing consumption of other fuels decreases.

Figure 1: CT Net Energy Load¹

Connecticut Net Energy for Load (GWh)



¹ ISO New England, "Net Energy and Peak Load," available at https://www.iso-ne.com/isoexpress/web/reports/load-and-demand/-/tree/net-ener-peak-load (Annual Generation and Load Data for ISO NE and the Six New England States link) (last visited November 21, 2024).

B. Connecticut Greenhouse Gas Emissions – Electricity Sector

There are two ways to measure electricity-sector emissions in Connecticut: (1) emissions associated with electricity usage or consumption within the state (load); and (2) emissions from power generation within the state. The former is the methodology used by Connecticut. DEEP tracks Connecticut's advancement towards its climate goals, including electric sector emissions, and regularly issues Greenhouse Gas Emissions Inventory Reports.²

In 2022, consumption-based electric sector greenhouse gas emissions were about 2.5 million metric tons of carbon dioxide equivalent (MMTCO2e), accounting for 7.1% of the state's total greenhouse gas emissions.³ Consumption-based electric sector emissions in Connecticut have been decreasing over time and were 79.7% below 2001 levels in 2022, due to increases in energy efficiency, a reduction in emissions intensity from regional fossil-based generators (reduced petroleum and coal use in favor of natural gas), and an increase in renewable energy generation. Significantly, the steep decline in emissions after 2019, as shown in Figure 2, is a result of the power purchase agreement with the Millstone Nuclear Plant, which granted Connecticut ownership of all RECs generated by the facility from 2019 to 2029.⁴ Generation of zero-carbon electricity from Millstone covers approximately 58% of the state's electric load for 2021 and 2022; in contrast, about 7% of Connecticut's electric demand was generated from solar and wind in 2021.⁵

However, power sector emissions associated with generation within Connecticut are significantly higher than consumption-based power-sector emissions, as Connecticut generates more power than it consumes. In 2023, emissions from electricity generation totaled about 10.8 MMTCO2e.⁶

² <u>See</u> CT DEEP, "Connecticut Greenhouse Gas Reduction Progress Reports," available at https://portal.ct.gov/deep/climate-change/ct-greenhouse-gas-inventory-reports (last visited November 21, 2024).

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³ CT DEEP, "CT GHG Emissions Inventory 1990-2021 with Preliminary Look at 2022," p. 6, available at <a href="https://portal.ct.gov/-/media/deep/climatechange/1990-2021-ghg-inventory/deep_ghg_report_90-21_pre-22.pdf?rev=335c1fb6947648bab0539c45619076f1&hash=EEF41B3C1A6758F0F0831A17022C9919 (Updated October 4, 2024) (last visited November 21, 2024). Note that 2022 results are preliminary. In addition, beginning with its 1990–2021 Greenhouse Gas Emissions Inventory, DEEP included a new methodology for calculating the consumption-based electric power sector emissions that better accounts for the exchange and retirement of Renewable Energy Certificates. In general, this new methodology reduced calculated emissions. See, infra, page 17 of this Report.

⁴ <u>See</u> Connecticut DEEP and PURA Corresp., Feb. 1, 2018, Docket No. 17-07-32, <u>DEEP and PURA Joint Proceeding to Implement the Governor's Executive Order Number 59</u>, Resource Assessment of Millstone Pursuant to Executive Order No. 59 and Public Act 17-3, available at: https://www.dpuc.state.ct.us/2nddockcurr.nsf/8e6fc37a54110e3e852576190052b64d/3e4880375be426ff85258752007981d6?OpenDocument.

⁵ CT DEEP, "CT GHG Emissions Inventory 1990-2021 with Preliminary Look at 2022," pp. 10, 14, available at https://portal.ct.gov/-/media/deep/climatechange/1990-2021-ghg-inventory/deep_ghg_report_90-21_pre-22.pdf?rev=335c1fb6947648bab0539c45619076f1&hash=EEF41B3C1A6758F0F0831A17022C9919 (Updated October 4, 2024) (last visited November 21, 2024).

⁶ Id., p. 21.

Generation-based power sector emissions have held relatively steady, with only a 10.7% decrease from 1990 to 2023. Increased in-state emissions associated with the construction and operation of natural gas generators have offset reductions in coal and petroleum-based power generation.⁷

Connecticut Greenhouse Gas Emissions - Power Sector

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Figure 2: CT Greenhouse Gas Emissions - Power Sector⁸

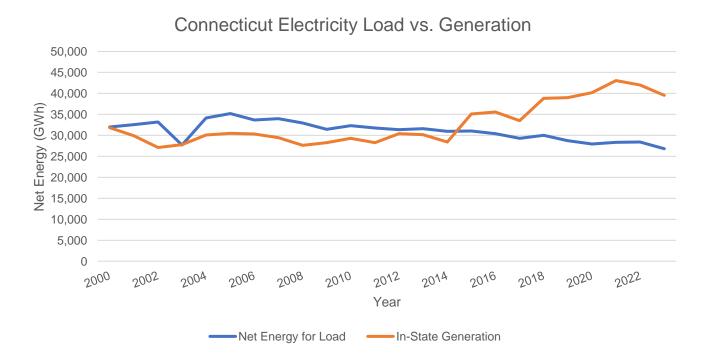
Figure 3, which illustrates net energy load and Connecticut-sited generation, shows Connecticut's status as a net exporter of electricity. In 2023, Connecticut generated approximately 47.3% more electricity than it consumed. New England's electrical grid is organized as a regional system; decisions about the siting and construction of generation are complex and driven by a variety of factors.

Figure 3: CT Electricity Load vs. Generation⁹

⁷ <u>See</u> U.S. Energy Information Administration (EIA), "Connecticut Electricity Profile 2023," available at https://www.eia.gov/electricity/state/connecticut/.

⁸ CT DEEP, "CT GHG Emissions Inventory 1990-2021 with Preliminary Look at 2022," Supporting Data, Emissions Totals sheet, available at https://portal.ct.gov/-/media/deep/climatechange/1990-2021-ghg-inventory/1990-2022/public-ghg-data-1990-2022.xlsx?rev=a84aa29da5394bd89083a7a0813bbd00&hash=3C0CA0F72BE67D76F586FA6207043355 (Updated October 4, 2024) (last visited November 21, 2024).

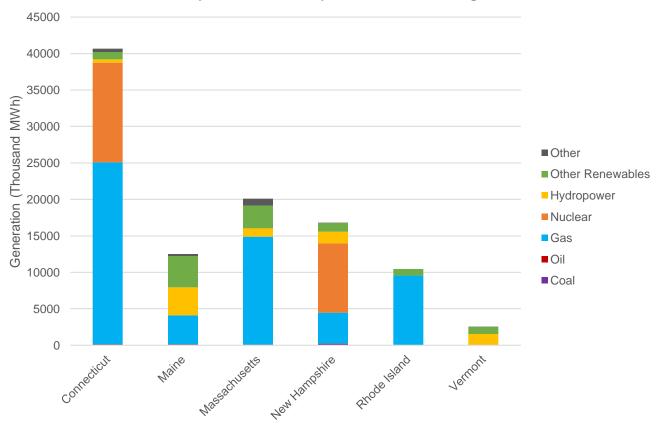
⁹ ISO New England, "Net Energy and Peak Load," available at https://www.iso-ne.com/isoexpress/web/reports/load-and-demand/-/tree/net-ener-peak-load (Annual Generation and Load Data for ISO NE and the Six New England States link) (last visited November 21, 2024).



Connecticut's role in powering New England is further demonstrated in Figure 4 below. Connecticut produces approximately 40% of the electricity generated within New England (excluding exports from neighboring regions). The state generates more electricity from both zero-carbon and carbon-emitting resources than any other state. Note that, in the graph below, nuclear made up 34% of Connecticut's electricity generation in 2023, representing 90% of the state's zero-carbon electricity generation.

Figure 4: 2023 New England States Energy Generation by Fuel¹⁰

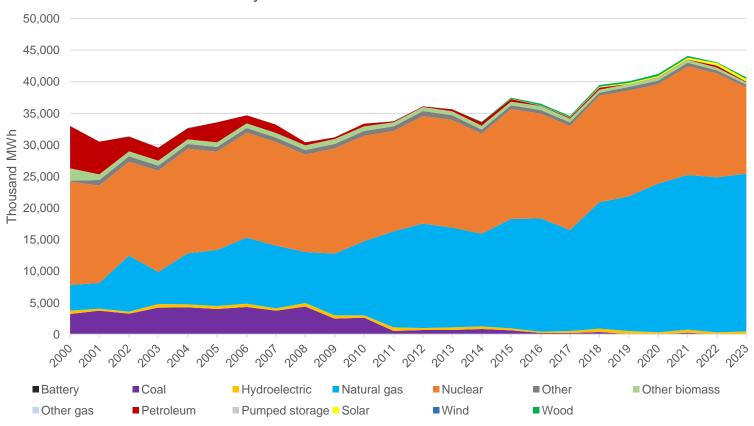




EIA, "Electricity Data Browser," available at https://www.eia.gov/electricity/data/browser/#/topic/0?agg=2,0,1&fuel=vvg&geo=80fo&sec=g&freq=A&start=200 https://www.eia.gov/electricity/data/browser/#/topic/0?agg=2,0,1&fuel=vvg&geo=80fo&sec=g&freq=A&start=200 <a href="https://www.eia.gov/electricity/data/browser/#/topic/0?agg=2,0,1&fuel=vvg&geo=80fo&sec=g&freq=A&start=200 <a href="https://www.eia.gov/electricity/data/browser/#/topic/0?agg=2,0,1&fuel=vvg&geo=80fo&sec=g&freq=A&start=200</a

Figure 5. Electricity Generation in Connecticut Over Time¹¹

Electricity Generation in Connecticut Over Time



¹¹ EIA, "Connecticut Electricity Profile 2023," available at available at https://www.eia.gov/electricity/state/connecticut/ (Table 5: Electric power industry generation by primary energy source, 1990 through 2023) (last visited December 19, 2024).

III. Equitable Modern Grid (EMG)

On October 2, 2019, PURA issued an Interim Decision in Docket No. 17-12-03, PURA Investigation into Distribution System Planning of the Electric Distribution Companies. The Interim Decision outlines the Authority's framework for realizing an equitable modern electric grid in Connecticut (EMG Framework), as well as for near-term and long-term plans to ensure continued improvements to Connecticut's electric grid.

While the EMG Framework is not the subject of this report, the Authority strives to achieve the objectives of the EMG Framework in its oversight of the programs outlined in this report and the clean energy programs established effective January 1, 2022 (e.g., the Residential Renewable Energy Solutions (RRES) and the Energy Storage Solutions (ESS) programs, among others). The EMG Framework objectives are:

- 1. Support (or remove barriers to) the growth of Connecticut's green economy;
- 2. Enable a cost-effective, economy-wide transition to a decarbonized future;
- 3. Enhance customers access to a more resilient, reliable, and secure commodity; and
- Advance the ongoing energy affordability dialogue in the state, particularly in underserved communities.

Based on the foundational record established during Phase I of Docket No. 17-12-03, the Interim Decision also identified and outlined 11 dockets, shown in Figure 6 below, to help realize the EMG Framework's objectives.

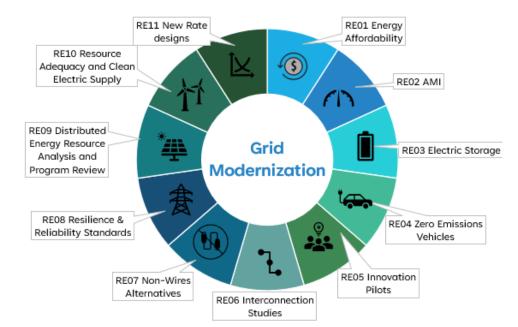


Figure 6: Grid Modernization Dockets

The Authority has reached a final determination in all eleven EMG Framework dockets, resulting in numerous new programs, processes, and frameworks established to better achieve the objectives outlined above. Major milestones in each of the dockets are shown in Figure 7 below. More information on the EMG Framework and the resulting programs, processes, and frameworks can be found on the Authority's dedicated <u>website</u>.

Figure 7: Status of Grid Modernization Dockets



IV. Combined Program Data

The table below provides a summary of the clean energy programs currently and previously in effect in Connecticut:

Table 1: Overview of Clean Energy Programs

	Program Name	Customer Segment	Technology	Time Period
Current Programs	Residential Renewable Energy Solutions (RRES)	Residential	Class I Renewable ¹²	2022–2027
	Non-Residential Renewable Energy Solutions (NRES)	Non-residential	Class I Renewable ¹³	2022–2027
	Shared Clean Energy Facilities (SCEF)	Residential and Non-residential	Class I Renewable	2020–2027
	Energy Storage Solutions (ESS)	Residential and Non-residential	Energy Storage	2022–2030
	Electric Vehicle (EV) Charging	Residential and Non-residential	EV Chargers	2022–2030
	Public Policy Contracts	Utility-Scale	Varies	Varies
	Conservation and Load Management Plan	Residential and Non-residential	Energy Efficiency	
	Voluntary Renewable Options (VRO)	Standard service utility customers	RECs	2021–Present
Legacy Programs	Residential Solar Investment Program (RSIP)	Residential	Solar	2012–2021
	Low and Zero Emission Renewable Energy Credit (LREC/ZREC)	Residential and Non-residential (primarily non-residential)	Solar, Fuel Cell, and Other Class I, II, and III renewable	2012–2021

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¹² While the RRES program is open to Class I renewables (a category that includes multiple zero-carbon and low-carbon electricity generating technologies), projects have been exclusively solar PV to date.

¹³ The NRES and SCEF Programs are open to Class I renewables; solar PV and fuel cell projects have been deployed through the programs to date.

Program Name	Customer Segment	Technology	Time Period
Virtual Net Metering (VNM)	Non-residential (State, Agricultural, and Municipal)	Solar, Fuel Cell, and Other Class I, II, and III renewable	2014–2021
Clean Energy Options Program (CEOP)	Standard service utility customers	RECs	2005–2020

Figure 8 below shows the cumulative deployment of fuel cell, wind, battery storage, and electric vehicle charging systems via all relevant state programs, including projects where the physical deployment is out of state (e.g., in New York or in federal waters).¹⁴ It also shows the cumulative deployment of solar resources via all relevant state programs.¹⁵ For solar, one MW of installed capacity produces enough electricity annually to power approximately 130–140 houses in Connecticut.¹⁶ The data for 2024 is through September 30.

Figure 8 shows the combined data for both EDCs. Notably, the figure does not show deployment through programs or procurements conducted by the state's municipal electric utilities. For more information on deployment over time for individual programs, see the relevant sections below.

¹⁴ Excludes the Conservation and Load Management (C&LM) Plan. The C&LM plan was excluded to improve graph scale, as the deployed MW are significantly higher than that of other programs.

Residential solar PV is defined as solar deployed at a residential customer's site behind the utility meter. Interrog. Resp. CAE-1 n. 2, July 24, 2020, Docket No. 17-12-03RE09, PURA Investigation into Distribution System Planning of the Electric Distribution Companies – Clean and Renewable Energy Resource Analysis and Program Reviews. Non-residential solar PV is defined as solar deployed at a commercial or industrial customer's site behind the utility meter. Id. Utility-scale solar PV is defined as solar connected directly to the distribution grid.

¹⁶ See Solar Energy Industries Association, "What's in a Megawatt?," available at https://seia.org/whats-in-a-megawatt/ (last visited Dec. 27, 2024).

Figure 8: Cumulative Resource Deployment - All Programs¹⁷



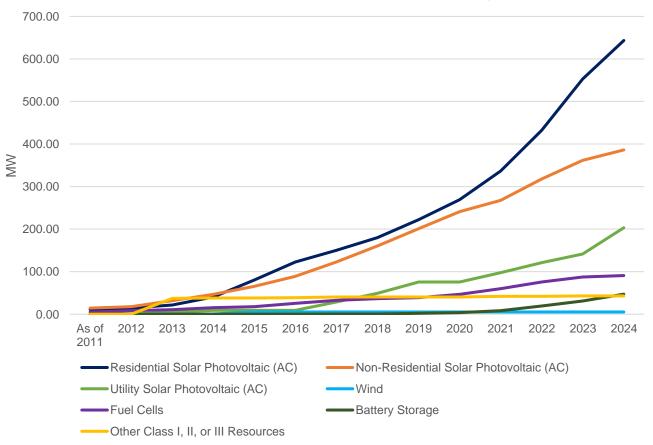


Table 2 highlights deployment data by energy type, separated by year, for both EDCs. The table reflects only deployment in the state of Connecticut via relevant state programs, as opposed to Table 3 below, which includes projects physically located outside of Connecticut.

¹⁷ Eversource Compliance, Jan. 17, 2025, Supplemental Order No. 1, Att. <u>ES Sec. II.A.1 and II.A.3 Interrogatories DN 24-08-01Rev01.xlsx</u> (Overview by Tech sheet, Interrogatories CRE-01, CRE-02, and CRE-03); UI Corresp., Jan. 13, 2025, Order No. 1, 2025-01-13 UI Attachment 2 - PURA Questions Response #24-08-01, Att. <u>2025-01-13 UI Attachment 2 - PURA Questions Response #24-08-01.xlsx</u>, (Overview by Tech sheet, Interrogatories CRE-01, CRE-02, and CRE-03).

Table 2: Program Deployment by Year by Technology Type¹⁸

In State Incremental MW of Deployment by Year by Technology Type (UI & Eversource)

		As of 2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
	Residential	11.1	3.3	7.0	18.7	40.4	41.8	27.4	30.4	41.8	47.2	67.1	95.6	121.2	90.3
Solar Photovoltaic (AC)	Non- Residential	14.3	3.2	14.6	14.8	18.3	24.2	33.6	37.3	40.6	39.9	26.9	50.1	44.4	24.1
(710)	Utility	0.0	0.0	5.0	4.0	0.0	0.0	20.0	20.0	26.4	0.0	22.1	23.2	20.6	61.9
Wind		0.1	0.0	0.0	0.1	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel Cells		5.0	3.0	2.7	4.4	2.6	7.9	7.0	3.9	2.6	7.6	13.5	15.4	11.7	3.6
Battery Storage		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.7	1.7	4.7	10.0	10.7	12.0
Energy Efficiency/Demand Response		884.6	124.8	123.4	123.4	166.2	83.7	94.0	87.0	60.1	100.4	116.6	118.7	123.6	103.6
Other Class I, II, or III Resources		0.0	0.0	37.6	0.5	0.1	0.9	1.3	0.0	0.0	0.0	1.6	0.3	0.6	0.0

¹⁸ Eversource Compliance, Jan. 17, 2025, Supplemental Order No. 1, Att. <u>ES Sec. II.A.1 and II.A.3 Interrogatories DN 24-08-01Rev01.xlsx</u>, (Overview by Tech sheet, Interrogatory CRE-01); UI Corresp., Jan. 13, 2025, Order No. 1, 2025-01-13 UI Attachment 2 - PURA Questions Response #24-08-01, Att. <u>2025-01-13 UI Attachment 2 - PURA Questions Response #24-08-01.xlsx</u>, (Overview by Tech sheet, Interrogatory CRE-01).

Table 3: Overview of Programs, Including Deployment MW and Count¹⁹

Overview of Programs - Including Total Deployment (In and Out of State)

	Statutory Authority	Renewable Energy Source(s)	Duration of Tariff or Contract	Total No. of Annual Solicitations (or Program Length)	Initial Project Award Year	Total Deployment Levels	Total Deployment Levels through 2023	
	C.G.S. §§ 16-		15-year REC	0 (~10 years)	2011	Deployment in MWs (AC)	330	
Residential Solar	245ff, 16-244u	Solar PV	contract for RSIP	o (~10 years)	(RSIP)	No. Projects In-Service	46,319	
(RSIP + RRES)	C.G.S. § 16-244z	3 00.00. 1 1	20-year tariff	0 (6 years)	2022	Deployment in MWs (AC)	264.52	
	0.0.0. § 10-2442		20-year tariii	0 (6 years)	(RRES)	No. Projects In-Service	33,941	
NRES	C.G.S. § 16-244z	Solar PV	20-year tariff	0 (6 years)	2022	Deployment in MWs (AC)	10.05	
Program						No. Projects In-Service	66	
LREC/ZREC	C.G.S. §§ 16-244r, 16-244s, 16-244t	Class I RECs	15-year tariff	10 (10-yr procurement term)		Deployment in MWs (AC)	437.63	
Program					2012	No. Projects In-Service	2607	
VAIM Drogram	C.G.S. § 16-	Class I & Class	Project life	N/A	2014	Deployment in MWs (AC)	82.24	
VNM Program	244u(5)	III Energy	Project ille		2014	No. Projects In-Service	85	
SCEF Pilot		Class I Energy +		1 RFP (2-year		Deployment in MWs (AC)	1.6	
Program	C.G.S. § 16-244x	RECs	20-year tariff Pilot	Pilot program)	2017	No. Projects In-Service	1	
SCEF		Class I Energy +		6 (6-year		Deployment in MWs (AC)	8.3	
Program	C.G.S. § 16-244z	RECs	20-year tariff	procurement term)	2020	No. Projects In-Service	3	
DEEP		arias Cas DEED D	roouwamanta aaatis = f	or dataila	·	Deployment in MWs (AC)	1679.69	
Procurements	Varies - See DEEP Procurements section for details					No. Projects In-Service	53	

¹⁹ Eversource Compliance, Nov. 15, 2024, Order No. 1, Section II.A.1 and A.3 (Interrogatories) and Section II.A.4 (Cross-Posted Compliance), Att. <u>ES Sec. II.A.1</u> and II.A.3 Interrogatories <u>DN 24-08-01.xlsx</u>, (Overview by Program sheet, Interrogatory CRE-05); UI Compliance, Dec. 3, 2024, Order No. 1, VNM Data Interrogatories Supplement, Att. <u>UI Attachment 2 - VNM Data Supplement #24-08-01.xlsx</u>, (Overview by Program sheet, Interrogatory CRE-05).

	Overview of Programs - Including Total Deployment (In and Out of State)								
	Statutory Authority	Renewable Energy Source(s)	Duration of Tariff or Contract	Total No. of Annual Solicitations (or Program Length)	Initial Project Award Year	Total Deployment Levels	Total Deployment Levels through 2023		
CEOP/VRO	/RO C.G.S. §§ 16-244c Voluntary Class I Enroll 1-year 2005 /		Annual No. RECs Delivered (Average) ²⁰	2,012,592					
Program	/ 16-245p(a)	RECs only	customer contract		January 2021	No. Enrolled Customers (Average)	221,709		
	C.G.S. §§ 16- 245a, 16- 244c(h)(1) and 16- 243q	Required Percentages of Class I, Class II and Class III RECs	Annual Compliance	N/A	2000	2023 Class I - Required %	26%		
RPS						2023 Class II - Required %	4%		
Compliance						2023 Class III - Required %	5%		
ESS Program	C.G.S. §§ 16-11, 16-19, 16-19e, 16-	Energy Storage	N/A, through 2030 for the	0 (9 years)	2022	Submitted and Approved Projects in MWs (AC)	3.29		
Loo i rogium	243ee; 16-244i	Energy Storage	Performance Incentive	o (9 years)		No. Projects Submitted and Approved	261		
EV Charging	C.G.S. §§ 16-11, 16-244i, 16-244,	EV Charging Infrastructure	N/A, 24 month managed charging requirement	0 (9 years)	2022	Residential Ports In-Service	13,754		
Program	16-19e, 16-19(a), 16-2(m)			o (a years)	2022	Commercial Ports In-Service	7,181		

²⁰ CEOP/VRO deployment is provided as annual averages (through 2022), as RECs and customer enrollments pertain to each year and do not accumulate. <u>See</u> Eversource Exceptions, Feb. 7, 2024, Docket No. 23-08-01, <u>2023 Clean and Renewable Energy Program Data and Report</u>.

V. Existing Programs

A. Residential Renewable Energy Solutions (RRES) Program

1. Program Description and History



Authorized by General Statutes § 16-244z(b)(2), the six-year Residential Renewable Energy Solutions (RRES) Program replaced the Residential Solar Incentive Program (RSIP, discussed below in Section VII.A). The program began on January 1, 2022, and will run through 2027.

The following five objectives guide the development of the RRES Program: (1) fostering the sustained and orderly

development of the state's solar industry, and maintaining Connecticut's annual historical deployment of residential solar; (2) achieving a 100% zero carbon electric grid by 2040, including through additional residential solar deployment; (3) balancing participant, non-participant, and electric system costs and benefits; (4) ensuring program accessibility for customers; and (5) promoting inclusivity and program participation by low- and moderate-income (LMI) customers and those in environmental justice communities.²¹ In accordance with the fifth Program Objective, the program has a target of 40% deployment among low-income populations or in distressed municipalities.²²

The RRES program design was established in the February 10, 2021 <u>Interim Decision</u> in Docket No. 20-07-01, <u>PURA Implementation of Section 3 of P.A. 19-35</u>, <u>Renewable Energy Tariffs and Procurement Plans</u>. While open to all forms of Class I renewables, RRES deployments have been exclusively solar projects to date. This program is administered by the EDCs in their respective service territories.

²¹ <u>See</u> Interim Decision, Feb. 10, 2021, Docket No. 20-07-01, <u>PURA Implementation of Section 3 of Public Act 19-35, Renewable Energy Tariffs and Procurement Plans, pp. 5–7.</u>

²² The current distressed municipality list and criteria are defined by the CT Department of Economic and Community Development (DECD). CT.gov, "Distressed Municipality List 2024," available at https://portal.ct.gov/DECD/Content/About_DECD/Research-and-
Publications/02_Review_Publications/Distressed-Municipalities (last visited Dec. 19, 2024).

The RRES Program allows residential solar customers to sell energy and RECs for a 20-year term under one of two tariff rate structures: (1) Buy-All; or (2) Netting.

Under the Buy-All tariff, the residential project is provided fixed compensation for all energy and RECs produced over a 20-year term. Compensation can either be provided directly to customers in the form of monetary on-bill credits, or as direct payments to third-party beneficiaries, such as a solar developer. Customers can cash out credits in excess of their utility bill.

Alternatively, under the Netting tariff, qualified projects are compensated for the net energy produced (i.e., all renewable energy production not consumed within the established netting interval) at the retail electric rate at the time of generation. RECs created during the 20-year term are compensated at a fixed rate, payable to either the customer of record or a third-party beneficiary on a quarterly basis. A customer's energy consumption, and therefore monthly energy bill, are reduced by the energy produced and used on site. Further, the EDCs provide customers with monetary on-bill credits for any energy the eligible project exported to the electric grid.

The Authority annually reviews the RRES Program in Docket No. XX-08-02, where XX is the last two digits of the year (e.g., "24" for 2024). PURA reviewed 2024 (Program Year 3) RRES deployment data and program documents for use in 2025 (Program Year 4) in Docket No. 24-08-02, <u>Annual Residential Renewable Energy Solutions Program Review – Year 4</u>. PURA issued a <u>Decision</u> on October 16, 2024 (Year 4 RRES Decision), which implemented several changes to better align the RRES Program with its program objectives.

The Year 4 RRES Decision updated the Buy-All and Netting tariff rates for 2024 using a tariff model developed through a robust stakeholder process to reflect recent economic and project data. Accordingly, the Buy-All tariff rate for customers applying to the program in 2025 will increase from 31.89 cents to 31.95 cents per kWh. For customers enrolling under the Netting tariff, the Authority approved a non-bypassable charge of \$0.005 per kWh. These changes were made to achieve a reasonable rate of return for participating customers while balancing participant costs and benefits with costs and benefits to non-participating ratepayers. The Year 4 RRES Decision also approved updated application fees of \$163 per project for both EDCs to reflect administrative costs of the program. The Decision also authorized changes to expand customer options for metering and wiring by approving alternatives to trough-type connections, allowing continued use of non-bypass meter sockets, and directing the EDCs to take steps to permit the deployment of meter socket adapters for residential solar installations.

In addition, in 2024, the Authority approved master-metered multifamily affordable housing to participate in the RRES Program through a <u>second decision</u> in Docket No. 23-08-02, Annual Residential Renewable Energy Solutions Program Review – Year 3.

Previously, only individually metered multifamily affordable housing was eligible for the program. The decision approved the Multifamily Housing Working Group's proposal to allow master-metered affordable housing to receive RRES benefits, as long as properties distribute at least 25% of the tariff's financial value to tenants through eligible building upgrades.

More information and resources are available at the PURA RRES Program <u>webpage</u> and on each of the EDC's dedicated RRES Program webpages (Eversource <u>Residential</u>; United Illuminating <u>Residential</u>).

2. Rates & Deployment

Following the objectives cited above, RRES tariff rates are structured to provide a reasonable rate of return for project owners, as required under General Statutes § 16-244z(b) while protecting Connecticut ratepayers from overcompensating projects, with the goal of providing a sustained and orderly growth of the residential solar market in Connecticut. The RRES <u>Residential Tariff Model</u> attached to the Year 4 RRES Decision as Appendix B is used to aid the development of these rates.

The 2025 RRES tariff rates approved in the Year 4 RRES Decision are shown in Table 4 below:

2025 RRES Residential Tariff Rates **Netting REC Rate / Non-**Buy-All Rate (\$/kWh) Bypassable Charge (\$/kWh) -0.0050 **Eversource** 0.3195 UI 0.3195 -0.0050 **Low-Income Adder** 0.055 0.035 **Distressed Municipality** Adder 0.0275 0.0175

Table 4: 2025 RRES Residential Tariff Rates²³

The EDCs also make quarterly and annual reports on RRES system deployment. RRES total and approved applications data as of September 2024 are shown below in Table 5. Roughly 96% of applications submitted over this period were approved.

²³ Year 4 RRES Decision, p. 11 (Table 4).

Table 5: RRES Application Data: January 2022–September 2024²⁴

RRES Application Data: January 2022 - September 2024								
	Total Applications	Total Application kW	Approved Applications	Approved kW				
Eversource	38,664	307,829	37,164	295,556				
UI	7,759	55,580	7,430	51,730				
Total	46,423	363,408	44,594	347,286				

Out of the 44,594 approved applications, about 76% have been completed and deployed across the EDCs, as seen in Table 6 below.

Table 6: RRES Deployment: January 2022–September 2024²⁵

RRES Deployment: January 2022–September 2024							
	Total # Projects Deployed	Total kW Deployed					
Eversource	28,946	229,701					
UI	4,995	34,818					
Total	33,941	264,518					

Generally, RRES deployment has exceeded the programmatic target of 50–60 MW per year set based on the state's historical residential solar deployment, despite headwinds due to supply chain bottlenecks and the lingering impact of the COVID-19 pandemic. Historically high electricity supply rates in early 2023, which make self-generation of electric power more attractive, may have been a driver of particularly high deployment in 2023. Collaboration between PURA, the Program Administrators, and installers to streamline the process of utilizing this program has also led to its rapid success.

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²⁴ Eversource Order No. 12 Compliance, Oct. 15, 2024, Docket No. 23-08-02; UI Order No. 12 Compliance, Oct. 15, 2024, Docket No. 24-08-02.

²⁵ <u>ld</u>.

RRES Systems Installed 16 12 10 6 May-23 Nov-22 Jan-23 Feb-23 Apr-23 Jun-23 Jul-23 Aug-23 Sep-23 Oct-23 Vov-23 Sep-22 Oct-22 Dec-23 Dec-22 Mar-23 Month

Figure 9. RRES Systems Installed by Month²⁶

B. Combined Residential Solar Program Metrics

■ Low Income Adder
■ Distressed Municipality Adder
■ No Adder

The plot below shows the cumulative deployment of residential solar in Connecticut through state residential solar programs, including the legacy Residential Solar Investment Program (RSIP), discussed in Section VII.A, and the RRES Program, through October 2023. Notably, 2022 is the first year of deployment via the RRES Program. Cumulative residential solar deployment reached 764 MW by September 2024. In addition, some residential solar projects are deployed outside of the state-authorized programs, which are also shown on the plot below.

Evergourge Order No. 12 Compliance Oct. 15, 2024, Dec

-

²⁶ Eversource Order No. 12 Compliance, Oct. 15, 2024, Docket No. 23-08-02; UI Order No. 12 Compliance, Oct. 15, 2024, Docket No. 24-08-02.

Figure 10: Cumulative MW of Residential Solar Deployed in CT by Program²⁷

The plot below shows annual residential solar deployment by program, including deployment outside of the state-authorized programs. Note that 2024 data only includes deployment through September.

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²⁷ Eversource Compliance, Nov. 15, 2024, Order No. 1, Section II.A.1 and A.3 (Interrogatories) and Section II.A.4 (Cross-Posted Compliance), Att. <u>ES Sec. II.A.1 and II.A.3 Interrogatories DN 24-08-01.xlsx</u>, (RRES NRES SCEF sheet and LREC ZREC sheet, Interrogatory CRE-01); UI Compliance, Dec. 3, 2024, Order No. 1, VNM Data Interrogatories Supplement, Att. <u>UI Attachment 2 - VNM Data Supplement #24-08-01.xlsx</u>, (RRES NRES SCEF sheet and LREC ZREC sheet, Interrogatory CRE-01); UI Compliance Filing, Nov. 15, 2023, Docket No. 23-08-01, "2023-11-15 Section B.1.a UI Cover Letter - Interrogatories - 2023 Clean and Renewable Energy Program #23-08-01," UI CAE-033 Attachment 1.

Annual MW Deployment of Residential Solar in CT 160 140 ■ RSIP RRES 120 ■ LREC/ZREC 100 ■ No Program 80 60 40 20 0 2015 2016 2019 2017 2018

Figure 11: Annual MW Deployment of Residential Solar in CT²⁸

The data shown in Figure 10 and Figure 11, particularly the "No Program" data, is approximate. The out-of-program deployment value for past years was calculated using total residential solar deployment by town and subtracting the RSIP, RRES, and LREC/ZREC deployment data.²⁹ If data from the different sources is attributed to different years, the "No Program" value may be slightly higher or lower than what is represented. In addition, out-of-program deployment is not available for 2023 or 2024 but is expected to be minimal, as net metering is no longer being offered separately from the state-authorized programs.

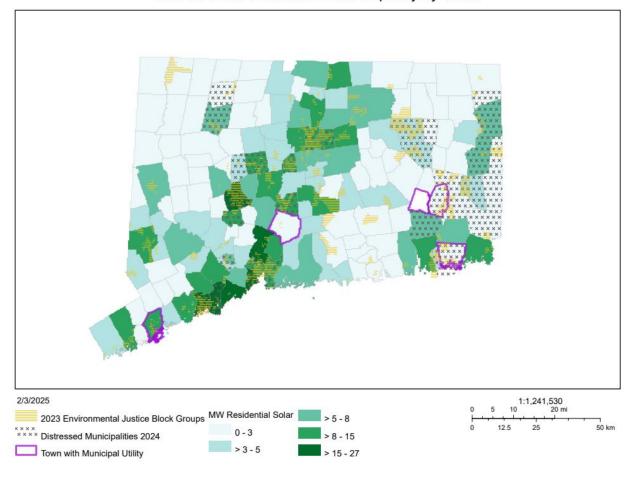
Figure 12 below displays total cumulative residential solar deployment by town through September 2024.

²⁸ ld

²⁹ See Decision, Feb. 22, 2023, Docket No. 22-08-01, <u>2022 Clean and Renewable Energy Program Data and Report</u>, p. 3.

Figure 12: MW of Total Installed Residential Solar Capacity by Town³⁰

MW of Total Residential Solar Capacity by Town



In general, higher deployment is evident areas with higher population density. Bridgeport has the highest total installed residential solar, with 26.7 MW, followed by Hamden (20.3 MW) and Waterbury (19.7 MW). The map also displays Connecticut's

³⁰ UI Corresp., Jan. 13, 2024, 2025-01-13 UI Attachment 2 - PURA Questions Response #24-08-01.xlsx, (Capacity by Town sheet, Interrogatories CRE-15).; UI Compliance, Nov. 15, 2023, Docket No. 23-08-01, "2023-11-15 Section B.1.a UI Cover Letter - Interrogatories - 2023 Clean and Renewable Energy Program #23-08-01," CAE-55; Eversource Compliance Filing, Nov. 15, 2023, Docket No. 23-08-01, "Sec II.A.1 (Interrogatories) and Sec II.A.3 (Cross Posted Compliance)," A1-CAE-055; Eversource Compliance Filing, Nov. 15, 2024, "Section II.A.1 and A.3 (Interrogatories) and Section II.A.4 (Cross-Posted Compliance)", A4 – Order 22 from 20-07-01 Att. 1 (REDACTED). Note that, due to data inconsistencies in the EDCs' compliance in this docket, compliance filings from Docket No. 23-08-01 were used to cross-check and replace deployment values where necessary.

environmental justice communities, as defined by General Statutes § 22a-20a.³¹ Additionally, some towns have municipal utilities, and may have additional residential solar not captured in this plot.³² Please note that due to data inconsistencies in the EDCs' residential solar deployment reported in this proceeding compared with past years, compliance filings from Docket No. 23-08-01 were used to cross-check and replace deployment values where necessary.³³

Figure 13 below displays residential solar deployment per capita, in kW per 100 persons. Like Figure 12 above, it reflects residential deployment through September 2024. Middlefield has the highest residential solar installed per capita, with about 92 kW per hundred residents, followed by Stonington (56 kW per hundred residents) and North Haven (55 kW per hundred residents).

For a full table of total and per capita residential solar deployment by town, see Appendix 1.

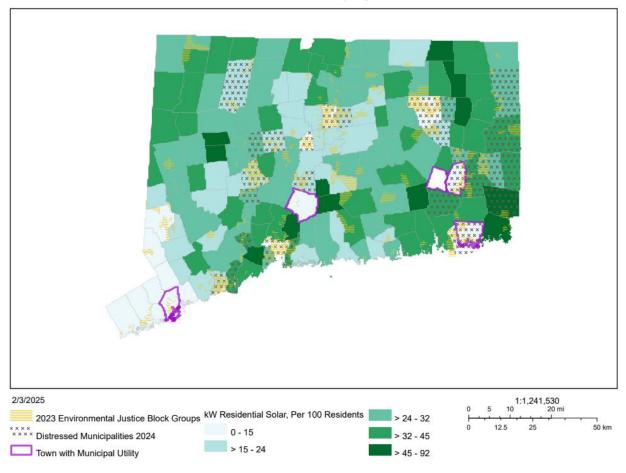
³¹ EJ communities include: (a) Distressed municipalities as defined by the CT Department of Economic and Community Development (DECD); and (b) Census block groups that are not in distressed municipalities but in which 30% or more of the population lives below 200% of the federal poverty level (FPL). The plot displays 2024 distressed municipalities and 2023 environmental justice census block groups, as updated block groups for 2023 were not available at the time of this report.

³² As shown in Figures 12 and 13, Bozrah, Groton, Norwich, Norwalk, and Wallingford have municipal electric utilities. While some municipal utility solar may be captured in cases where the CGB has agreements with municipal utilities to participate in RSIP, the data reflected here is likely not complete for towns with municipal utilities.

³³ For UI's residential solar by town data, solar deployment as of 2011 was taken from UI's Interrogatory CAE-55 response in Docket No. 23-08-01. For Eversource's residential solar by town, the Eversource data from its Interrogatory CAE-55 response in Docket No. 23-08-01 was updated with Eversource's cross-posted filing in compliance with Order 22 of Docket No. 20-01-01, Att. 1 (REDACTED) in the current docket.

Figure 13: kW of Total Installed Residential Solar Capacity by Town, Per 100 Persons³⁴

kW of Total Residential Solar Capacity By Town, Per 100 Persons



³⁴ <u>Id</u>.

C. Non-Residential Renewable Energy Solutions (NRES) Program

1. Program Description and History



The Non-Residential Renewable Energy Solutions (NRES) Program is a statewide, six-year, non-residential program for Class I renewable energy projects under 5 MW administered by the EDCs in their respective service territories. The NRES Program is a combined successor program to the state's Low and Zero Emissions Renewable Energy Credit (LREC/ZREC) and Virtual Net Metering (VNM) programs for non-residential customers, and was established pursuant to General Statutes § 16-244z in the June 30, 2021 Decision in

Docket No. 20-07-01, <u>PURA Implementation of Section 3 of Public Act 19-35, Renewable Energy Tariffs and Procurement Plans.</u>

Five objectives guide the development of the NRES Program: (1) fostering the sustained, orderly development of the state's Class I renewable energy industry; (2) deploying the full megawatt capacity allowable under statute; (3) ensuring least-cost outcomes through the solicitation process; (4) enabling program accessibility for customers; and (5) encouraging inclusivity and program participation by customers in underserved and environmental justice communities.³⁵ The program has a target of 40% deployment in distressed municipalities.

Zero-emission NRES projects less than or equal to 200 kilowatts (kW) are awarded incentive agreements on a non-competitive basis with an administratively set compensation rate. Zero-emission NRES projects between 200 kW and 5,000 kW, or 5 MW, are awarded incentive agreements through a competitive solicitation process subject to price caps. The NRES competitive solicitation process is split into three categories: (1) medium zero-emission projects; (2) large zero-emission projects; and (3) low-emission projects. In addition, beginning in Year 4 (2025), the NRES Program will include an additional carveout for solar projects at public schools, with a maximum total capacity 25 MW per year, as directed in Public Act 24-151 § 173. A summary of the NRES project

³⁵ <u>See</u> Decision, June 30, 2021, Docket No. 20-07-01, <u>PURA Implementation of Section 3 of Public Act 19-35, Renewable Energy Tariffs and Procurement Plans</u>, pp. 7–8.

categories is found in Table 7 below. The annual MW capacity allocation is split 80%/20% between Eversource and UI.³⁶

Table 7: NRES Project Size Categories³⁷

NRES Project Size Categories							
Category	Project Size (AC)	Selection Method	MW/Year (Year 4)				
	≤ 200 kW	Lottery/First-come,	30				
Small Zero Emission		first-served ³⁸					
	>200 kW	Competitive	33				
Medium Zero Emission	< 1,000 kW	solicitation					
	≥ 1,000 kW	Competitive	37				
Large Zero Emission	≤ 5,000 kW	solicitation					
	≤ 5,000 kW	Competitive	10				
Low Emission		solicitation					
School Solar		First-ready ³⁹	25				

Approved NRES projects are eligible to sell energy and RECs to the EDCs for a 20-year term under one of two tariff rate structures, consistent with the RRES payment structures: (1) Buy-All; or (2) Netting. Under the Buy-All tariff, the project is provided with fixed compensation for all energy and RECs produced over the 20-year term. Compensation is provided in the form of either monetary on-bill credits or quarterly direct payments. Customers can assign a portion or all of the tariff compensation to a third party.

Alternatively, under the Netting tariff, the qualified NRES project is compensated (1) for all energy produced at the retail electric rate at the time of generation (i.e., all renewable energy production not consumed within the established netting interval) and (2) for the

³⁷ Decision, Nov. 8, 2023, Docket No. 24-08-03, <u>Annual Non-Residential Renewable Energy Solutions Program Review – Year 3</u> (Year 3 NRES Decision), p. 22 (Table 4); Decision, Nov. 6, 2024, Docket No. 24-08-03, <u>Annual Non-Residential Renewable Energy Solutions Program Review – Year 4</u> (Year 4 NRES Decision), pp. 13–14.

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 ³⁶ Program capacity allocation is split 80%/20% based on the EDCs' respective shares of Connecticut electric customers. <u>See</u> Decision, June 30, 2021, Docket No. 20-07-01 – PURA Implementation of Section 3 of Public Act 19-35, Renewable Energy Tariffs and Procurement Plans, p. 19.
 ³⁷ Decision, Nov. 8, 2023, Docket No. 24-08-03, <u>Annual Non-Residential Renewable Energy Solutions</u>

³⁸ Small Zero Emission NRES Projects are selected by lottery if the MW of submitted small projects exceed available capacity after the conclusion of a two-week window. Year 3 NRES Decision, pp. 16–17. If the MW of submitted projects does not exceed available capacity, then all projects are accepted, and the remaining MW are available on a first-come, first-serve basis. Id.

³⁹ School category projects will be awarded on a "first-ready" basis, where the applicant must complete steps on a pre-application checklist before submitting a project. Projects that meet this requirement will be reviewed and awarded as they are submitted, until the 25 annual MW capacity is reached. Year 4 NRES Decision, p. 14.

RECs created at a fixed rate over a 20-year term. Regarding energy production compensation, a customer's energy consumption and monthly energy bill are reduced by the energy produced and used onsite. The EDCs also provide customers with monetary on-bill credits for any energy exported to the electric grid by the eligible project and not consumed on site. REC payments are made to either the customer of record or a third-party beneficiary on a quarterly basis.

The Authority annually reviews the NRES Program in Docket No. XX-08-03, where XX is the last two digits of the year (e.g., "24" for 2024). PURA reviewed the 2024 (Year 3) NRES deployment data and 2025 program documents in Docket No. 24-08-03, <u>Annual Non-Residential Renewable Energy Solutions Program Review – Year 4</u>. PURA issued a <u>Decision</u> on November 6, 2024 (Year 4 NRES Decision), which implemented several changes to better align the NRES Program with its program objectives.

The Year 4 NRES Decision established price caps for 2025 project bids for both the Buy-All and Netting tariffs, maintaining the existing 2024 price caps and bid preferences. In addition, the decision adjusted the bid selection process in accordance with Public Act 24-31, An Act Concerning Solar Projects Throughout the State, which allowed the NRES Program to exceed the MW capacity cap beginning in 2025, as long as the aggregate compensation for all selected projects does not exceed the compensation for projects selected in 2024. The Authority directed the EDCs to allocate any excess capacity available in Program Year 4 to the lowest-priced bid within the applicable EDC's service territory.

Further, the Authority used the Year 4 NRES Program review to develop an offering for NRES projects at public schools, in accordance with Public Act 24-151 § 173, which required the Authority to develop a program to encourage the installation of up to 25 MW of solar PV systems and energy storage systems at public schools annually. Accordingly, the Decision created a distinct NRES "School Category" and directed bids to be awarded on a "first-ready" basis to prioritize projects based on their viability. To accommodate a non-competitive auction approach, the Decision set a fixed Buy-All price for the solar component of school category projects at \$188.90 per MWh, the same as the Buy-All price cap for the NRES medium zero-emission category.

Finally, the Year 4 NRES Decision made several additional changes to further the Program Objectives, including 1) approving definitions for "brownfield" and "parcel"; 2) requiring that load data be tracked for all selected projects; and 3) requiring bidders to acknowledge their understanding of the requirements set forth in Public Act 21-43 regarding community benefits agreements, prevailing wages, and workforce development for projects with capacity greater than 2 MW.

More information and resources are available at the PURA NRES Program <u>webpage</u> and on each of the EDCs' dedicated NRES Program webpages (Eversource <u>Non-residential</u>; United Illuminating <u>Non-Residential</u>).

2. Procurement Results

NRES price caps, which represent the extent of the state's willingness to pay for a given resource block, while allowing competitive forces to set the actual bid prices paid to winning bidders, are shown in Table 8 below for NRES Years 2, 3, and 4 (i.e., 2023, 2024, and 2025).

NRES B			
Category	Year 2 Price Cap (\$/MWh)	Year 3 Price Cap (\$/MWh)	Year 4 Price Cap (\$/MWh)
Small Zero Emission	\$200.97	\$199.82	\$199.82
Medium Zero Emission	\$190	\$188.9	\$188.9
Large Zero Emission	\$159	\$145.97	\$145.97
Low Emission	\$159	\$159	\$159

Table 8: NRES Buy-All Bid Price Caps⁴⁰

Table 9, below, represents the combined outcomes of the first four NRES program solicitations, occurring in February 2022 (Year 1), February and August 2023 (Year 2), and February 2024. The August 2024 (Year 3) solicitation data was not yet available at the time of this report, but will include any unused capacity from the February 2024 Solicitation.

Table 9: NRES Solicitation Data from February 2022-August 2024⁴¹

NRES Solicitation Data from February 2022 - August 2024 (Table includes Year 1 Solicitation, Year 2 Solicitations, and Year 3 Solicitation)

⁴¹ Year 4 NRES Decision, p. 5 (Table 1); <u>Eversource Order No. 7 Compliance</u>, Aug. 27, 2024, Docket No. 23-08-03; <u>UI Order No. 7 Compliance</u>, Aug. 9, 2024, Docket No. 23-08-03, Att. 1.

⁴⁰ Year 4 NRES Decision, p. 7; Year 3 NRES Decision, p. 7.

	Size Categories	Total # of Executed Agreements	Available MW	MW Executed Agreements
	Small Zero Emission	431	54	53.8
Eversource	Medium Zero Emission	92	62	64
Lversource	Large Zero Emission	28	84	82
	Low Emission	13	24	20.8
	Small Zero Emission	95	13.5	13.5
UI	Medium Zero Emission	39	19	19.7
OI .	Large Zero Emission	6	17.5	7.84
	Low Emission	2	6	2.58
Total		706	280	264

Eversource received a total of 1,269 unique bids in the first five solicitations (Year 1,⁴² Year 2 February and August,⁴³ and Year 3 February and August⁴⁴), as shown in Figure 14 below. Of these total bids, 127 (10%) were disqualified. United Illuminating received a total of 366 unique bids in the first four solicitations (Year 1,⁴⁵ Year 2 February and August,⁴⁶ and Year 3 February and August⁴⁷). Of these bids, 57 (15%) were disqualified.

⁴² Motion No. 49, Docket No. 21-08-03, Exhibit A (Eversource Year 1 NRES Procurement Plan).

⁴³ Motion No. 20, Docket No. 22-08-03, Exhibit A (<u>Eversource Year 3 February NRES Procurement Plan</u>); Motion No. 27, Docket No. 22-08-03, Exhibit A (<u>Eversource Year 2 August NRES Procurement Plan</u>).

⁴⁴ Motion No. 31, Docket No. 23-08-03, Exhibit A (<u>Eversource Year 3 February NRES Procurement Plan</u>); Motion No. 25, Docket No. 23-08-03, Exhibit A (<u>Eversource Year 3 NRES Procurement Plan</u>).

⁴⁵ Motion No. 48, Docket No. 21-08-03, Exhibit A (UI Summary of Year 1 NRES Procurement Plan).

⁴⁶ Compliance, June 30, 2023, Docket No. 22-08-02, Exhibit A (<u>UI Year 2 February NRES Procurement Plan</u>); Motion No. 30, Docket No. 22-08-03, Exhibit A (<u>UI Year 2 August NRES Procurement Plan</u>).

⁴⁷ Motion No. 29, Docket No. 23-08-03, Exhibit A (<u>UI Year 3 February NRES Procurement Plan</u>); Motion No. 38, Docket No. 23-08-03, Exhibit A (<u>UI Year 3 August NRES Procurement Plan</u>).

NRES Bids Received 350 299 300 278 262 253 250 Number of Bids 200 177 150 102 100 69 70 68 57 50 0 Year 1 Year 2 Feb Year 2 Aug Year 3 Feb Year 3 Aug ■ Eversource ■ UI

Figure 14. Number of NRES Bids Received⁴⁸

In total, across the first four solicitations, the zero emission categories executed contracts for 241 MW out of the 250 MW available (96%).

- Small Zero Emission: 67.3 MW / 67.5 MW (99.7%)
- Medium Zero Emission: 83.8 MW / 81 MW (103.5%)
- Large Zero Emission: 89.8 MW / 101.5 MW (88.5%)

The low emission categories executed 23.4 MW out of the 30 MW available (78%). In the 2024 solicitation, solar projects represented 95% of the MW capacity selected, or four out of five selected projects, in the low emissions NRES category.

Figure 15 below shows the total capacity of eligible NRES bids received and selected in each year across both EDCs. In the most recent program year, all categories received more bids than the available capacity. The chart does not include disqualified, declined, terminated, or withdrawn bids.

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⁴⁸ Eversource Order No. 7 Compliance, Aug. 27, 2024, Docket No. 23-08-03; UI Order No. 7 Compliance, Aug. 9, 2024, Docket No. 23-08-03, Att. 1.

NRES MW Received and Selected 90 80 70 60 $\stackrel{50}{\ge}_{40}$ 50 30 20 10 0 Small Medium Large Low Small Medium Large Small Medium Large Low 2022 2023 2024 ■ Selected ■ Not Selected

Figure 15. NRES MW Received and Selected

Out of 155 total bids selected in the competitive project categories through the February 2024 solicitation⁴⁹, 79 received a distressed municipality bid preference, 1 received a brownfield bid preference, 16 received a landfill bid preference, and 4 received a solar canopy or carport bid preference. Note that small zero emission projects do not receive bid preferences, as they are not competitively selected.

⁴⁹ The values in this paragraph, as well as Figure 16 below, do not include bids selected in the August 2024 solicitation because Eversource's bid data includes only whether or not each project received a bid preference, not the type of bid preference received.

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Figure 16. Bid Preferences of Selected NRES Projects

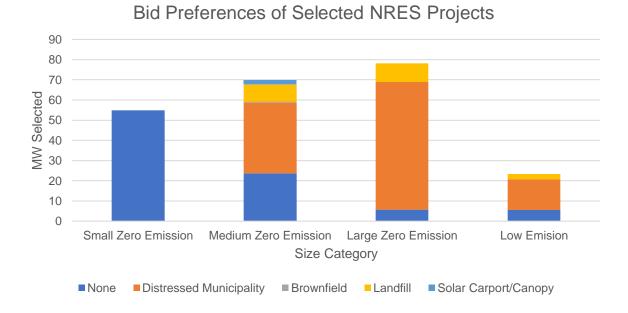


Table 10, below, provides the average pricing for the projects selected through the Years 1-3 NRES solicitations.

Table 10: Average Bid Price for Selected Projects in NRES Years 1–3 Solicitations⁵⁰

Average Bid Price for Selected Projects in NRES Years 1 – 3 Solicitations								
	Year 1 Average (\$/MWh)	Year 2 Average (\$/MWh)	Year 3 Average (\$/MWh)					
Small Zero Emission 51	\$200.97	\$200.97	\$199.82					
Medium Zero Emission	\$163.8	\$160.1	\$154.8					
Large Zero Emission	\$143.1	\$134.5	\$124.2					
Low Emission	\$137.9	\$151.2	\$140.8					

⁵⁰ Eversource Order No. 7 Compliance, Aug. 27, 2024, Docket No. 23-08-03; UI Order No. 7 Compliance, Aug. 9, 2024, Docket No. 23-08-03, Att. 1.

⁵¹ Small zero emission projects are not competitively selected and are awarded tariff agreements at an administratively set rate. As such, the small zero emission Buy-All rate per MWh is shown here.

As of September 2024, a total of 9.58 MW have been installed under the NRES Program, of which 8.98 MW is solar PV.

Cumulative MW Deployed via the NRES Program

12.00

10.00

8.00

4.00

2.00

2.00

Solar PV Fuel Cell

Figure 17. Cumulative MW Deployed via NRES⁵²

D. Shared Clean Energy (SCEF) Program and SCEF Pilot Program

1. Program Description and History

Pursuant to General Statutes § 16-244z(a)(1)(C), the SCEF Program was established as a competitive procurement effort to provide benefits of clean energy to customers who meet income requirements or are unable to install clean energy projects at their home or business. SCEF is Connecticut's version of a community clean energy program.

The goal of the SCEF Program is to provide savings to specific categories of customers, particularly customers with low- to moderate-incomes, low-income service organizations, and customers who reside in environmental justice communities. Typically, residents or

⁵² Eversource Compliance, Nov. 15, 2024, Order No. 1, Section II.A.1 and A.3 (Interrogatories) and Section II.A.4 (Cross-Posted Compliance), Att. <u>ES Sec. II.A.1 and II.A.3 Interrogatories DN 24-08-01.xlsx</u>, (RRES NRES SCEF sheet, Interrogatory CRE-01); UI Compliance, Dec. 3, 2024, Order No. 1, VNM Data Interrogatories Supplement, Att. <u>UI Attachment 2 - VNM Data Supplement #24-08-01.xlsx</u>, (RRES NRES SCEF sheet, Interrogatory CRE-01).

businesses can choose to invest in, or lease, a renewable energy system on the rooftops of their homes or businesses. However, some Connecticut residents and businesses, especially LMI customers, may face substantial barriers to investing in or leasing an individual installation, such as high installation costs, unsuitable rooftop orientation, shaded property, or renting a property instead of owning one. In addition to the goal of providing savings to these specific categories of customers, the SCEF Program objectives are to cost-effectively allocate up to 50 megawatts to SCEFs annually, and to lower or eliminate barriers to entry for subscriber organizations.

A SCEF project enables multiple customers to benefit directly from a facility's energy production. Participating SCEF customers, or subscribers, receive clean energy savings in the form of a fixed monthly credit of \$0.025/kWh on their utility bill.

The EDCs administer the SCEF Program in coordination with DEEP. Specifically, the EDCs are responsible for subscription management, identification, and enrollment of customers/subscribers, as well as project selection through an annual, competitive solicitation. The Authority reviews the program requirements, price caps, and bid preferences each year to ensure the program's effectiveness. The SCEF owner is responsible for the financing and construction of the project that delivers energy and RECs to the EDCs. In turn, the SCEF owner receives direct payment for the energy production of the project on a quarterly basis over a 20-year term. The Program allocated 25 MW of new clean power generation per year for the first three program years (2020–2022) and 50 MW per year for subsequent program years. In 2024, Public Act 24-31, An Act Concerning Solar Projects Throughout the State, extended the SCEF program from six to eight years, with the final procurement in 2027, for a total of 325 MW available over eight years. The MW allocation is split 80%/20% between Eversource and UI, respectively.

The SCEF project requirements and tariff design, including the program timeline, project eligibility requirements, and the EDCs' solicitation and bid selection process were approved by PURA through the December 18, 2019 <u>Decision</u> in Docket No. 19-07-01, <u>Review of Statewide Shared Clean Energy Facility Program Requirements</u>. The Authority conducts an annual review proceeding each year to determine whether any adjustments to next year's procurement are necessary in Docket No. XX-08-04, where XX is the last two digits of the year (e.g., "24" for 2024). This year, the 2025 Program documents and manual were reviewed and approved by PURA in the December 11, 2024 <u>Decision</u> in Docket No. 24-08-04, <u>Annual Review of Statewide Shared Clean Energy Facility Program</u> Requirements – Year 6 (Year 6 SCEF Decision).

The Year 6 SCEF Decision implemented several program changes, in addition to the annual revision and approval of the SCEF Program Manual and other program documents. In the decision, the Authority maintained the prior year's price cap of \$133 per MWh for all projects, given successful allocation of available capacity to date. In

addition, the decision revised the definition of "brownfield" and added a definition for "parcel" to the Program Manual, to enhance clarity for program participants. The decision also maintained the landfill and brownfield bid preferences of 20%, but increased the bid preference for solar canopies and carports from 30% to 40%, given the lack of successful solar canopy SCEF bids in past solicitations. The Authority accepted DEEP's recommendation that up to 10% of a project site may be located on a slope greater than 15%, recognizing the need for siting flexibility as solar deployment increases. Finally, the decision affirmed the Authority's position that SCEF projects can meet the requirements to receive the low-income economic development adder under the Inflation Reduction Act of 2022 by providing an attestation letter from the EDCs, and directed that the EDCs should update SCEF eligibility prioritization from the Eversource New Start and UI Bill Forgiveness programs to the new Matching Payment program.

2. SCEF Pilot Program

The current SCEF Program design is largely based off lessons learned from a Pilot Program administered under General Statutes § 16-244x and approved by PURA in Docket No. 17-06-28, <u>Application to Approve the Selected Projects Under the Shared Clean Energy Facility Pilot Program</u>. In the November 8, 2017 <u>Decision</u> in Docket No. 17-06-28, PURA approved DEEP's selection of three solar projects for a two-year SCEF Pilot Program with the EDCs.

The selected projects consist of a 2.0 MW facility by CHIP Fund 5 and a 1.62 MW facility by Clean Energy Collective located in Eversource territory, and a 1.6 MW facility by US Solar Corporation located in UI territory. Currently, only the 1.62 MW facility in Eversource territory is in service under the SCEF Pilot Program.⁵³

The RFP issued by DEEP to select pilot projects was conducted pursuant to General Statutes §16-244x. The statute directed DEEP to: (1) establish a billing credit for subscribers of a SCEF; (2) establish consumer protections for subscribers and potential subscribers of such facility; and (3) select, pursuant to a competitive RFP process, SCEF projects with an aggregate total nameplate capacity rating of no more than 6 MW, including no more than 2 MW in the aggregate in the service territory of UI, and no more than 4 MW in the aggregate in the service territory of Eversource. Additional information on the SCEF Pilot Program can be found on DEEP's webpage.

⁵³ DEEP Interrog. Resp. CAE-18, Nov. 17, 2023, Docket No. 23-08-01.

3. Procurement Results & Deployment

Below is an overview of program procurement results through Year 5 of the SCEF Program. In April 2022, the Connecticut General Assembly passed, and Governor Lamont subsequently signed into law, Public Act No. 22-14, An Act Concerning Clean Energy Tariff Programs, which doubled SCEF's program capacity from 25 MW to 50 MW. As shown in Table 11 below, the increased program capacity was largely met by increased demand. However, the weighted average selected bid price also increased, which may be the result of several factors, including the increased program capacity because bids further down the bid stack were selected.

Table 11: Committed Capacity & Average Bid Prices by SCEF Program Year⁵⁴

Committed Capacity & Average Bid Prices by SCEF Program Year							
SCEF Program Year							
1	25 / 25	\$99.46					
2	21.9 / 25	\$87.51					
3	24.97 / 25	\$90.41					
4	45 / 50	\$102.63					
5	52.35 / 55	\$129.51					

Table 12 below are the price caps and bid preferences for the Year 5 SCEF procurement.

⁵⁴ Year 5 SCEF Decision, p. 21 (Table 1); Eversource Compliance, Nov. 15, 2024, Order No. 1, Section II.A.1 and A.3 (Interrogatories) and Section II.A.4 (Cross-Posted Compliance), Att. <u>ES Sec. II.A.1 and II.A.3 Interrogatories DN 24-08-01.xlsx</u>, (RRES NRES SCEF sheet, Interrogatory CRE-24); UI

Compliance, Dec. 3, 2024, Order No. 1, VNM Data Interrogatories Supplement, Att. <u>UI Attachment 2 - VNM Data Supplement #24-08-01.xlsx</u>, (RRES NRES SCEF sheet, Interrogatory CRE-24).

⁵⁵ Public Act No. 22-14 allows for uncommitted capacity to be rolled over into the next Program Year, starting with Program Year 4. <u>See</u> §3 Public Act No. 22-14. Stated another way, uncommitted capacity from SCEF Program Years 1 through 3 were ineligible to roll over into SCEF Program Year 4, but the 5 MW uncommitted in SCEF Program Year 4 is eligible to roll into SCEF Program Year 5.

Table 12: SCEF Program Price Cap & Bid Preferences⁵⁶

SCEF Program Price Cap & Bid Preferences				
Year 6 Price Cap*	Bid Preference			
All Projects	Solar Canopies ⁵⁷ Landfills/Brownfields			
\$0.133/kWh	40%	20%		

The SCEF Program price cap applies after the bid preference is applied for projects that are 100% solar canopy, and applies before the bid preference for all other resources, in recognition of the unique land-use benefits of solar canopy projects.

Figure 18, below, displays the total MW selected in each year and the share of successful bids that qualified for one of the available bid preferences.

Figure 18. Bid Preferences of Selected SCEF Projects⁵⁸

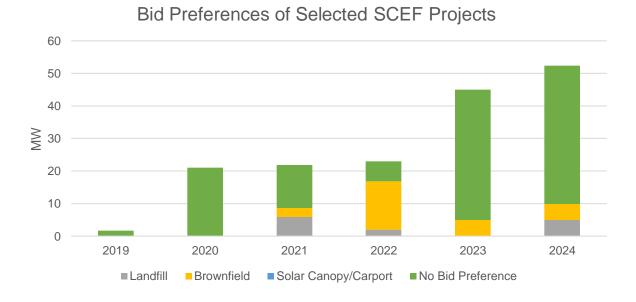


Figure 19 below shows deployment under both the SCEF Pilot and SCEF Program. As of September 2024, a total of 9.92 MW has been deployed under the SCEF and SCEF

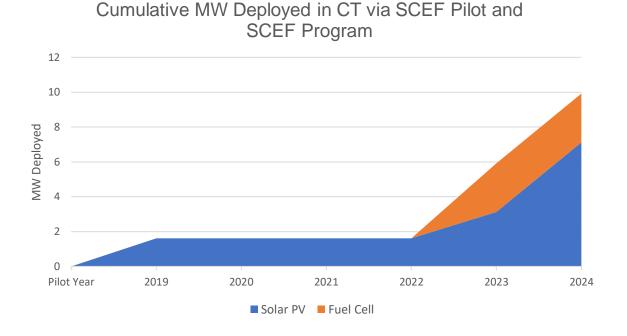
⁵⁶ Year 6 SCEF Decision, p. 10.

⁵⁷ The solar canopy bid preference was 30% for Program Years 3–5, and increased to 40% for Year 6 in the Year 6 SCEF Decision.

⁵⁸ Year 5 SCEF Decision, p. 21 (Table 1); Eversource Compliance, Nov. 15, 2024, Order No. 1, Section II.A.1 and A.3 (Interrogatories) and Section II.A.4 (InterroCross-Posted Compliance), Att. ES Sec. II.A.1 and II.A.3 Interrogatories DN 24-08-01.xlsx, (RRES NRES SCEF sheet, Interrogatory CRE-24); UI Compliance, Dec. 3, 2024, Order No. 1, VNM Data Interrogatories Supplement, Att. UI Attachment 2 -VNM Data Supplement #24-08-01.xlsx, (RRES NRES SCEF sheet, Interrogatory CRE-24).

Pilot programs. Notably, the clean energy industry has faced significant hurdles to deployment in recent years with continued impacts of shutdowns and delays caused by the COVID-19 pandemic, inflation, and supply shortages. The Authority anticipates a significant increase in SCEF deployment in the coming years based on the amount of capacity selected under the program to date.

Figure 19. Cumulative MW Deployed in CT via SCEF Pilot and SCEF Program⁵⁹



E. Combined Solar Deployment Metrics

Table 13, below, displays total solar deployment, including residential, non-residential, and utility-scale solar, for states in the Northeast United States. Rankings for each category are displayed in red. As noted below, there is a wide range in solar deployment levels across the selected states. Connecticut ranks fifth in terms of total solar deployment, behind states with larger geographic area and population, with 1,632 MW of solar installed. While Connecticut is sixth in terms of total solar deployment per capita, its rank rises to fourth when considering only the past five years, indicating that the pace of deployment has accelerated in recent years in comparison with other states in the

(RRES NRES SCEF sheet, Interrogatory CRE-01).

⁵⁹ Eversource Compliance, Nov. 15, 2024, Order No. 1, Section II.A.1 and A.3 (Interrogatories) and Section II.A.4 (Cross-Posted Compliance), Att. <u>ES Sec. II.A.1 and II.A.3 Interrogatories DN 24-08-01.xlsx</u>, (RRES NRES SCEF sheet, Interrogatory CRE-01); UI Compliance, Dec. 3, 2024, Order No. 1, VNM Data Interrogatories Supplement, Att. <u>UI Attachment 2 - VNM Data Supplement #24-08-01.xlsx</u>,

region. As noted in Section V.B, Combined Residential Solar Program Metrics, residential installations (totaling 764 MW as of October 2024) make up over half of Connecticut's total solar deployment.

Table 13: Total Solar Deployment for Northeast States through September 2024

Total Solar Deployment for Northeast States						
State	Total Solar MW Capacity Installed (Rank) ⁶⁰	Total Solar MW Capacity Deployed per 100,000 Persons (Rank) ⁶¹	Solar MW Capacity Deployed Between 2020–2024 per 100,000 Persons (Rank) ⁶²			
Connecticut	1,632 (5)	45.1 (6)	22.5 (4)			
Maine	1,415 <mark>(6)</mark>	101.4 (1)	76.3 <mark>(1)</mark>			
Massachusetts	5,399 <mark>(3)</mark>	77.1 (3)	28.1 (3)			
New Hampshire	296 (9)	21.1 (8)	12.2 (8)			
New Jersey	5,479 <mark>(2)</mark>	59.0 <mark>(5)</mark>	19.1 <mark>(6)</mark>			
New York	6,493 <mark>(1)</mark>	33.2 (7)	19.2 <mark>(5)</mark>			
Pennsylvania	2,349 (4)	18.1 (9)	12.7 <mark>(7)</mark>			
Rhode Island	1,111 (7)	101.4 (2)	70.6 <mark>(2)</mark>			
Vermont	436 (8)	67.3 <mark>(4)</mark>	11.3 (9)			

F. Energy Storage Solutions (ESS) Program

1. Program Description and History

Effective beginning January 1, 2022, and running through December 31, 2030, the ESS Program incentivizes and supports the deployment of both commercial and residential electric storage devices statewide. The ESS Program establishes a goal of 580 MW of

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⁶⁰ Solar Energy Industries Association (SEIA), "Solar State by State," available at https://www.seia.org/states-map (last visited Dec. 12, 2024).

⁶¹ Id.; U.S. Census Bureau, "State Population Totals and Components of Change: 2020–2023," available at https://www.census.gov/data/tables/time-series/demo/popest/2020s-state-total.html#v2023 (last visited Dec. 12, 2024).

⁶² CGB Compliance, Dec. 23, 2024, Response to CRE-19 Final.pdf.

energy storage deployment by the end of 2030 and is administered by the Connecticut Green Bank (CGB) along with the EDCs.

The ESS Program was developed pursuant to General Statutes § 16-243ee and authorized through a July 28, 2021 <u>Decision</u> in Docket No. 17-12-03RE03, <u>PURA Investigation Into Distribution System Planning Of The Electric Distribution Companies – <u>Electric Storage</u> (ESS Decision). This decision further authorized three-year program cycles with interim goals of 100 MW energy storage deployment by 2025 and 300 MW by 2028.</u>

The ESS Program objectives, as established in the ESS Decision, are: (1) to provide positive net present value to ratepayers; (2) to provide multiple types of benefits to the electric grid, including resilience, ancillary services, peak shaving, avoiding or deferring distribution system upgrades, or supporting the deployment of other distributed energy resources; (3) to foster the sustained, orderly development of the state's electric energy storage industry; (4) to prioritize delivering resilience to LMI customers, customers in EJ or economically distressed communities, customers coded medical hardship, public housing authorities, customers on the grid-edge, and critical facilities; (5) lowering the barriers to entry for electric storage; (6) maximizing the long-term environmental benefits of storage; and (7) maximizing ratepayer benefits derived from the wholesale capacity market.⁶³ In accordance with the objectives, the ESS Program includes a goal of deploying 40% of residential installations among low-income households or customers in distressed municipalities.⁶⁴

Participants in the ESS Program can receive an upfront incentive, which requires participation in passive dispatch. During passive dispatch, projects discharge stored energy back into the electric grid at set times each day in the summer to provide benefits to the electric grid, including peak shaving and the deferral of distribution system upgrades. Table 14 shows the passive dispatch parameters for the ESS Program.

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⁶³ ESS Decision, pp. 5-7.

⁶⁴ ESS Decision, p. 13.

Table 14: Passive Dispatch Parameters

ESS Program Passive Dispatch Parameters						
Parameter Summer Winter						
Events per Season	All non-holiday weekdays (~60)	N/A				
Months	June, July & August	N/A				
Event Duration	5 Hours (uniform dispatch)	N/A				
Anticipated Dispatch Window 5 PM to 8 PM N/A						
Reserve Capacity	20% Required Reserve	N/A				

Projects can also receive a biannual performance-based incentive for participation in active dispatch events, which are called by the EDCs under rules approved by PURA to reduce stress on the electric grid during periods of peak energy use, resulting in financial savings for all ratepayers. Program incentives vary by project type (i.e., commercial versus residential projects), customer class (underserved residential customer, small commercial project, etc.), and program tranche (i.e., where incentives change once each tranche's capacity is fully committed). Table 15, below, shows the active dispatch parameters for the ESS Program.

Table 15: Active Dispatch Parameters

ESS Program Active Dispatch Parameters					
Parameter	Summer	Winter			
Events per Season	30 to 60	1 to 5			
Months	June through September	November through March			
Event Duration	1 - 3 hours	1 - 3 hours			
Anticipated Dispatch Window	12 PM to 9 PM (All Days)	12 PM to 9 PM (All Days)			
Reserve Capacity	Not required by Program				

Table 16 and subsequent tables, below, show the tranches for each project type.

The Authority annually reviews the ESS Program in Docket No. XX-08-05, where XX is the last two digits of the year (e.g., "24" for 2024). The Authority conducted the fourth annual ESS Program review in Docket No. 24-08-05, <u>Annual Energy Storage Solutions Program Review – Year 4</u>, and issued a decision on December 4, 2024 (Year 4 ESS Decision). This review focused on the deployment data from Year 3 (2024) and introduced several changes aimed at better aligning the ESS Program with its objectives.

Among the key changes, the Year 4 ESS Decision revised the program's passive dispatch requirements, which had not met expectations for participation to date. Notable adjustments include: (1) shortening the program's passive dispatch window from five to three hours, driven by strong stakeholder support and a desire to enhance peak reduction impact; (2) introducing a new proposal next year to revise the program's upfront incentive into a performance-based model, thereby limiting ratepayer risk; and (3) revising the program's clawback formula to better reflect the extent of nonperformance, ensuring that participants are not overly penalized.

Additionally, the Year 4 ESS Decision made changes to reflect the Program's strong commercial enrollment, which has already surpassed its targets. The decision increased the Program's commercial capacity by approximately 50%, or 140 MW, reallocating about half of the Program's residential capacity. This adjustment takes advantage of the high demand for commercial enrollment and the lower cost per kW for commercial projects, enabling the installation of more storage capacity at a reduced cost to ratepayers. Furthermore, the decision reduced the upfront incentives for commercial projects, recognizing that the substantial early enrollment indicates that these incentives can be lowered without jeopardizing the Program's ability to meet its targets.

Finally, the Year 4 ESS Decision implemented additional changes to advance the Program's objectives, including: (1) improving data accessibility for customers to enhance transparency; (2) allowing passive dispatch test events before the summer dispatch season to identify and resolve potential issues; and (3) permitting energy storage aggregators to submit active dispatch applications on behalf of customers to boost Program enrollment and participation.

More information and resources are available on <u>PURA's ESS Program webpage</u> and on the dedicated <u>ESS Program website</u>.

2. Rates & Deployment

The tables below show the ESS program deployment goals by tranche (Table 16), incentive levels (Tables 17–20), and deployment to date (Table 22).

Table 16: ESS Program Deployment Targets (MW)⁶⁵

ESS Program Deployment Targets (MW)								
Customer Class	Customer Class Tranche 1 Tranche 2 Tranche 3 Tranche 4 Total							
Residential	ntial 50 50 50 0 150							
Commercial &	Commercial &							
Industrial 50 113.9 126.1 140 430								
Total	100	163.9	280	140	580			

Table 17: Years 1 – 2 ESS Residential Customer Upfront Incentives (Tranche 1)⁶⁶

Legacy ESS Residential Customer Upfront Incentives (Tranche 1)						
Installed Underserved Low-Grid Incentive Capacity Baseline Community income Edge Step (MW) (\$/kWh) (\$/kWh) Adder						
1	10	\$200	\$300	\$400	+50%	
2	15	\$170	\$300	\$400	+50%	
3	25	\$130	\$300	\$400	+50%	

Table 18: Year 3 – 4 ESS Residential Customer Upfront Incentives (Tranche 1)⁶⁷

Updated ESS Residential Customer Upfront Incentives (Tranche 1)							
Incentive Step							
1	10	\$250	\$450	\$600	+50%		
2	15	\$212.5	\$450	\$600	+50%		
3	25	\$162.5	\$450	\$600	+50%		

Year 4 ESS Decision, p. 38 (Table 10).
 Decision, Nov. 29, 2023, Docket No. 23-08-05, <u>Annual Energy Storage Solutions Program Review -</u> Year 3 (Year 3 ESS Decision), p. 5 (Table 2).

⁶⁷ Year 4 ESS Decision, p. 7 (Table 2).

Table 19: Years 1 – 3 ESS Commercial and Industrial Customer Upfront Incentives (Tranches 1 and 2)⁶⁸

ESS Commercial and Industrial Customer Upfront Incentives (Tranches 1 and 2)							
Enrolled	Small	Large		Priority			
Capacity	Commercial	Commercial	Industrial	Customer			
(MW)	(\$/kWh)	(\$/kWh)	(\$/kWh)	Adder			
50	\$200 \$175 \$100 +25%						
113.9	\$200	\$175	\$100	+25%			

Table 20: Year 4 ESS Commercial and Industrial Customer Upfront Incentives (Tranche 3)

ESS Commercial and Industrial Customer Upfront Incentives (Tranche 3)								
Tranche 3 Enrolled Capacity (MW)	Enrolled Small Medium Large Priority Capacity Commercial Commercial Customer							
0-50	\$182 \$159.25 \$91.00 +25%							
50-75	-75 \$164 \$143.50 \$82.00 +25%							
75-126.1	\$146	\$127.75	\$73.00	+25%				

Table 21: ESS All Customer Classes Performance-Based Incentives (Tranche 1)⁶⁹

ESS All Customer Classes Performance-Based Incentives (Tranche 1)						
Years 1-5 Years 6-10						
Summer (\$/kW)	ummer (\$/kW) Winter (\$/kW) Summer (\$/kW) Winter (\$/kW)					
\$200						
\$225 a	nnually	\$130	annually			

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⁶⁸ Year 4 ESS Decision, p. 7 (Table 3).

⁶⁹ Year 4 ESS Decision, p. 8 (Table 4).

Table 22: ESS Program Enrollment⁷⁰

ESS Program Enrollment, as of December 2024						
Customer Type Submitted Approved Complete (MW) (MW) (MW)						
Residential	0	2.86	3.15	6.06		
Commercial and Industrial (C&I)	0	141.5	0.75	142.3		

The average system size for ESS Program submission is 2,072 kW for C&I projects and 10.8 kW for residential projects.⁷¹ There were a total of 727 residential project applications as of the end of 2024, of which 565 were 1–4 unit properties, 161 were 5+ units, 175 received a low-income adder, 84 received an underserved community adder, and 427 were standard residential customers receiving no adder. There were 70 C&I projects by the end of 2024, of which 30 received a grid edge⁷² adder, 19 were critical facility projects, 11 were small business projects, and 30 were paired with solar PV.

The following charts (Table 23 and Table 24) provide a breakdown of project applications and deployment in the ESS program through December 2024. Larger storage projects generally have a multi-year lead time from enrollment in the program to deployment.

⁷⁰ Energy Storage Solutions Performance Report. Available at: https://energystoragect.com/ess-performance-report/ (last visited Dec. 16, 2024).

⁷¹ ld.

⁷² Customers on the "grid edge" consistently experience more and/or longer than average outages during major storms.

Table 23: C&I Project Submissions as of December 2024⁷³

C&I Project Submissions as of December 2024						
		Total System Power Rating	Total System Energy			
	Projects	(MW)	Capacity (kWh)			
	Lá	arge C&I				
Submitted, under review	0	0	0			
Approved	36	99.49	240,830			
Completed	2	0.5	1,116			
	Me	dium C&I				
Submitted, under review	0	0	0			
Approved	21	35.81	99,926			
	Si	mall C&I				
Submitted, under review	0	0	0			
Approved	9	6.22	22,500			
Completed	2	0.25	1,540			
	Al	I Sizes ⁷⁴				
Total	70	142.27	365,912			

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⁷³ Energy Storage Solutions, Performance Report, available at: https://energystoragect.com/ess-performance-report/ (last visited Dec. 16, 2024).

⁷⁴ Project categories are mutually exclusive; i.e., "approved" refers to projects that are approved but not yet completed.

Table 24: Residential Project Submissions as of December 2024⁷⁵

Residential Project Submissions as of December 2024								
	Projects	Total System Power Rating (kW)	Total System Energy Capacity (kWh)	Projects Paired with Solar PV	Low Income	Underserved Community		
		1-4	4 Residential (Units				
Approved	224	2,386.1	5,063.2	224	52	94		
Inspection	4	53.6	74.6	4	0	0		
Completed	337	3,151,8	7,446.5	277	3	31		
		5 +	- Residential U	Inits				
Approved	161	469.9	1,879.7	1	1	0		
Completed	0	0	0	0	0	0		
			AII					
Total	726	6,061.5	14,463.9	506	56	125		

C&I program uptake has significantly outpaced expectations, exceeding the program tranche that was initially expected to last until the end of 2024 by nearly three times. Residential program uptake has been slower, in part due to the different use cases for residential versus C&I storage (for example, demand charges are common for C&I rate classes, but are not for residential customers). To address this divergence in program participation, PURA made several adjustments to the program, including increasing the residential program incentives in the Year 3 ESS annual review, decreasing the commercial incentives for Tranche 3 in the Year 4 annual review, and reallocating 140 MW of the overall program capacity from the residential sector to the commercial sector in the Year 4 annual review, as discussed above.

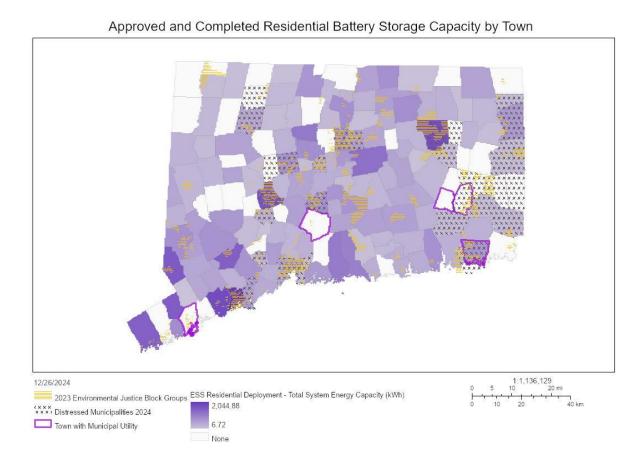
A core programmatic goal of the ESS program is the prioritization of deploying the increased electric resilience that energy storage can provide LMI customers and customers living in distressed municipalities. In addition to the financial benefits in program participation, resiliency benefits of storage are particularly high for customers who may struggle to afford or cannot feasibly use alternative resiliency options (e.g., fossil-fuel backup generator). Accordingly, the Authority set a goal of 40% of ESS project deployment serving these historically underserved populations. To date, ESS underserved enrollment has met the Program target, with about 41% of ESS approved

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⁷⁵ Energy Storage Solutions, Performance Report, available at: https://energystoragect.com/ess-performance-report/ (last visited Dec. 16, 2024).

residential projects to date qualifying for the low-income or underserved community adder. On a project capacity basis, about 26% of residential approved MW capacity qualifies for the low-income or underserved community adder.

Figure 20: Total Approved and Completed Residential Storage Capacity by Town⁷⁶

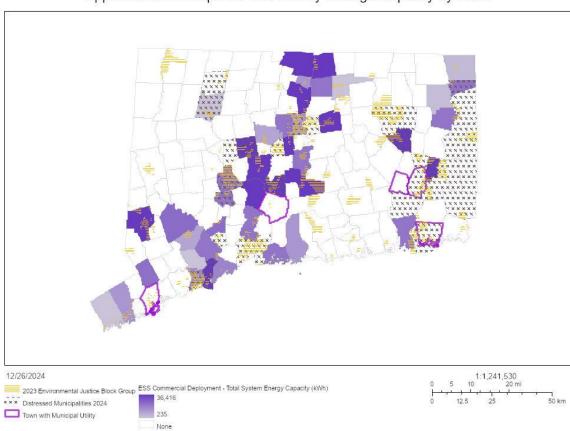


In three years of battery storage deployment via the ESS program, residential storage systems have been approved and deployed throughout many towns in Connecticut, as shown in Figure 20 above.⁷⁷ Although the program has met the goal of 40% deployment in underserved areas on project basis to date, several 2024 distressed municipalities have yet to have a residential battery system approved for installation. Through the annual review process held each year, the Authority will work with stakeholders to ensure

Foreign Storage Solutions, Performance Report, available at: https://energystoragect.com/ess-performance-report/ (last visited Dec. 20, 2024); CT DEEP, Environmental Justice Set 2024, available at: https://deepmaps.ct.gov/maps/cc8b490b6bf04c19a28dea808a4ae430 (last visited Dec. 26, 2024).
77 Id.

continued progress towards overall residential deployment targets as well as the goal of 40% deployment in low-income and underserved communities.

Figure 21: Total Approved and Completed Commercial and Industrial Storage Capacity by Town⁷⁸



Approved and Completed C&I Battery Storage Capacity by Town

During the first two years of ESS deployment, 70 commercial and industrial customer projects were approved for deployment or completed across 44 towns with a total system energy capacity of about 379,722 kWh. Notably, 23 of the 70 projects approved are in distressed municipalities. As program deployment grows over the years, the Authority will closely monitor the distribution of projects across towns in Connecticut to identify any trends and to ensure a fair and equitable distribution of program incentives.

⁷⁸ Energy Storage Solutions Performance Report, available at: https://energystoragect.com/ess-performance-report/ (last visited Dec. 20, 2024); DEEP Environmental Justice Set 2024, available at: https://deepmaps.ct.gov/maps/cc8b490b6bf04c19a28dea808a4ae430 (last visited Dec. 26, 2024).

G. Electric Vehicle Charging Program

1. Program Description and History

The Electric Vehicle (EV) Charging Program is a nine-year effort to support the statewide installation of EV charging infrastructure to meet the state's commitment to the <u>multi-state</u> <u>zero emission vehicle Memorandum of Understanding (MOU) for light-duty vehicles</u>. The EV Charging Program is administered by the EDCs in their respective service territories.

The July 14, 2021 <u>Decision</u> in Docket No. 17-12-03RE04, <u>PURA Investigation into Distribution System Planning of the Electric Distribution Companies – Zero Emission <u>Vehicles</u> (EV Charging Program Decision), outlines the statewide EV Charging Program and establishes the following objectives: (1) to enable Connecticut's commitment to the ten-state Memorandum of Understanding and deploy approximately 125,000–150,000 EVs in Connecticut by 2025; (2) to facilitate the seamless integration of new and emerging zero emission vehicle (ZEV)-related technologies to realize the potential electric system, economic, health, and environmental benefits of ZEVs; (3) to deploy and integrate ZEVs into Connecticut's electric grid as a key component of meeting the EMG Framework objectives; and (4) to achieve an equitable transition to wide-scale EV deployment across all communities in Connecticut. Additionally, PURA adopted the National Electric Vehicle Infrastructure (NEVI) Program's goal to deploy 40% of all EV installations in underserved communities in accordance with the federal government's Justice40 initiative.</u>

The EV Charging Program Decision details yearly port deployment targets from 2022 through 2030 and provides a combination of incentives for networked Level 2 electric vehicle supply equipment (EVSE) for residential and commercial customers, as well as for direct current fast chargers (DCFCs). Deployment targets have since been modified in subsequent annual review decisions.

Additionally, the EV Charging Program includes incentivized managed charging options for single-family residential customers, Light-Duty EV Fleets, and Multi-Unit Dwellings (MUDs); a Level 2 EVSE Lease Program at MUDs; and rate designs for separately metered DCFCs and Level 2 EVSEs serving light-duty fleets (i.e., Eversource's proposed EV-S, EV-M, and EV-L tariffs, and Ul's proposed GS-EVSE and GST-EVSE tariff).

The Authority conducts an annual review of the EV Charging Program in Docket No. XX-08-06, where XX is the last two digits of the year (e.g., "24" for 2024). PURA reviewed and approved the EV Charging Program rules and documents for 2025 in the December 4, 2024 <u>Decision</u> in Docket No. 24-08-06, <u>Annual EV Charging Program Review – Year 4</u> (Year 4 EV Decision).

The Year 4 EV Decision reviewed 2024 EVSE deployment data, the EDCs' Program experiences to date, and cost effectiveness, and made several programmatic

changes. The decision approved MUD Program Area port deployment targets for Program Cycles 2 and 3 (i.e., 2025–2027 and 2028–2030, respectively), as the Authority had not yet established those deployment targets. In addition, the Authority approved the EDCs' proposed MUD Managed Charging Pilot, which is scheduled to launch in January 2025. This Pilot will occur in three phases and begin by utilizing eligible vehicle telematics, expand to EVSE integration through an e-mobility service provider, and culminate in greater EVSE integration through Open Charge Point Interface Protocol (OCPI) connections. Further, the decision established a scaled-up managed charging offering for light-duty fleets. The decision also focused on streamlining and improving the efficiency of Program incentives, such as removing the demand response component of the residential managed charging program, allowing residential customers to receive up to \$1,000 on combined Level 2 EVSE and/or wiring upgrade costs, and reducing the persite port requirements for Workplace and Light-Duty Fleet Program Area incentives. Finally, the decision approved the EDCs' proposed non-compliant Network Service Provider Correction Action Plan pilot as well as the recruitment of a load research sample for improved Program analyses.

More information and resources on the EV Charging Program are available at PURA's webpage, Eversource's commercial and residential program webpage, Ul's commercial and residential program webpages, and EVConnecticut's webpage on vehicle and charging incentives.

2. Rates, Incentives, & Deployment

The tables below show the EV Charging Program deployment goals by three-year program cycle and program area (Table 25), a summary of EVSE and make-ready incentives by program area (Table 26), and additional details on residential incentives and rebates (Table 27).

Table 25: EVSE Program Development Targets (# of ports)⁷⁹

EVSE Program	Development	Targets (#	# of port	is)
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⁷⁹Year 4 EV Decision, p. 43.

Program Area	2022–2024	2025–2027	2028–2030	Total
Residential Single-				
Family (Level 2)	15,000	17,500	17,500	50,000
Multi-Unit Dwellings				
(Level 2)	3,639	9,000	9,000	21,639
DCFC	438	172	172	782
Destination Charging				
(Level 2) 1,578		1,654	1,654	4,868
Workplace & Light-				
Duty Fleets (Level 2)	2,314	2,521	2,521	7,356

Table 26: EV Charging Program EVSE and Make-Ready Incentives⁸⁰

EV Charging Program EVSE and Make-Ready Incentives							
	Residential Single-Family (Level 2)	Multi-Unit Dwellings (Level 2)	Public Destination (Level 2)	Workplace & Light- Duty Fleets (Level 2)	DCFC		
	Incer	ntive structure)				
EVSE and Make-Ready Incentives	Up to \$500 EVSE rebate + a portion of necessary electrical upgrades	Up to 50% o make-read	Up to 50% of EVSE cost + Up to 100% make-ready installation (>= 2 ports)				
(Includ							
Baseline	-		\$150,000				
Underserved Communities	-		\$40,000		\$250,000		

Table 27: 2024 Residential EV Charging Program Incentives⁸¹

2024 Residential EV Charging Program Incentives	
Upfront Incentives	

 $^{^{80}}$ Year 3 EV Decision, p. 6 (Table 2); Year 4 EV Decision, pp. 24–25.

^{81 &}lt;u>Id.</u>, pp. 6 (Table 2), 7 (Table 3), 9 (footnote 7); Year 4 EV Decision, p. 21 (Table 5).

New Networked Smart Charger Rebate + Wiring Upgrade Rebate	Up to \$1,000			
One-Time Managed Charging Enrollment Incentive (for customers with				
Existing L2 Charger)	\$100			
Ongoing Incentives				
Annual Managed Charging Incentive	Up to \$300			

a) Residential Managed Charging

Managed charging provides financial incentives for EV owners to charge their vehicle during off-peak periods, i.e., between 9 p.m. and 3 p.m. on non-holiday weekdays. Customers that receive an EVSE and/or electrical wiring upgrade incentive are required to participate in the residential managed charging program. Customers that already have a Level 2 EVSE (networked or non-networked) may enroll in the managed charging program and receive an additional enrollment incentive.

From January 1, 2022, to June 30, 2024, \$634,185 in enrollment incentives were paid to residential customers, with \$55,846 going towards underserved communities. In the same period, \$1,033,130 was paid in performance incentives with \$162,224 going towards underserved communities.⁸²

Below, Table 28 provides a summary of the number of residential managed charging participants by technology type (e.g., vehicle telematics), while Table 29 provides a summary of all residential incentives paid and the number of program applications (i.e., participants).

Table 28: Residential Single-Family Managed Charging Participant Data - Year 383

Residential Single-Family Managed Charging Participant Data - Year 2 (January 1, 2024 - November 30, 2024)						
Category Utility Participants Enrolled						
Networked Level 2 Charger	Eversource	2,142				
Networked Level 2 Charger	UI	238				

⁸³ Eversource Compliance, Jan. 6, 2025, Att. Eversource CRE-17.xlsx; UI Compliance, Jan. 6, 2025, Att. 2, Annual Compliance Filings – 22-08-01 Interrogatories (Table 2) #24-08-01.xlsx.

⁸² Eversource and UI Joint Compliance, Aug. 1, 2024, Docket No. 24-08-06, Atts. 2b,2d.

	Total	2,380
	Eversource	860
Vehicle Telematics	UI	48
	Total	908

Table 29: Residential Single-Family EVSE & Wiring Upgrade Incentives⁸⁴

Residential Single-Family EVSE & Wiring Upgrade Incentive Data - All Years (through November 30, 2024)

Category	Approved Applications	Incentives Reserved
New L2 Charger Incentive	1,482	\$565,761
Wiring Upgrade Incentive	105	\$51,943
Wiring Upgrade & Charging Incentives	4,127	\$4,047,597
Telematics Incentive	1,010	\$101,200
Telematics & Wiring Upgrade Incentive	1,294	\$768,220
Total	8,018	\$5,534,721

The map below displays the number of residential EVSE deployed through the EV Charging program by town. Totals include participants receiving all types of incentives listed in the table above.

⁸⁴ <u>ld</u>.

2/6/2025

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2/2/3 Environmental Justice Block Groups Number of Residential EVSE Installed

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Figure 22. Residential EVSE Deployed by Town⁸⁵

Residential EV Supply Equipment Installed by Town

b) Commercial Deployment

The commercial EVSE deployment has seen robust uptake, with multiple commercial program areas reaching or nearly reaching their 2022-2024 port deployment goals as of November 3, 2024:

- Multi-Unit Dwellings (L2): 88% of goal
- Direct Current Fast Chargers (DCFCs): 69% of goal
- Destination (L2): 98% of goal
- Workplace & Light-Duty Fleets (L2): 79% of goal

⁸⁵ Eversource Compliance, Jan. 6, 2025, Att. Eversource CRE-17.xlsx; UI Compliance, Jan. 6, 2025, Att. 2, Annual Compliance Filings – 22-08-01 Interrogatories (Table 2) #24-08-01.xlsx (EV sheet, Interrogatory CRE-17).

Table 30 provides a more complete breakdown of commercial deployment by utility and program area.

Table 30: EDCs' Commercial Port Deployment⁸⁶

EDCs' Commercial Port Deployment (as of November 30, 2024)								
Program Area	Utility	2022–2024 Port Deployment Goal	2022 Ports Reserved	2023 Ports Reserved	2024 Ports Reserved	Percent of 2022–2024 Port Goal		
Multi-Unit	Eversource	2,910	322	1037	1058	83%		
Dwellings	UI	729	168	172	432	106%		
(Level 2)	Total	3,639	490	1,209	1,490	88%		
	Eversource	357	77	132	2	59%		
DCFC	UI	81	22	28	43	115%		
	Total	438	99	160	45	69%		
	Eversource	1,262	475	541	183	95%		
Destination (Level 2)	UI	316	64	220	58	108%		
,	Total	1,578	539	761	241	98%		
Workplace	Eversource	1,851	554	402	599	84%		
& Light- Duty Fleets	UI	463	62	94	115	59%		
(Level 2)	Total	2,314	616	496	714	79%		

H. DEEP Procurements(i.e., Public Policy Contracts/PPAS)

1. Overview of Authority and Past Procurements

To further the state's public policy objectives to reduce greenhouse gas emissions, improve electric grid reliability, and diversify generation fuel sources, Connecticut has

⁸⁶ ld.

enacted multiple pieces of legislation since 2011 authorizing state-run procurements of renewable and zero-carbon energy resources. The EDCs enter into power purchase agreements (PPAs) with selected projects in accordance with statutory directives. DEEP is typically responsible for running the procurements, in consultation with the Office of Consumer Counsel (OCC), the Office of the Attorney General (OAG) (in most procurement statutes), PURA, and the EDCs. Table 31, below, outlines the legislation enabling state-run procurements.

An evaluation team consisting of DEEP staff members, along with the entities listed above, conducts a review, evaluation, and selection process of the bid proposals submitted under each RFP. The bid proposals then go through a two-stage process, whereby one group evaluates the bids and another team selects bids. There is a standard of conduct and other measures that ensure separation between the evaluation team and selection team, including that the EDCs are not included on the selection team. The final bid selection is made by the DEEP Commissioner. Once projects have been selected, the EDCs are required to submit the PPAs to the Authority for regulatory approval and to obtain authorization for cost recovery. The Authority conducts a docketed investigation into the selections submitted by the EDCs, applying the relevant statutory standard of review to assess project approval. ⁸⁷

Any processes outside of the DEEP evaluation and selection process and the regulatory approval process outlined above that are necessary to ensure implementation of specific PPA terms and conditions are established prior to fully implementing the PPAs. The EDCs track the projects and contracts, and conduct administrative activities as needed under the terms and conditions of the PPAs. The PPA establishes the terms of payment for any of the products delivered, which may be either a fixed price or formula-based, depending on the rules of the solicitation under which the project was selected. The interconnection process is separate from the PPAs, and all requirements for delivery are the responsibility of the seller (i.e., the project owner and/or developer).

The EDCs sell the energy and RECs produced by PPA projects back into the markets, and the revenue is used to offset any PPA costs. The net costs then flow to ratepayers through the Non-Bypassable Federally Mandated Congestion Charge (NBFMCC). For additional relevant materials, see the analysis completed in the DEEP Integrated Resources Plan (IRP) issued October 7, 2021, including price information available on pages 88–93 and in Appendix A6.

⁸⁷ The standard of review is frequently outlined in the authorizing statute; however, several different standards have been included in these statutes over the years. Stakeholders are encouraged to review the specific statute and Authority decision for the applicable standard for a given procurement.

2. Past Procurements for Grid-Scale Renewable Resources

The table below summarizes the energy generation procured and deployed pursuant to DEEP solicitations. In December 2024, DEEP announced its selection of 518 MW of new solar generation projects and 200 MW of new electric storage capacity through competitive solicitations conducted in 2024.⁸⁸ Next, the selected solar and storage projects will negotiate long-term contracts with the EDCs, which are expected to be filed with PURA for review and approval in early 2025. No offshore wind projects were selected in the 2024 multi-state coordinated offshore wind procurement with Massachusetts and Rhode Island. For more information on DEEP-led renewable energy procurements, visit the DEEP Grid Scale Competitive Procurements website.

Table 31: DEEP Cumulative PPA Deployment^{89,90}

DEEP Cumulative PPA Deployment							
Public Policy Contracts / PPAs	Public Act(s)	PURA Docket Nos.	Renewable Energy Source(s)	Deployment (Metric)	Deployment (As of 2024)		
Project 150	PA 07- 242, Section 124	07-04- 27; 08- 03-03	Biomass, Fuel Cells	Total Deployments in MWs (AC) No. of Projects In-Service	55.83 3		
Section 127	PA 11- 80, Section 127	12-05- 13; 13- 01-32; 13-06- 27RE01	Solar, Wind, Fuel Cells	Total Deployments in MWs (AC) No. of Projects In-Service	20		
Section 6	PA 13- 303, Section 6	13-09- 19	Solar	Total Deployments in MWs (AC) No. of Projects In-Service	20		

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⁸⁸ <u>See</u> DEEP News Release, Dec. 20, 2024, available at: https://portal.ct.gov/deep/news-releases/news-releases/news-releases/news-releases---2024/connecticut-announces-clean-energy-selections.

⁸⁹ Eversource Compliance, Nov. 15, 2024, Order No. 1, Section II.A.1 and A.3 (Interrogatories) and Section II.A.4 (Cross-Posted Compliance), Att. <u>ES Sec. II.A.1 and II.A.3 Interrogatories DN 24-08-01.xlsx</u>, (DEEP Redacted sheet, Interrogatory CRE-11); UI Compliance, Dec. 3, 2024, Order No. 1, VNM Data Interrogatories Supplement, Att. <u>UI Attachment 2 - VNM Data Supplement #24-08-01.xlsx</u>, (DEEP Redacted sheet, Interrogatory CRE-11).

⁹⁰ For additional information, see Appendix 1, "Grid-Scale Procurement Authority" Table.

DEEP Cumulative PPA Deployment					
Public Policy Contracts / PPAs	Public Act(s)	PURA Docket Nos.	Renewable Energy Source(s)	Deployment (Metric)	Deployment (As of 2024)
Clean Energy RFP (Large Scale PPAs)	PA No. 13-303, Section 7; PA 15- 107(c), Section 1	17-01- 10	Solar, Wind	Total Deployments in MWs (AC) No. of Projects In-Service	293.6
Section 8	PA 13- 303, Section 8	14-02- 02	Biomass	Total Deployments in MWs (AC) No. of Projects In-Service	29.6
Amended Section 8	PA 13- 303, Section 8, Amended by PA 17-144, Section 10	18-06- 37	Fuel Cells, Offshore Wind, Fuels Cells w/ CHP	Total Deployments in MWs (AC) No. of Projects In-Service	24.8
Small Scale PPAs	PA 15- 107, Section 1(b)	17-01- 11	Solar, Wind	Total Deployments in MWs (AC) No. of Projects In-Service	125.14 9
Zero Carbon PPAs	PA 17-3 (June 2017), Section 1	18-05- 04; 20- 02-04	Nuclear, Solar, Offshore Wind, Solar w/ Storage	Total Deployments in MWs (AC) No. of Projects In-Service	1,261.05 2
Section 3	PA 18- 50, Section 3	18-07- 02	Biomass	Total Deployments in MWs (AC) No. of Projects In-Service	37.5 1
Offshore Wind PPA	PA 19- 71, Section 1	19-12- 18	Offshore Wind	Total Deployments in MWs (AC) No. of Projects In-Service	-

I. Conservation & Load Management Plan

1. Brief Program Description and History

The Conservation & Load Management (C&LM) Plan is an investment plan for energy savings and demand management programs. The C&LM Plan aims to incentivize residential and commercial customers to make energy efficiency improvements, which further the state's energy affordability and greenhouse gas emissions reduction goals. The electric and gas distribution companies administer the C&LM Plan through Energize CT.

The C&LM Plan was first established by Public Act No. 98-28, An Act Concerning Electric Restructuring. The energy efficiency programs were initially funded only by electric customers. Public Act No. 05-1, An Act Concerning Energy Independence, expanded the program to include a funding mechanism for programs to reduce gas consumption for residential and C&I customers. Public Act No. 13-298, An Act Concerning Implementation of Connecticut's Comprehensive Strategy and Various Revisions to the Energy Statutes, provided a framework for increased energy efficiency spending in the state, established that the Energy Efficiency Board (EEB) and CGB would provide on-bill financing of residential efficiency and renewable energy measures using private capital. and required the electric and gas companies to develop a three-year combined plan beginning in 2015. Public Act No. 18-50, An Act Concerning Connecticut's Energy Future, introduced a new energy savings goal, requiring the Companies to reduce energy consumption by 1.6 million MMBtus each year between 2020 and 2025. Consistent with General Statutes § 16a-3a(c), the C&LM Plan helps ensure that energy resource needs are first met "through all available energy-efficiency and demand reduction resources that are cost-effective, reliable and feasible," thus minimizing energy costs to customers over time.

C&LM programs are funded by several sources. These include funds collected through the Conservation Adjustment Mechanism (CAM) on customer energy bills, revenues from the Regional Greenhouse Gas Initiative (RGGI), and proceeds from C&LM savings sold into the ISO New England Forward Capacity Market (FCM). While significant funding was diverted from C&LM programs to the state's General Fund in 2017, negatively impacting the program between 2017 and 2019, the passage of Public Act No. 18-50 restored funding for the program and enacted protections against further diversions to the General Fund.

The C&LM Plans and their corresponding detailed budgets are developed every three years and updated annually by the utilities, with guidance from the EEB and public input. The utilities file the C&LM Plan and annual updates with DEEP for review and approval. The most recent version is the 2022–2024 C&LM Plan, supplemented with an annual

<u>update filed in 2024</u>, which budgets \$708 million over three years for energy efficiency investments. Program offerings have expanded since the C&LM Plan was established and include rebates, incentives, and financing for energy efficient and low-carbon products, such as: heat pumps; weatherization measures; promotion of green building codes and certifications; and efficient appliance and lighting standards. In addition, the plan includes measures for education, community outreach, and workforce development.⁹¹

2. Incentives & Deployment

The tables below show the C&LM Plan goals and savings relative to those goals (Table 32), as well as spending and gas and electric usage (MWh) and demand (MW) savings annually from 2013 to 2024. The data reflects C&LM Plan progress through December 31, 2024.

Table 32: 2024 C&LM Plan Overview⁹²

2024 C&LM Overview					
	2024 Lifetime Savings (Thousand MMBtu)	% of 2024 Goal Achieved	2024 Lifetime Savings (MWh)	% of 2024 Goal Achieved	
Eversource	7,304	103%	477,440	60%	
UI	1,588	63%	112,247	36%	
Combined Total	10,046	93%	589,687	53%	

Table 33: C&LM Plan Data by Year (2013–2024)93

	C&LM Summary – 2013–2024					
Year	Spending - Electric	Spending - Gas	Lifetime MWh Saved	Electric Demand Savings (MW)	Lifetime Thousands of MMBtus Gas Saved	
2013	\$125,740,669	\$24,118,793	2,896,791	129	74,412,254	

⁹³ ld.

⁹¹ More information available at DEEP's <u>C&LM Webpage</u>.

⁹² Connecticut Energy Efficiency Fund, Connecticut Energy Efficiency Dashboard, available at: ctenergydashboard.com/Public/PublicHome.aspx (last visited Jan. 3, 2025).

C&LM Summary – 2013–2024					
Year	Spending - Electric	Spending - Gas	Lifetime MWh Saved	Electric Demand Savings (MW)	Lifetime Thousands of MMBtus Gas Saved
2014	\$180,090,941	\$43,951,156	4,041,301	138	102,988,602
2015	\$181,925,566	\$43,270,653	4,351,232	177	94,215,989
2016	\$202,506,569	\$50,016,693	4,993,296	95	104,981,557
2017	\$162,981,549	\$47,320,352	4,084,021	95	97,806,810
2018	\$125,843,799	\$43,548,723	2,971,754	79	100,113,225
2019	\$172,101,705	\$52,903,239	3,492,418	65	97,608,623
2020	\$181,345,526	\$58,075,094	2,600,973	104	87,517,140
2021	\$205,917,831	\$52,549,853	2,892,849	123	95,259,310
2022	\$205,918,880	\$44,877,988	2,409,502	132	80,127,260
2023	\$259,189,435	\$50,430,158	1,607,848	142	60,602,520
2024	\$228,571,678	\$70,532,116	826,520	139	69,832,777

J. Voluntary Renewable Options (VRO) Program and Clean Energy Options Program (CEOP)

The VRO Program⁹⁴ enables electric customers to voluntarily purchase electricity with renewable energy attributes exceeding the state's annual minimum requirement through the RPS (discussed below in Section VI). The VRO Program establishes rules for power generation supply offers marketed as including renewable energy attributes that exceed the RPS requirement. Similarly, the modified CEOP, currently referred to as a REC-only offer, provides customers who utilize their utility's Standard Service (SS) generation supply with an option to support additional renewable energy through the purchase of RECs. Any REC-only and VRO offers must follow Authority-approved rulings, including

⁹⁴ See Decision, Oct. 21, 2020, Docket No. 16-12-29, PURA Development of Voluntary Renewable Options Program (the Authority modified and approved continuation of the CEOP, and established rules for voluntary renewable offers).

that the certificates that support such offers may only originate from the ISO-NE, New York, or PJM control areas and that the certificates must reflect resources defined as Class I in General Statutes § 16-1(20).

The Authority also requires specific label information to be included by all supplier offerings to better explain to consumers how RECs support renewable energy deployment and how a customer's generation is supplied. Specifically, the required information makes clear that CEOP and VROs represent the purchase of certificates rather than the purchase of electricity produced by renewable energy sources.

Pursuant to General Statutes § 16-244c, PURA established the CEOP in 2005 to allow consumers to support renewable energy above the minimum RPS. ⁹⁵ At the time of the CEOP's inception, customers had limited options for supporting renewable resources in excess of the RPS. The CEOP allowed customers, whether they received supply from SS or a third-party supplier, to participate in a REC-only program that was applied as an adder to their bill. The Authority modified and extended the program over time. ⁹⁶

Since 2005, nationwide REC markets emerged and matured, and suppliers began marketing offers that exceeded Connecticut's RPS. Some supplier offers now include energy plus the RECs claimed by suppliers in excess of the RPS, creating a bundled product, commonly referred to as a voluntary renewable offer. Unlike the CEOP, which was governed by PURA rules and standards, VROs evolved over time without regulatory guidance.

Due to the presence of voluntary renewable offers in the market, in 2016 the Authority announced it would develop and implement a new program to advance Connecticut's voluntary renewable market.⁹⁷ As noted above, the new program created to establish rules for voluntary renewable offers is the VRO Program, which was approved through the October 21, 2020 <u>Decision</u> in Docket No. 16-12-29, <u>PURA Development of Voluntary Renewable Options Program</u> (VRO Decision). Suppliers may also continue to apply to participate in the REC-only offerings program.

See Interim Decision, Sept. 27, 2007, Docket No. 07-01-09, DPUC Consideration of the Connecticut Clean Energy Options Program for 2008; see also, Decision, Mar. 30, 2011, Docket No. 10-05-07, PURA Review of the Connecticut Clean Energy Options Program.

⁹⁷ Decision, Dec.21, 2016, Docket No. 10-05-07RE01, PURA Review of the Connecticut Clean Energy Options Program.

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⁹⁵ See Interim Decisions, Apr. 21 and Oct. 20, 2004, and Decision, Feb. 17, 2005, Docket No. 03-07-16, Investigation of Alternative Transitional Standard Offer Services for United Illuminating and CL&P Customers.

The VRO Program began in January 2021. Currently, there are no suppliers offering VROs. In addition, as of 2025, there was only one REC-only supplier (Sterling Planet), offering two REC-only options for customers – a 50% or 100% option. The number of REC-only suppliers has decreased since 2022, when there were three suppliers. PURA monitors the program and participation through compliance filings under Docket No. 06-10-22 and under each CEOP supplier license dockets. Current CEOP suppliers with existing customer contracts were allowed to continue until January 2022. However, any new REC-only contracts with customers after January 1, 2021, were required to meet the new VRO program standards as established in the VRO Decision, with RECs originating only from ISO-NE, New York, and/or PJM control areas.

After the issuance of the VRO Decision and associated geographic and marketing restrictions, certain suppliers appealed the Decision to the Connecticut Superior Court. The Superior Court placed implementation of certain parts of the VRO Decision on hold pending further review of the appeal. However, electric suppliers were still required to comply with the requirements in the VRO Decision for REC-only offers. On July 4, 2023, the Connecticut Supreme Court rejected the suppliers' appeal and upheld the Authority's VRO Decision. Due to the stay on enforcement of the VRO Decision during the appeals process, the Authority approved extensions to the certain implementation dates of the VRO Decision in a December 6, 2023 Decision in Docket No. 16-12-29RE01, <a href="PURA Development of Voluntary Renewable Options Program - Modification of Implementation Dates.

The below plot shows annual RECs delivered and annual customer enrollment in the CEOP/VRO Program.

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⁹⁸ See the Energize CT Rate Board, available at: https://energizect.com/rate-board/compare-energy-supplier-rates?customerClass=1201&monthlyUsage=750&planTypeEdc=1196.

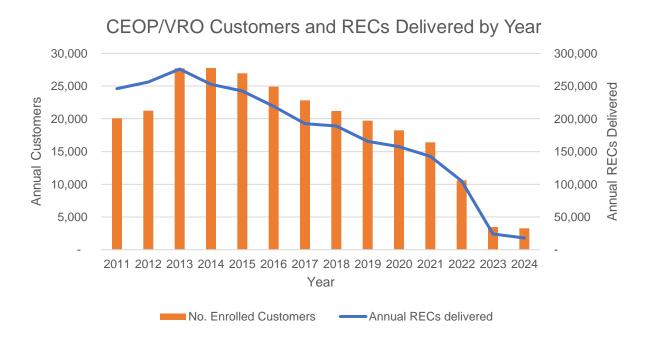


Figure 23: CEOP/VRO Customers and RECs Delivered99

VI. Renewable Portfolio Standard (RPS)

A. RPS Summary

The RPS was first designed and implemented in 1998, at the beginning of the deregulation of the electric supply industry, to bring online renewable energy resources not otherwise supported in the regional markets, in furtherance of state environmental policy goals. The RPS includes different portfolio requirements for energy resources classified as Class I, Class II, and Class III renewables. Class I renewables, as defined in General Statutes § 16-1(a)(20), include most zero-carbon resources such as solar and

2025-01-13 UI Attachment 2 - PURA Questions Response #24-08-01.xlsx, (Overview by Program sheet, Interrogatories CRE-05 and CRE-14).

⁹⁹ Eversource Compliance, Nov. 15, 2024, Order No. 1, Section II.A.1 and A.3 (Interrogatories) and Section II.A.4 (Cross-Posted Compliance), Att. <u>ES Sec. II.A.1 and II.A.3 Interrogatories DN 24-08-01.xlsx</u>, (Overview by Program sheet, Interrogatories CRE-05 and CRE-14); UI Corresp., Jan. 13, 2024,

wind, as well as some low-carbon resources. 100 Class II renewables include eligible waste-to-energy facilities. 101 Class III renewables include certain combined heat and power systems, waste heat recovery systems, electricity savings from conservation and load management programs, and demand-side management programs, subject to eligibility requirements.¹⁰²

Each year, electric suppliers in Connecticut must comply with the RPS¹⁰³ by procuring and properly settling the necessary amount of renewable energy certificates (RECs)¹⁰⁴ to meet the percentage targets for each RPS Class, meaning that they must obtain environmental attributes on a one-to-one basis for the specified percentage of their retail load supplied from renewable resources within a calendar year, commonly referred to as the RPS compliance year.

Connecticut has adopted an RPS requirement for Class I energy that progressively increases the required number of Class I RECs procured from 17% of a supplier's retail offering in 2018 to 40% by 2030, more than doubling the state's commitment to Class I renewable resources over this time period.

Table 34, below, shows the RPS requirements by year by resource type.

^{100 &}quot;Class I renewable energy source" means (A) electricity derived from (i) solar power, (ii) wind power, (iii) a fuel cell, (iv) geothermal, (v) landfill methane gas, anaerobic digestion or other biogas derived from biological sources. (vi) thermal electric direct energy conversion from a certified Class I renewable energy source, (vii) ocean thermal power, (viii) wave or tidal power, (ix) low emission advanced renewable energy conversion technologies, (x) a run-of-the-river hydropower facility that began operation after July 1, 2003, and has a generating capacity of not more than thirty megawatts, or a runof-the-river hydropower facility that received a new license after January 1, 2018, under the Federal Energy Regulatory Commission rules pursuant to 18 CFR 16, or (xi) a biomass facility that uses sustainable biomass fuel and has an average emission rate of equal to or less than .075 pounds of nitrogen oxides per million BTU of heat input for the previous calendar quarter, except that energy derived from a biomass facility with a capacity of less than five hundred kilowatts that began construction before July 1, 2003, may be considered a Class I renewable energy source, or (B) any electrical generation, including distributed generation, generated from a Class I renewable energy source, provided, on and after January 1, 2014, any megawatt hours of electricity from a renewable energy source described under this subparagraph that are claimed or counted by a load-serving entity, province or state toward compliance with renewable portfolio standards or renewable energy policy goals in another province or state, other than the state of Connecticut, shall not be eligible for compliance with the renewable portfolio standards established pursuant to section 16-245a." General Statutes § 16-1(a)(20).

General Statutes § 16-1(a)(21). 102 General Statutes § 16-1(a)(38). Note: After January 1, 2014, programs supported by ratepayers are not eligible for Class III.

¹⁰³ Pursuant to General Statutes §§ 16-245a, 16-244c(h)(1), and 16-243q.

¹⁰⁴ One MWh of renewable energy = one REC.

Table 34: RPS Obligations by Year

Class I, Class II, and Class III RPS compliance obligation by year ^{105,106}					
Year	Class I	Class II	Class III	Total	
2018	17.00%	4.00%	4.00%	25.00%	
2019	19.50%	4.00%	4.00%	27.50%	
2020	21.00%	4.00%	4.00%	29.00%	
2021	22.50%	4.00%	4.00%	30.50%	
2022	24.00%	4.00%	5.00%	33.00%	
2023	26.00%	4.00%	5.00%	35.00%	
2024	28.00%	4.00%	5.00%	37.00%	
2025	30.00%	4.00%	5.00%	39.00%	
2026	32.00%	4.00%	5.00%	41.00%	
2027	34.00%	4.00%	5.00%	43.00%	
2028	36.00%	4.00%	5.00%	45.00%	
2029	38.00%	4.00%	5.00%	47.00%	
2030	40.00%	4.00%	4.00%	48.00%	

In lieu of procuring and settling RECs, an electric supplier, or load serving entity (LSE), can make an Alternative Compliance Payment (ACP) to satisfy all or a portion of their annual RPS obligation. An LSE can also bank RECs for future use. However, banked RECs will expire if not timely applied to a future RPS Compliance Year.

The Connecticut RPS program is satisfied using the New England Power Pool (NEPOOL) Generation Information System (GIS) platform regarding the creation and settlement of all RECs.

Different classes of RPS generally correspond to different types of resources that the state has expressed a policy preference for incenting. In the 2022 budget adjustor, Public Act No. 22-118, the General Assembly removed the previous allowance that Class II compliance obligations could be met with Class I RECs and specified that any ACPs for

¹⁰⁵ General Statutes §§ 16-245a, 16-243q.

of any such supplier or such standard service of an electric distribution company shall, on demonstration satisfactory to the Public Utilities Regulatory Authority, be obtained from Class III sources, except that with respect to any retail electric supply contract that was entered into or renewed on or after January 1, 2023, but prior to July 1, 2024, not less than four per cent of the total output of any such supplier with respect to such contract shall be obtained from Class III sources. Such exception shall be in effect on and after July 1, 2024, until January 1, 2026, or the date that any such contract is renewed, whichever is earlier." General Statutes § 16-243q(4).

Class II RECS would go towards a newly-established sustainable materials management account.¹⁰⁷

While the value of RECs associated with the Connecticut RPS may historically have been sufficient to drive new resource deployment, for many project types (e.g., most solar projects, offshore wind, etc.), the REC value does not provide sufficient incentive for investment in new renewable projects. Connecticut has implemented a series of policies and programs, described in this report, that provide more tailored support for various types of resources, most of which produce RECs that can be used to meet Connecticut's RPS obligations. Thus, in addition to providing some direct economic incentive, the RPS also serves as a measurement and accountability tool, ensuring progress towards Connecticut's decarbonization targets in conjunction with complementary policies.

B. Demonstrating RPS Compliance

LSEs demonstrate compliance with the RPS requirements by filing exhibits and supporting documents in annual PURA dockets. For the 2022 Compliance Year, LSEs provided evidence to demonstrate that an appropriate amount of their retail load was supplied by renewable resources in Docket No. 23-06-01, <u>Annual Review of Connecticut's Electric Suppliers' and Electric Distribution Companies' Compliance with Connecticut's Renewable Energy Portfolio Standards in the Year 2022</u>. For obligations tied to 2022 load, load serving entities were ordered to pay approximately \$15 million in ACPs (see below for description).

There is a lag in REC creation. For instance, Q4 2022 RECs were created April 15, 2022, and it is permissible for RECs to be transacted and settled for the 2023 Compliance Year through June 15, 2024. To allow additional time for the administrative work to be completed before filing, the annual filing deadline for the 2022 Compliance Year was not until October 16, 2023. This lag period is typical, as the end dates for the trading periods to transfer/settle RECs are approximately six to nine months after the calendar period dates, as seen in the table below.

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¹⁰⁷ Sections 163 and 164 of P.A. 22-118.

¹⁰⁸ <u>See</u> DEEP, 2020 Integrated Resources Plan, p. 88, available at: <u>2020-connecticut-integrated-resources-plan-10-7-2021.pdf</u>.

Table 35: REC Trading Periods¹⁰⁹

REC Trading Periods							
Generation Month REC Trading Period REC Quarter							
Jan-March	July 15 – Sept. 15	First					
April-June	Oct. 15 – Dec. 15	Second					
July-Sept	Jan. 15 – March 15	Third					
OctDec.	April 15 – June 15	Fourth					

C. Banking Requirements for Excess RECs

Each LSE is allowed to bank excess Class I, II, and III RECs for up to two years. The number of banked RECs allowed in each class in any year cannot be more than 30% of the LSE's REC obligation in each respective class. The allowance of banked RECs became available with the 2009 RPS requirements, as the amended regulation became effective on December 22, 2009.

D. ACP for Shortage of RECs

Any wholesale supplier of an EDC or any electric supplier that fails to meet the RPS requirements (shortage of RECs) for Class I is required to pay four cents per kilowatt hour (\$40 per MWh) and three cents per kilowatt hour (\$30 per MWh) for Class II. A licensee that fails to meet the RPS requirements for Class I is required to pay four cents per kilowatt hour (\$40 per MWh) and two and a half cents per kilowatt hour (\$25 per MWh) for Class II. These payments, known as the ACP, are returned to ratepayers.

Any excess amount remaining after ACP funds are allocated as per statute shall be applied to reduce the costs collected through the NBFMCC. Any ACP required of the LSE shall be made to the EDCs in proportion to the load the LSE served in each EDC's territory.

Pursuant to General Statutes § 16-243q(b), the February 16, 2006 <u>Interim Decision</u> in Docket Nos. 05-07-19, <u>DPUC Proceeding to Develop A New Distributed Resources Portfolio Standard (Class III)</u>, and the February 11, 2010 <u>Decision</u> in Docket No. 05-07-19RE02, <u>DPUC Proceeding to Develop a New Distributed Resources Portfolio Standard</u>

¹⁰⁹Decision, Dec. 20, 2023, Docket No. 23-06-01, p. 4.

¹¹⁰Conn. Agencies Regs. § 16-245a-1(g).

¹¹¹ General Statutes §16-244c(h)(1).

¹¹² General Statutes § 16-245(k).

¹¹³ See General Statutes §§ 16-245(k) and 16-244c(h)(1).

(Class III) – 2009 Revisions, any LSE that fails to meet the Class III requirements is subject to an ACP of \$31 per MWh, 25% of which shall go to the Clean Energy Fund (CEF) with the remainder being divided between the EDCs' C&LM Funds in proportion to the load the LSE served in their respective territories.¹¹⁴

Table 36 provides a summary of historical and current ACPs by resource type.

Table 36: Class I, Class II, and Class III ACP¹¹⁵

Class I, Class II, and Class III ACP							
	Class I	\$55 / REC					
Up to Year 2017:	Class II	\$55 / REC					
	Class III	\$31 / REC					
2018–2020:	Class I	\$55 / REC					
	Class II	\$25 / REC					
	Class III	\$31 / REC					
	Class I	\$40 / REC					
2021:	Class II	\$25 / REC					
	Class III	\$31 / REC					
	Class I	\$40 / REC					
2024 Onwards:	Class II	\$30 / REC					
	Class III	\$31 / REC					

¹¹⁴ General Statutes § 16-243q(b) provides in part: "the Public Utilities Regulatory Authority shall assess each electric supplier and each electric distribution company that fails to meet the percentage standards of subsection (a) of this section a charge of up to five and five-tenths cents for each kilowatt hour of electricity that such supplier or company is deficient in meeting such percentage standards." In the February 16, 2006 Interim Decision in Docket Nos. 05-07-19, the Authority set the Class III ACP at three and one-tenth cents (\$0.031) for each kilowatt hour of electricity that such supplier or company is deficient in meeting such percentage standards. Interim Decision, Feb. 16, 2006, Docket No. 05-07-19. In the February 11, 2010 Decision in Docket No. 05-07-19RE02, the Authority ruled that the Class III ACP shall remain at \$31 per MWh. Decision, Feb. 11, 2010, Docket No. 05-07-19RE02.

¹¹⁵ The ACP values displayed in this table are for electric suppliers, not licensees. See General Statutes § 16-245(k) for ACP values for licensees.

VII. Legacy Programs

A. Residential Solar Investment Program (RSIP)

1. Program Description and History

Initially authorized in 1998 under General Statutes §16-243h, traditional net metering provided customers with monthly kWh credits for excess solar PV generation provided to the electric grid. Later, in 2011, the General Assembly created the RSIP to provide financial incentives beyond traditional net metering to residential homeowners installing solar PV systems. RSIP began in 2012 and was administered by the CGB.¹¹⁶

Through the RSIP, CGB offered three types of incentives to customers. The Expected Performance Based Buydown provided an up-front incentive, based on the system's generating capacity, to customers who purchased their systems. The Performance Based Incentive (PBI) provided quarterly payments for six years based on the amount of electricity produced, benefiting customers with third-party owned projects. The Low-and Moderate-Income Performance Based Incentive offered a higher PBI incentive level for income-eligible customers.

The program had a statutory target of 350 MW, which was increased in 2019 from 300 MW, 117 and an end date of December 31, 2022. RSIP reached its deployment goal of 350 MW nearly a year ahead of the December 2022 deadline. On November 12, 2020, CGB filed a brief in Docket No. 17-12-03RE09, PURA Investigation into Distribution System Planning of the Electric Distribution Companies – Clean and Renewable Energy Resource Analysis and Program Reviews, stating they had approved 350 MW of projects and already deployed 312.8 MW of the 350 MW threshold. 118 Further, in an exception to the draft decision filed on January 21, 2022, the CGB stated that 348 MW had been deployed as of December 31, 2021, with the legislative target of 350 MW expected to be

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¹¹⁶ For more information on the RSIP, see CGB, RSIP, available at: https://www.ctgreenbank.com/strategy-impact/societal-impact/successful-legacy-programs/residential-solar-investment-program-rsip/.

 ¹¹⁷ The program was also updated substantively several other times, including in 2015 and 2016.
 118 CGB Brief, November 12, 2020, Docket Nos. 17-12-03RE09, <u>PURA Investigation into Distribution System Planning of the Electric Distribution Companies – Clean and Renewable Energy Resource Analysis and Program Reviews</u>, pp. 1–2 (also posted in Docket No. 19-06-36, <u>Application of Low and Zero Emissions Renewable Energy Credit Program - Year 9 and 10 Solicitations</u>.

achieved by January 31, 2022.¹¹⁹ See Table 37 below for the MW deployed by year and Table 38 below for the number of projects deployed per year for the RSIP program.

With the achievement of the RSIP's statutory deployment goal, the state transitioned to the RRES Program, authorized in General Statutes §16-244z, to provide support for residential solar installation through a tariffed PV structure. To aid in the transition to the RRES Program, PURA ruled on October 15, 2020, that RECs could continue to be aggregated for all residential solar PV systems that CGB provided an incentive for prior to January 1, 2022. As a result of this ruling, the CGB continued to provide incentives in support of the residential solar PV market in 2021 (i.e., after CGB identified that it had approved 350 MW of projects under RSIP, but before the RRES Program began), including providing limited incentives to projects above the 350 MW RSIP cap. The CGB termed this separate incentive program RSIP-E.

The RRES Program was established through the February 10, 2021 <u>Decision</u> in Docket No. 20-07-01, as discussed above in Section V.A. The RRES Program became available to all EDC residential customers starting January 1, 2022.

2. Rates & deployment

Table 37: RSIP Development by Year (MW AC)¹²¹

RSIP Development by Year (MW-AC)							
Completed Year	Eversource	United Illuminating	Total				
2012	1.315	0.190	1.506				
2013	5.811	0.910	6.720				
2014	9.870	1.507	11.378				
2015	46.406	7.256	53.662				
2016	37.980	11.000	48.979				
2017	19.844	10.004	29.848				

Motion No. 18 Ruling, September 17, 2020, Docket No. 17-12-03RE09, <u>PURA Investigation into Distribution System Planning of the Electric Distribution Companies – Clean and Renewable Energy Resource Analysis and Program Reviews.</u>

¹¹⁹ CGB Exception to Draft Decision, January 21, 2022, Docket No. 17-12-03RE09, <u>PURA Investigation into Distribution System Planning of the Electric Distribution Companies – Clean and Renewable Energy Resource Analysis and Program Reviews, p. 1.</u>

¹²¹ UI Compliance Filing, Nov. 15, 2023, Docket No. 23-08-01, "2023-11-15 Section B.1.a UI Cover Letter - Interrogatories - 2023 Clean and Renewable Energy Program #23-08-01," UI CAE-033 Attachment 1; Eversource Compliance Filing, Nov. 15, 2023, Docket No. 23-08-01, "Sec II.A.1 (Interrogatories) and Sec II.A.3 (Cross Posted Compliance)," A1-CAE-033.

RSIP Development by Year (MW-AC)							
Completed Year	Eversource	United Illuminating	Total				
2018	25.829	12.343	38.172				
2019	35.120	16.436	51.556				
2020	34.966	11.472	46.438				
2021	29.062	6.899	35.961				
2022	3.695	1.922	5.618				
2023	0.008	0	0.008				
Total	249.906	79.939	329.845				

Table 38: RSIP Development by Year 122

RSIP Development by Year (# of Projects)							
Completed Year	Eversource	United Illuminating	Total				
2012	213	29	242				
2013	890	147	1,037				
2014	1,215	260	1,475				
2015	6,975	1,184	8,159				
2016	5,371	1,691	7,062				
2017	2,661	1,499	4,160				
2018	3,502	1,909	5,411				
2019	4,650	2,487	7,137				
2020	4,649	1,788	6,437				
2021	3,467	1,010	4,477				
2022	430	291	721				
2023	1	0	1				
Total	34,024	12,295	46,319				

¹²² <u>Id</u>.

B. Low Emission Renewable Energy Credit (LREC) and Zero Emission Renewable Energy Credit (ZREC) Program

1. Program Description and History

The LREC/ZREC Program was established in 2011 pursuant to General Statutes §§ 16-244r, 16-244s, and 16-244t. The program ran for ten years and required the EDCs to enter into 15-year contracts to purchase RECs¹²⁴ from qualifying projects located in Connecticut at a fixed price. Zero-emission Class I renewable resources with a capacity of 1 MW or less were eligible for ZREC, while low-emission Class I resources (i.e., fuel cells) with a capacity of 2 MW or less were eligible for LREC. Larger LREC/ZREC projects were selected competitively while smaller projects were provided with an administratively set incentive rate, similar to the NRES Program, which replaced the LREC/ZREC Program in 2022. If the EDCs selected a project, the "Seller," or qualified project, was required to execute a contract or service agreement, which defined the term of the contract, price, and all the other requirements of the Seller and "Buyer", the EDC. Notably, these projects were also eligible for traditional net metering, explained below in Section VII.C.

2. Budget and Procurement Process

The budget for the LREC/ZREC Program was split 80%/20% between Eversource and UI, respectively, for each procurement year. According to the 80%/20% split, for Years 6–10 of the program (2017–2021), \$6.4M was allotted for Eversource and \$1.6M was allotted for UI. Additionally, any applicable funds from terminated LREC/ZREC projects that resulted in adjustments to the Maximum Annual Quantity (MAQ)¹²⁶ were added to the budget. Further, the budget was divided by project type as follows: 50% to LREC projects and 50% to ZREC projects, divided evenly among Small, Medium, and Large ZRECs.

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¹²³ Section 2 of Public Act No. 19-35, <u>An Act Concerning a Green Economy and Environmental Protection</u>, amended General Statutes § 16-244r(c) to extend the LREC/ZREC Program for Year 9 (2020) and Year 10 (2021).

¹²⁴ RECs are a way to track electricity generated from renewable sources. One REC represents the environmental attributes of one megawatt hour of energy produced. LREC: Low emission RECs, e.g., fuel cells. ZREC: Zero emission RECs, e.g., solar, wind, small hydropower. ZREC resources may also be eligible as LREC projects in this program.

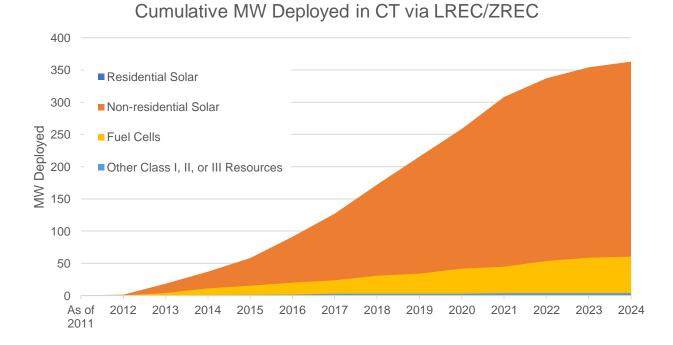
¹²⁵ Significant legislation associated with the LREC/ZREC Program can be found in Appendix 1: Additional Resources & Documents.

¹²⁶ Maximum number of LRECs or ZRECs that the EDC is obligated to purchase in any Contract Year under the Agreement.

The LREC/ZREC Program ended after the conclusion of the Year 10 procurement in 2021. See Figure 24 below for a depiction of the MW deployed by project type, and Table 39 for an overview of the number of projects and MW by project size for the LREC/ZREC Program. The LREC/ZREC Program was succeeded by the NRES Program, established in the June 30, 2021 Decision in Docket No. 20-07-01 and effective January 1, 2022, as discussed in Section V.C of this report. While some LREC/ZREC projects approved prior to the end of the program continued to be deployed in 2022 and 2023, the program is no longer accepting new enrollments.

3. Procurement Results & Deployment

Figure 24: Cumulative MW Deployed in CT via LREC/ZREC¹²⁷



¹²⁷ Eversource Compliance, Nov. 15, 2024, Section II.A.1 and A.3 (Interrogatories) and Section II.A.4 (Cross-Posted Compliance), ES Sec. II.A.1 and II.A.3 Interrogatories DN 24-08-01.xlsx, CRE-01, CRE-06, CRE-07, CRE-08 (LREC ZREC sheet); UI Compliance, Dec. 3, 2024, UI Attachment 2 - VNM Data Supplement #24-08-01.xlsx, CRE-01, CRE-06, CRE-07, CRE-08 (LREC ZREC sheet).

Table 39: LREC/ZREC Deployment Overview¹²⁸

	LREC/ZREC Deployment Overview															
LRE	C/ZREC Program Categories	As of 2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	TOTAL
LREC	Annual Deployment in MWs (AC)	0.0	0.4	3.6	7.1	4.0	9.5	10.5	12.5	6.0	16.2	23.0	19.0	7.9	5.8	125.5
	No. of Projects In-Service	0.0	1.0	6.0	13.0	10.0	12.0	13.0	12.0	9.0	14.0	17.0	16.0	9.0	4.0	136.0
Large	Annual Deployment in MWs (AC)	0.0	0.3	6.5	7.9	6.0	13.2	15.5	19.4	20.5	17.9	16.4	7.2	5.7	1.4	137.9
ZREC	No. of Projects In-Service	0.0	1.0	13.0	13.0	9.0	21.0	25.0	29.0	28.0	26.0	24.0	9.0	8.0	2.0	208.0
Mediu m	Annual Deployment in MWs (AC)	0.0	0.6	8.6	6.8	8.5	9.1	8.0	12.0	10.0	8.6	8.0	5.8	4.8	2.5	93.2
ZREC	No. of Projects In-Service	0.0	3.0	43.0	39.0	44.0	55.0	45.0	64.0	48.0	45.0	42.0	30.0	25.0	13.0	496.0
Small ZREC	Annual Deployment in MWs (AC)	0.2	0.5	2.3	5.0	7.3	8.0	8.5	9.4	11.7	8.4	7.3	6.9	4.3	1.0	80.8
ZNEC	No. of Projects In-Service	27	35	55	114	168	190	203	203	243	162	138	131	83	15	1767

¹²⁸ <u>Id</u>.

C. Virtual Net Metering (VNM) Program

1. Program Description and History

VNM allows a renewable energy system's owner, or host, to share excess billing credits with an offsite electric user. Connecticut's legacy VNM Program was available to state, agricultural, and municipal (SAM) customers to encourage the installation of Class I and Class III distributed generation. Pursuant to General Statutes § 16-244u(5), the VNM Program allowed customer hosts (customers who operate behind-the-meter generation) to assign surplus production from their eligible generator to other metered accounts, called beneficial accounts, that were not physically connected to the Customer Host's generator.

For SAM customer hosts participating in the VNM Program, metering equipment would measure electricity consumed and subtract the amount of electricity produced but not consumed, to measure net generation and VNM credits. The VNM credits for excess generation were applied monthly as credits to the electric bill of the beneficial account(s).¹³² VNM credits were equal to the generation of service charges and a declining percentage of the transmission and distribution charges (80% in the first year, 60% in year two, and 40% in year three onwards).¹³³

The maximum aggregated annual compensation under the VNM Program was \$4 million for UI and \$16 million for Eversource. However, municipal hosts who submitted an interconnection and VNM application on or before April 13, 2016, were allocated an additional \$6 million (\$1.2M UI, \$4.8M Eversource). An additional allocation of \$3 million (\$0.6M UI, \$2.4M Eversource) was available for agricultural customer hosts utilizing an anaerobic digestion Class I renewable energy source. The Individual customer hosts annual cap was based on estimated kWh production and rates in effect at the time of application. When an individual customer host's annual cap is reached in a calendar

¹²⁹ Municipal or State Customer Hosts were required to fully own, lease or be under long term contractual arrangement for receipt of power from a VNM facility. Agricultural Customer Hosts were required to own, or hold, an equity interest in a special purpose entity (SPE) that owns the VNM facility.

¹³⁰ Behind-the-meter generation refers to energy systems located on the customer's side of the utility meter.

¹³¹ A table of Final Decisions by PURA that enacted changes to the program over time can be found in Appendix 1: Additional Resources and Documents

¹³² Beneficial Account defined pursuant to General Statutes § 16-244u(1) as "an in-state retail end user of an EDC designated by a customer host or an agricultural customer host in the EDC's service area to receive VNM credits."

¹³³ VNM credit defined pursuant to General Statutes § 16-244u(6) as "a credit equal to the retail cost per kilowatt hour (kWh) the customer host may have otherwise been charged for each kilowatt hour produced by a VNM facility that exceeds the total amount of kWhs used during an EDC monthly billing period."

year, net energy billing continues, and all excess kWh produced is compensated under the applicable power purchase rate for the remainder of the year (i.e., at the wholesale power rate).

The VNM Program ended on Jan 1, 2022. See Table 40 for an overview of the VNM Program and Figure 25 for MW deployment under the VNM Program. Existing customers enrolled in the program can continue to participate, but new VNM applications are no longer being accepted. The VNM Program was succeeded by the NRES Program established in PURA's Decision in Docket No. 20-07-01 and discussed in Section V.C of this report. The NRES Program, similar to the VNM Program, allows SAM customers to designate beneficial accounts to receive excess generation credits.

The amount of excess kWh delivered by the customer host to the electric distribution system (e.g., the total kWh exported to the grid minus the kWh imported over a monthly billing period) is the net exported kWh.

The VNM credit was determined monthly based on the net exported kWh using this formula:

VNM Credit=Net Exported kWh*([SS or LRS]+[% T & D rates of Customer Host])

Where SS is standard service, LRS is last resort service, and % T&D is the percentage of transmission and distribution charges.



The VNM credits were then allocated to the beneficial accounts. Municipal & state customer hosts could have up to 5 municipal or state accounts, respectively, plus up to 5 non-municipal or non-state critical facilities connected to a microgrid. Agricultural customer hosts could have up to 10 beneficial accounts, consisting of agricultural customers, municipal customers, or non-commercial critical facilities connected to a microgrid.

2. Rates & Deployment

Table 40: VNM Program Overview¹³⁴

VNM Program Overview by Sector

	Statutory Authority	PURA Dockets	Renewable Energy Sources		Municipal Sector	State Sector	Agriculture Sector	Agriculture Anaerobic Digester Sector			
				Amount Subscribed	\$11,200,000	\$3,543,334	\$6,056,666	\$2,400,000			
				Total Annual Cap	\$11,200,000	\$3,543,334	\$6,056,666	\$2,400,000			
Eversource	16- 244u(5)	DN 13-08-14; DN 15-09-08	Class I (All) and Class III (Municipal & State)	and Class III (Municipal &	and Class III	and Class III	No. Projects Subscribed	40	12	19	3
	and (6)				No. Applications Waiting List	25	0	7	1		
				Total Deployed in MWs	40.8	11.0	21.7	1.1			
U	16- 244u(5)	DN 13-08-14;	Class I (All) and Class III	Amount Subscribed	\$2,597,413	\$828,012	\$701,210	\$ -			
	and (6)	DN 15-09-08	(Municipal & State)	Total Annual Cap	\$2,597,413	\$1,200,000	\$1,200,000	\$600,000			

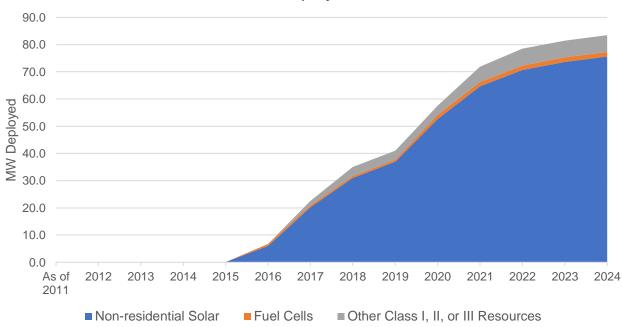
¹³⁴ Eversource Compliance, Nov. 15, 2024, Section II.A.1 and A.3 (Interrogatories) and Section II.A.4 (Cross-Posted Compliance), ES Sec. II.A.1 and II.A.3 Interrogatories DN 24-08-01.xlsx, CRE-08, CRE-09 (VNM sheet); UI Compliance, Dec. 3, 2024, UI Attachment 2 - VNM Data Supplement #24-08-01.xlsx, CRE-08, CRE-09 (VNM sheet).

VNM Program Overview by Sector

Statutory Authority	PURA Dockets	Renewable Energy Sources		Municipal Sector	State Sector	Agriculture Sector	Agriculture Anaerobic Digester Sector
			No. Projects Subscribed	7.7	2	2	-
			No. Applications Waiting List	0	0	0	0
			Total Deployed in MWs	5.65	0	2	0

Figure 25: Cumulative MW Deployed in CT via VNM¹³⁵

Cumulative MW Deployed in CT via VNM



VIII. Clean Energy Employment¹³⁶

According to the 2023 Connecticut Clean Energy Industry Report, at the end of 2022, Connecticut had roughly 44,000 clean energy jobs, an increase of roughly 2.9% from the prior year. This represents the clean energy sector's full recovery from the job losses incurred in 2020 as a result of the COVID-19 pandemic, though employment growth slowed relative to 2021. While Connecticut's clean energy employment growth rate exceeded the state's economy-wide average employment growth rate (1.7%), it lagged behind the growth in clean energy employment nationwide (7%) as well as that of neighboring states Massachusetts (8.7%), Maine (3.8%), and New York (3.5%).

Most technology sectors experienced employment growth between 2021 and 2022. Employment in the alternative transportation sector grew most significantly, increasing by about 17%, or a gain of 439 jobs compared to 2021. Growth was also strong in clean grid and storage employment (11% increase, or 88 jobs) and clean energy generation employment (7% increase, or 335 jobs). Energy efficiency continues to make up the bulk of clean energy jobs, at 34,377 in 2022, and grew by about 1% compared to 2021.

Connecticut's clean energy industry positively contributes to the state's overall economy. Specifically, in 2022, Connecticut's clean energy economy contributed roughly \$7.68 billion to statewide gross regional product (GRP), an 8.5% increase over the previous year. All clean energy industries grew in value between 2021 and 2022, except for construction, which experienced a 9.7% decrease in GRP.

The figures below highlight employment trends in the state's clean energy economy. Figure 26 shows the number of jobs by clean energy sector and Figure 27 shows the number of clean energy jobs by clean energy generation technology type, from 2017 to 2022.

¹³⁶ See the 2023 Connecticut Clean Energy Industry Report for quotations and data referenced in this section. Connecticut Green Bank, "Societal Impact: Connecticut Clean Energy Industry Reports," available at https://www.ctgreenbank.com/strategy-impact/societal-impact/ (last visited Dec. 13, 2024).

Figure 26: Number of Jobs in Connecticut by Clean Energy Sector 137

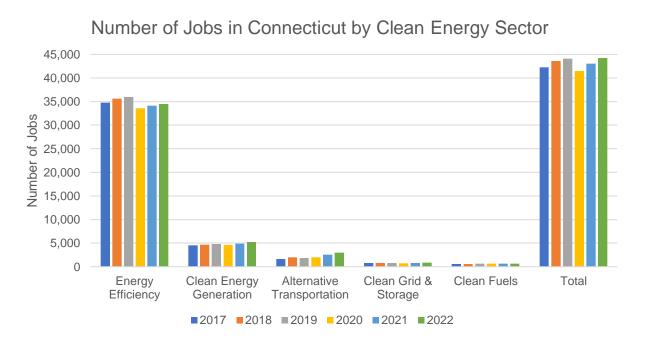
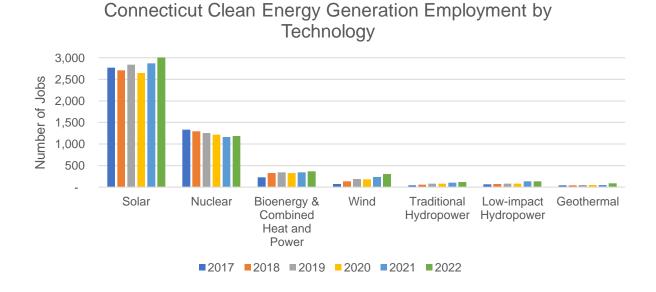


Figure 27: Connecticut Clean Energy Generation Employment by Technology¹³⁸



 ¹³⁷ Connecticut Green Bank, "Societal Impact: Connecticut Clean Energy Industry Reports," available at https://www.ctgreenbank.com/strategy-impact/societal-impact/ (last visited Dec. 13, 2024).
 ¹³⁸ Id.

IX. Report and Program Notes

This report is, generally, a framework for future annual reports. However, the Authority is committed to expanding and improving the type, quality, and presentation of the data included in this annual report, and will seek to make incremental improvements each year, to the extent possible. The Authority reserves the right to add, edit, or remove any part of the report, including the addition or removal of programs, as appropriate.

X. Appendix 1:

ADDITIONAL RESOURCES & DOCUMENTS

PURA Clean Energy Programs Webpage

RRES Program

PURA RRES Program Webpage

Eversource Program Website

UI Program Website

Program Manual (effective January 1, 2025)

Frequently Asked Questions (effective January 1, 2025)

NRES Program

PURA NRES Program Webpage

Eversource Program Website

UI Program Website

Program Manual (effective February 3, 2025)

Frequently Asked Questions (effective February 3, 2025)

SCEF Program

Eversource Program Website

UI Program Website

Program Manual

ESS Program

PURA ESS Program Webpage

Program Website

Program Manual

Frequently Asked Questions

EV Charging Program

PURA EV Charging Program Webpage

Program Manual¹³⁹

Eversource Program Website

Eversource FAQ

UI Program Website

UI FAQ

DEEP Procurements

DEEP Integrated Resources Plan, dated October 2021

Grid-Scale Procurement Authority

Legislation	General Statutes §	Program	Summary
Public Act No. 11-80, Section 127	16-244v	Section 127 Procurement	Procurement for 30 MW of Class I renewables, with Connecticut's EDCs authorized to own and operate no more than 10 MW each (no additional solicitations will be issued).

¹³⁹ The new program manual reflecting program changes from the Year 4 EV Decision is due no later than March 1, 2025. Year 4 EV Decision, p. 33 (Order no. 9).

Legislation	General Statutes §	Program	Summary
Public Act No. 13-303, Section 6	16a-3f	Section 6 Procurement	Procurement for Class I resources up to 4% of load distributed by the state's EDCs.
Public Act No. 13-303, Section 7;	16a-3g; 16a- 3j(c)	Large-Scale Procurement	Three-state (Connecticut, Massachusetts, and Rhode Island) solicitation for large-scale clean energy projects and transmission.
No. 15-107, Section 1 (c)			
Public Act No. 13-303, Section 8; Public Act No. 17-144, Section 10; Public Act No. 18-50, Section 31	16a-3h	Section 8 Procurement	Procurement of energy and/or RECs from run-of-the- river hydropower, landfill methane gas, or biomass Class I resources for up to 6% of Connecticut's load.
Public Act No. 15-107, Section 1 (b)	16a-3j(b)	Small-Scale Procurement	Passive demand response, small-scale 2–20 MW Class I & III resources, and energy storage systems to reduce electric demand and improve the state's resiliency and grid reliability, especially during winter peak demand
Public Act No. 17-3 (June 2017)	16a-3m	Zero-Carbon RFP	Procurement for zero carbon electricity generating resources that deliver power into the control area of the regional independent system operator, including eligible nuclear power facilities, hydropower, Class I renewables, and energy storage systems co-located with zero carbon resources, up to 12,000,000 MWh per year.
Public Act No. 05-01 Section 26; Public Act 07-242, Section 124; Public Act No. 11-80, Sections 91, 94 & 110	16-244c (h)(2); 16- 244c; 16- 244t	Project 150	Allows for long-term PPAs (no additional solicitations will be issued).

Legislation	General Statutes §	Program	Summary
Public Act No. 19-35, Section 17	16a-3p	Anaerobic digestion	Procurement for energy derived from anaerobic digestion, up to 10 MW.
Public Act No. 19-71, Section 1	16a-3n	Offshore wind	Procurement of energy from offshore wind facilities of up to 2,000 MW, and associated transmission.
Public Act No. 21-53, Section 2	16-243dd	Energy storage	Authorized DEEP to issue RFPs for energy storage projects connected at the transmission or distribution level, including stand-alone energy storage projects and energy storage. projects paired with Class I renewable energy sources or hydropower facilities not more than 100 MW.

RSIP

CGB Website

CGB Memo on RSIP Program progress

GoSolarCT Website

LREC/ZREC

Eversource Program Website

UI Program Website

Docket No. 11-12-06, Final Decisions dated April 4, 2012; May 20, 2014; January 21, 2015; December 16, 2015; April 25, 2018; December 16, 2015

Other significant legislation:

- Public Act No. 11-80, which authorized five years of LREC and up to six years of ZREC procurement;
- Public Act No. 16-196, which authorized LREC technology participation in Year 6 procurement with a 50/50 split of ZREC statutory budget of \$8M to LREC and ZREC technologies respectively, all under ZREC statute;

- Public Act No. 17-144, which authorized Year 7 procurement, with the same statutory budget as year 6;
- Public Act No. 18-50, which authorized Year 8 procurement, with the same statutory budgets as Year 6 with the exception of Small ZREC (combined Years 7 and 8 small ZREC budgets in order to utilize funds before LREC/ZREC program expired at end of calendar year 2019);
- Public Act No. 19-35, which authorized Years 9 and 10 procurements, with the same statutory budgets as year 6.

VNM

PURA Docket(s):

- Docket No. 13-08-14, Final Decisions dated July 21, 2014; October 15, 2014;
 May 27, 2015; March 23, 2016
- Docket No. 13-08-14RE01, Decision dated December 17, 2014; Reopened to address implementation for "stand-alone" VNM facilities and established calculation of VNM credits for all Customer Host facilities.
- Docket No. 13-08-14RE02, Decision dated December 2, 2015; Eliminated unassigned VNM Credits that were carried to end of year. All VNM credits now allocated each month to beneficial accounts without carrying over to following months.
- Docket No. 15-09-08, Decision dated February 3, 2016; Agriculture ownership structure of VNM facility
- Docket No. 13-08-14RE03, Decision dated October 26, 2016; Commercial Operation time period and Agriculture Host documentation
- Docket No. 13-08-14RE04, Decision dated July 20, 2018; Added Agriculture Anaerobic Digesters located at Dairy Farms
- Docket No. 13-08-14RE05, Decision dated October 21, 2019; Increased Annual VNM Caps

CEOP/VRO

PURA Docket(s):

 Docket No. 16-12-29, <u>PURA Development of Voluntary Renewable Options</u> <u>Program</u>, Final Decision dated October 21, 2020. Docket No. 16-12- 29RE01, <u>PURA Development of Voluntary Renewable Options</u>
 <u>Program - Modification of Implementation Dates</u>, Decision dated December 6, 2023.

RPS

NEPOOL GIS website

Frequently asked questions, exhibits and guide to RPS Compliance

RPS Compliance Dockets and final Decision dates:

- Year 2009 RPS Docket No. 10-09-06, Final Decision dated October 31, 2012
- Year 2010 RPS Docket No. 11-09-03, Final Decision dated November 21, 2013
- Year 2011 RPS Docket No. 12-09-02, Final Decision dated June 4, 2013
- Year 2012 RPS Docket No. 13-06-11, Final Decision dated February 11, 2015
- Year 2013 RPS Docket No. 14-05-35, Final Decision dated December 23, 2015
- Year 2014 RPS Docket No. 15-09-18, Final Decision dated September 28, 2016
- Year 2015 RPS Docket No. 16-07-20, Final Decision dated November 8, 2017
- Year 2016 RPS Docket No. 17-06-23, Final Decision dated January 23, 2019
- Year 2017 RPS Docket No. 18-06-28, Final Decision dated July 1, 2020
- Year 2018 RPS Docket No. 19-06-01, Final Decision dated March 3, 2021
- Year 2019 RPS Docket No. 20-06-01, Final Decision dated May 19, 2021
- Year 2020 RPS Docket No. 21-06-01, Final Decision dated November 17, 2021
- Year 2021 RPS Docket No. 22-06-01, Final Decision dated November 23, 2022
- Year 2022 RPS Docket No. 23-06-01, Final Decision dated December 20, 2023

Program Costs

For more information on the costs associated with the programs included in this report, see the EDCs' CRE-16 responses in Docket No. 24-08-01, available at Eversource

Residential Solar Installed by Town

Town	Total MW	kW per 100 Persons
Andover	0.90	28.72
Ansonia	6.41	33.74
Ashford	1.37	32.49
Avon	3.13	16.56
Barkhamsted	1.05	28.65
Beacon Falls	1.96	31.57
Berlin	4.62	22.62
Bethany	2.16	41.01
Bethel	3.73	18.06
Bethlehem	1.57	45.94
Bloomfield	7.08	32.34
Bolton	1.90	39.40
Branford	5.60	19.97
Bridgeport	26.70	18.04
Bridgewater	0.48	29.24
Bristol	14.77	23.98
Brookfield	4.33	24.77
Brooklyn	3.18	36.97
Burlington	3.74	38.42
Canaan	0.47	43.12
Canterbury	2.11	41.14
Canton	2.05	20.16
Chaplin	0.66	30.78
Cheshire	7.97	27.29
Chester	1.06	28.06
Clinton	3.99	29.78
Colchester	5.00	32.23

Town	Total MW	kW per 100 Persons
Colebrook	0.44	32.10
Columbia	1.81	34.29
Cornwall	0.56	35.69
Coventry	3.71	30.18
Cromwell	3.85	26.80
Danbury	10.74	12.48
Darien	1.42	6.46
Deep River	1.10	24.80
Derby	4.00	32.24
Durham	3.75	52.08
East Granby	1.82	34.95
East Haddam	2.87	31.92
East Hampton	4.12	31.70
East Hartford	12.11	23.91
East Haven	11.41	41.43
East Lyme	6.06	32.04
East Windsor	3.08	27.59
Eastford	0.78	45.98
Easton	3.00	39.29
Ellington	5.24	30.84
Enfield	10.03	24.60
Essex	1.27	18.62
Fairfield	10.85	17.11
Farmington	4.74	17.68
Franklin	0.82	43.18
Glastonbury	7.01	19.92
Goshen	0.79	24.47

¹⁴⁰ The Connecticut Industrial Energy Consumers (CIEC) recommends presenting program financial data in the body of the report rather than through links in the appendix. CIEC Exceptions, Feb. 3, 2025. The Authority takes this recommendation under advisement but declines to make the proposed change for the 2024 Clean and Renewable Energy Program Data and Report.

Town	Total MW	kW per 100 Persons
Granby	3.67	32.62
Greenwich	4.47	7.02
Griswold	3.41	29.36
Groton	0.84	2.22
Guilford	6.37	28.92
Haddam	2.89	32.97
Hamden	20.32	33.86
Hampton	0.82	46.87
Hartford	9.16	7.65
Hartland	0.50	26.36
Harwinton	1.55	27.54
Hebron	2.63	28.75
Kent	0.98	32.02
Killingly	5.35	29.79
Killingworth	2.51	40.18
Lebanon	2.23	31.37
Ledyard	5.74	37.13
Lisbon	1.89	44.62
Litchfield	2.36	28.46
Lyme	1.03	42.82
Madison	4.14	23.66
Manchester	11.29	19.01
Mansfield	3.72	14.65
Marlborough	1.74	28.50
Meriden	13.63	22.68
Middlebury	1.90	23.95
Middlefield	3.92	91.99
Middletown	11.50	23.96
Milford	18.38	34.82
Monroe	4.44	23.57
Montville	7.26	40.77
Morris	1.21	53.17
Naugatuck	8.95	28.12
New Britain	9.48	12.79
New Canaan	1.96	9.38
New Fairfield	3.07	22.76
New Hartford	2.05	30.63
New Haven	14.73	10.89
New London	3.49	12.65

Town	Total MW	kW per 100 Persons
New Milford	6.95	24.59
Newington	7.02	22.47
Newtown	7.56	27.32
Norfolk	0.61	38.09
North Branford	3.72	27.75
North Canaan	0.98	30.64
North Haven	13.30	54.74
North	0.40	47.00
Stonington	2.48	47.99
Norwalk	9.81	10.61
Norwich	0.51	1.29
Old Lyme	2.49	32.34
Old Saybrook	2.83	26.74
Orange	6.52	45.55
Oxford	4.51	34.36
Plainfield	5.06	33.28
Plainville	4.65	26.59
Plymouth	3.37	28.62
Pomfret	1.71	39.69
Portland	2.79	29.64
Preston	1.83	37.94
Prospect	2.74	28.92
Putnam	2.51	26.95
Redding	1.99	22.84
Ridgefield	3.39	13.61
Rocky Hill	3.91	18.88 32.55
Roxbury Salem	0.75 2.08	48.18
Salisbury	1.15	27.03
Scotland	0.54	34.47
Seymour	4.20	24.75
Sharon	1.04	37.82
Shelton	11.60	27.53
Sherman	1.14	32.37
Simsbury	3.75	15.03
Somers	3.03	28.21
South Windsor	7.33	27.36
Southbury	4.30	21.36
Southington	12.47	28.50

Town	Total MW	kW per 100 Persons
Sprague	0.71	24.27
Stafford	2.77	23.99
Stamford	10.30	7.56
Sterling	1.53	42.02
Stonington	10.23	55.51
Stratford	19.70	37.56
Suffield	5.19	33.18
Thomaston	1.87	24.94
Thompson	2.87	30.57
Tolland	5.13	35.19
Torrington	7.38	20.76
Trumbull	10.21	27.40
Union	0.39	49.18
Vernon	5.94	19.42
Voluntown	1.04	39.82
Wallingford	0.00	0.00
Warren	0.61	44.56
Washington	0.90	24.38
Waterbury	19.71	17.14

Town	Total MW	kW per 100 Persons
Waterford	8.52	42.99
Watertown	7.07	31.74
West Hartford	10.97	17.14
West Haven	16.60	30.30
Westbrook	1.40	20.28
Weston	2.11	20.43
Westport	3.99	14.53
Wethersfield	5.84	21.55
Willington	1.47	26.48
Wilton	2.55	13.85
Winchester	1.55	15.11
Windham	4.54	19.06
Windsor	9.09	30.94
Windsor Locks	4.17	33.26
Wolcott	5.45	33.40
Woodbridge	3.54	39.25
Woodbury	1.99	20.14
Woodstock	2.71	32.45

XI. Appendix 2: PROGRAM OBJECTIVES

RRES Program

- 1. Fostering the sustained and orderly development of the state's solar industry, and maintaining Connecticut's annual historical deployment of residential solar;
- 2. Achieving a 100% zero carbon electric grid by 2040, including through additional residential solar deployment;
- 3. Balancing participant, non-participant, and electric system costs and benefits;
- 4. Ensuring program accessibility for customers;
- 5. Promoting inclusivity and program participation by low- and moderate-income (LMI) customers and those in environmental justice communities.

NRES Program

- 1. Fostering the sustained, orderly development of the state's Class I renewable energy industry;
- 2. Deploying the full megawatt capacity allowable under statute;
- 3. Ensuring least-cost outcomes through the solicitation process;
- 4. Enabling program accessibility for customers;
- 5. Encouraging inclusivity and program participation by customers in underserved and environmental justice communities.

SCEF Program

- 1. Annually and cost-effectively procure up to 50 megawatts of SCEFs;
- Provide savings to specific categories of customers, particularly customers with low- to moderate-income (LMI), low-income service organizations, and customers who reside in environmental justice communities;
- 3. Lower or eliminate barriers to entry for Subscriber Organizations, if and when possible.

ESS Program

- 1. To provide positive net present value to ratepayers;
- 2. To provide multiple types of benefits to the electric grid, including resilience, ancillary services, peak shaving, avoiding or deferring distribution system upgrades, or supporting the deployment of other distributed energy resources;
- 3. To foster the sustained, orderly development of the state's electric energy storage industry;
- 4. To prioritize delivering resilience to LMI customers, customers in EJ or economically distressed communities, customers coded medical hardship, public housing authorities, customers on the grid-edge, and critical facilities;
- 5. Lowering the barriers to entry for electric storage;
- 6. Maximizing the long-term environmental benefits of storage;
- 7. Maximizing ratepayer benefits derived from the wholesale capacity market.

EV Charging Program

- 1. To enable Connecticut's commitment to the ten-state Memorandum of Understanding and deploy approximately 125,000–150,000 EVs in Connecticut by 2025;
- 2. To facilitate the seamless integration of new and emerging zero emission vehicle (ZEV)-related technologies to realize the potential electric system, economic, health, and environmental benefits of ZEVs;
- 3. To deploy and integrate ZEVs into Connecticut's electric grid as a key component of meeting the EMG Framework objectives;
- To achieve an equitable transition to wide-scale EV deployment across all communities in Connecticut.

XII. Appendix 3: GLOSSARY OF ACRONYMS

Acronym	Meaning
ACP	Alternative Compliance Payment
CAM	Conservation Adjustment Mechanism
CEF	Clean Energy Fund
CEOP	Clean Energy Options Program
CGB	Connecticut Green Bank
CIEC	Connecticut Industrial Energy Consumers
C&LM	Conservation and Load Management
DEEP	Department of Energy and Environmental Protection
DER	Distributed Energy Resource
EDC	Electric Distribution Company
EEB	Energy Efficiency Board
EMG	Equitable Modern Grid
ESS	Energy Storage Solutions
EV	Electric Vehicle
EVITP	Electric Vehicle Infrastructure Training Program
EVSE	Electric Vehicle Supply Equipment
DCFC	Direct Current Fast Charging
FCM	Forward Capacity Market
FERC	Federal Energy Regulatory Commission
GIS	Generation Information System
IRP	Integrated Resources Plan
kWh	Kilowatt hour
LMI	Low to moderate income
LREC	Low Emission Renewable Energy Credit
LRS	Last Resort Service
LSE	Load Serving Entity
MAQ	Maximum Annual Quantity
MOU	Memorandum of Understanding
MUD	Multi-Unit Dwelling
MW	Megawatts
NBFMCC	Non-Bypassable Federally Mandated Congestion Charge
NECEC	Northeast Clean Energy Council
NEPOOL	New England Power Pool

Acronym	Meaning
NEVI	National Electric Vehicle Infrastructure
NRES	Non-Residential Renewable Energy Solutions
OAG	Office of the Attorney General
OCC	Office of Consumer Counsel
PBI	Performance Based Incentive
PPA	Power Purchase Agreement
PURA	Public Utilities Regulatory Authority
PURPA	Public Utility Regulatory Policies Act
PV	Photovoltaic
REC	Renewable Energy Credit
RGGI	Regional Greenhouse Gas Initiative
RPS	Renewable Portfolio Standards
RRES	Residential Renewable Energy Solutions
RSIP	Residential Solar Incentive Program
SAM	State, Agricultural, and Municipal
SCEF	Shared Clean Energy Facility
SPE	Special Purpose Entity
SS	Standard Service
T&D	Transmission and Distribution
VNM	Virtual Net Metering
VRO	Voluntary Renewable Option Program
ZEV	Zero Emission Renewable Energy Credit
ZREC	Zero Emission Vehicle