

2023 CLEAN & RENEWABLE ENERGY REPORT



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Connecticut Public Utilities
Regulatory Authority



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I. 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 (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 Standards (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. 23-08-01, [2023 Clean and Renewable Energy Program Data and Report](#). 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., "23" for 2023). 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 of 2022, the Connecticut General Assembly passed [Public Act No. 22-5, An Act Concerning Climate Change Mitigation](#), (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.

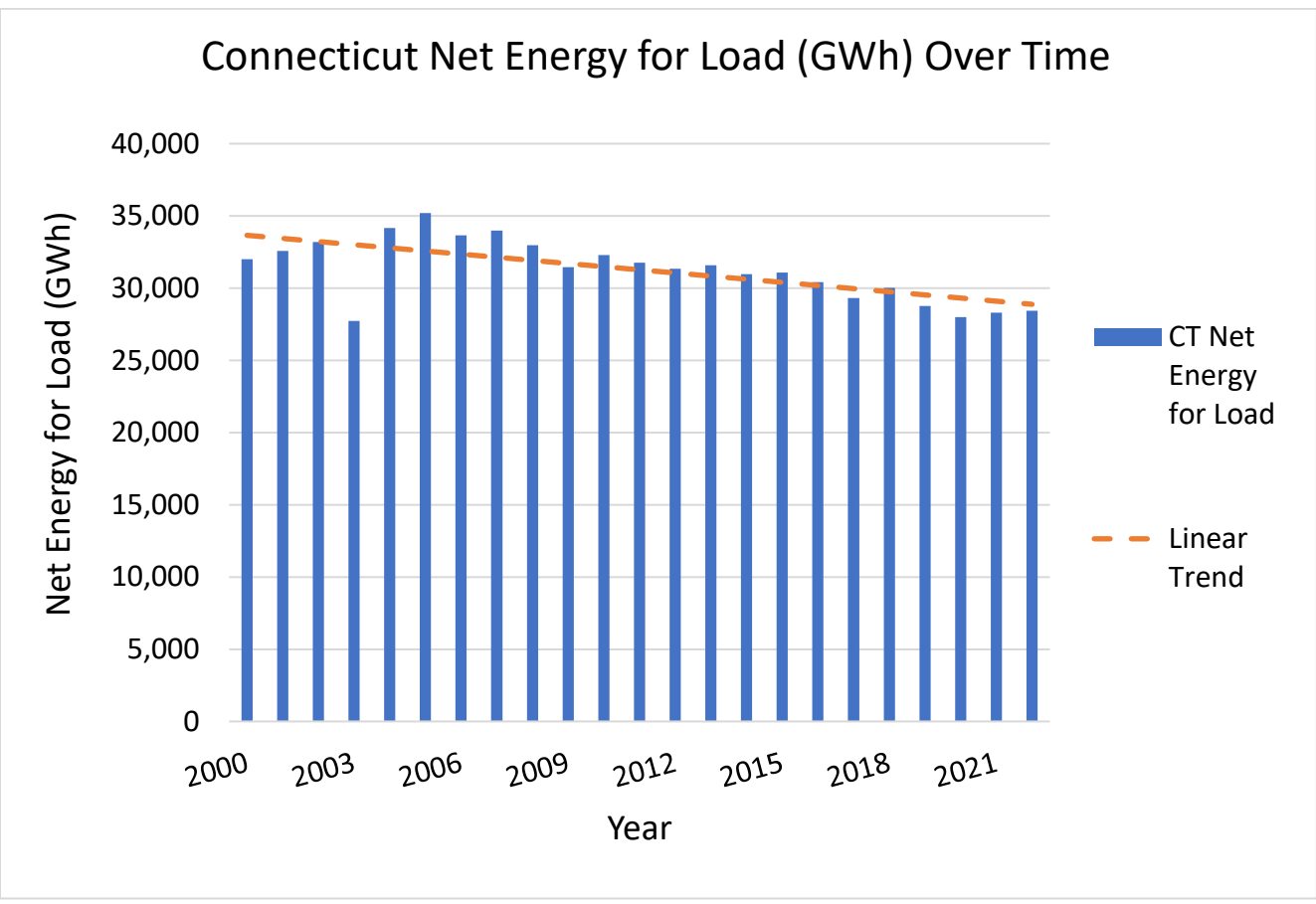
Electricity supplied to electric customers can be thought of as the electricity consumed in the state, otherwise known as the electric load, which typically has units of megawatt-hours (MWh)

or gigawatt-hours (GWh). The below graph displays Connecticut's net electricity load over time ("net", in this context, indicates the inclusion of reductions in load attributable to behind-the-meter distributed generation). As can be seen in the chart below, Connecticut's electricity load requirement has been steadily decreasing (by about 9% between 2015 and 2022), in part due to increased proliferation of energy efficiency and distributed generation. While this trend in reduced consumption is laudable, increasing electrification of transportation and space heating will likely lead to a reversal in this trend, with electricity consumption growing as consumption of other fuels decreases.

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).

Figure 1: CT Net Energy Load¹



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 January 12, 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

Connecticut Greenhouse Gas Reduction Progress Reports

The state of Connecticut has set several climate-related goals. DEEP tracks progress toward meeting these goals and has published a number of reports on the progress made in reducing statewide greenhouse gas (GHG) emissions over specific years. Below are Connecticut's published reports, starting with the most recent report.

2019-21 Greenhouse Gas Emissions Inventory- Released April 20, 2023
 Watch DEEP Commissioner Katie Dykes present the key findings from the 2019-21 Greenhouse Gas Emissions Inventory, and the roundtable discussion with members of the Governor's Council on Climate Change, the State Legislature, and environmental organizations.
[Presentation slides](#) | [Meeting recording](#) Passcode: 5.Kj*a*j

Proposed Methodology for Electricity-Sector GHG Accounting: Presentation | [Video](#)
 (October 26, 2021)

GHG Emissions Inventory Reports:

[CT GHG Emissions Inventory 1990-2021](#) and supporting [data](#) (released 2023)

[CT GHG Emissions Inventory 2018](#) and supporting [data](#) (released 2021)

[CT GHG Emissions Inventory 2017](#) and supporting [data](#) (released 2020)

In 2021, consumption-based electric sector greenhouse gas emissions accounted for 8.8% of the state's total greenhouse gas emissions.³ Electric sector emissions in Connecticut have been decreasing over time and are currently 74.5% below 2001 levels, 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.

² See [CT Greenhouse Gas Inventory Reports](#).

³ Note that in its 1990–2021 [Connecticut 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 the Report.

Conversely, power sector emissions, as measured based on the location of the generation, have continued to rise with the construction and operation of natural gas generators in Connecticut, with a 7.3% increase from 2020 to 2021.

Figure 2: CT Greenhouse Gas Emissions - Power Sector⁴

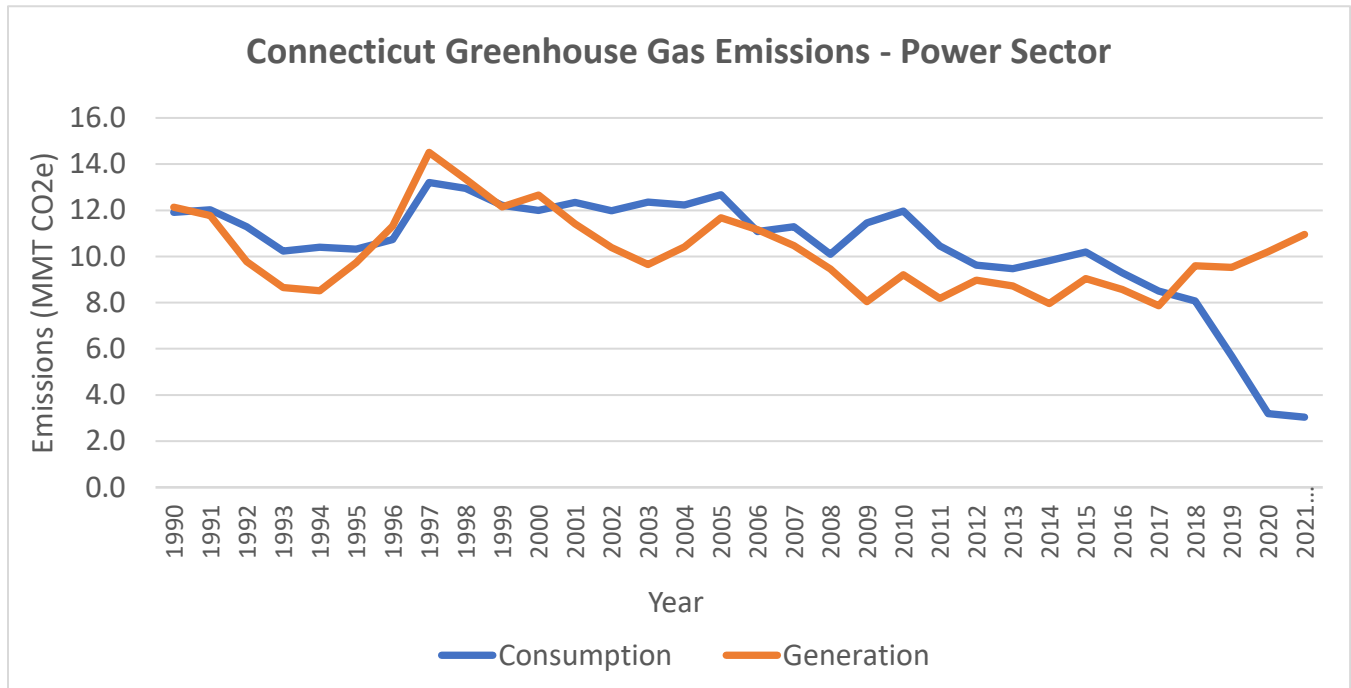
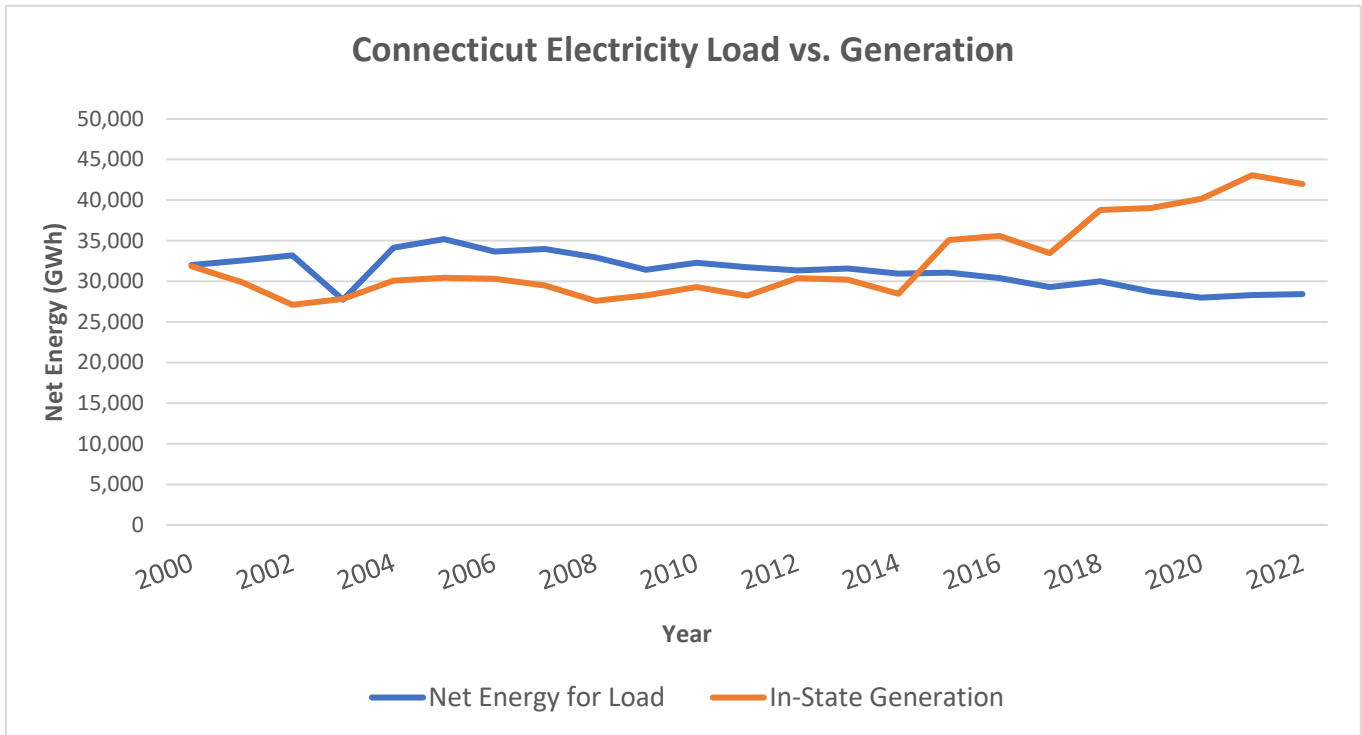


Figure 3, which illustrates net energy load and Connecticut-sited generation, shows a related trend; namely, that the state is a net exporter of electricity. In 2023, Connecticut generated approximately 47.8% more electricity than it consumes. New England's electrical grid is organized as a regional system; decisions about the siting and construction of generation are complex and driven by a variety of factors.

⁴ DEEP, "CT GHG Emissions Inventory 1990-2021," (April 2023), available at https://portal.ct.gov/-/media/DEEP/climatechange/1990-2021-GHG-Inventory/DEEP_GHG_Report_90-21_Final.pdf.

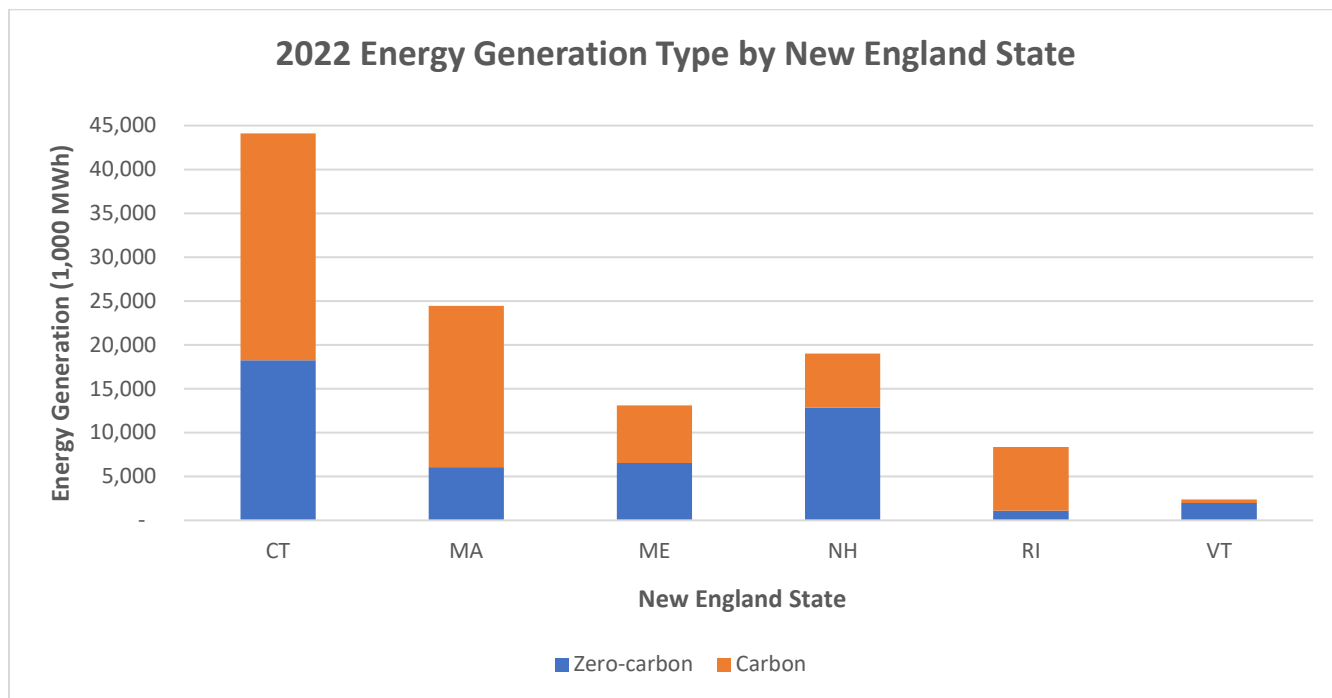
Figure 3: CT Electricity Load vs. Generation⁵



Connecticut's role in powering New England is further demonstrated in **Figure 4**. Connecticut produces approximately 40% of the electricity generated within New England (this excludes 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, 90% of zero-carbon generation in Connecticut is from nuclear.

⁵ 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 January 12, 2024).

Figure 4: 2022 Energy Generation by New England State⁶



⁶ Energy Information Administration (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=2001&end=2022&ctype=linechart<ype=pin&rtype=s&maptype=0&rse=0&pin=> (last visited January 12, 2024).

III. Equitable Modern Grid (EMG)

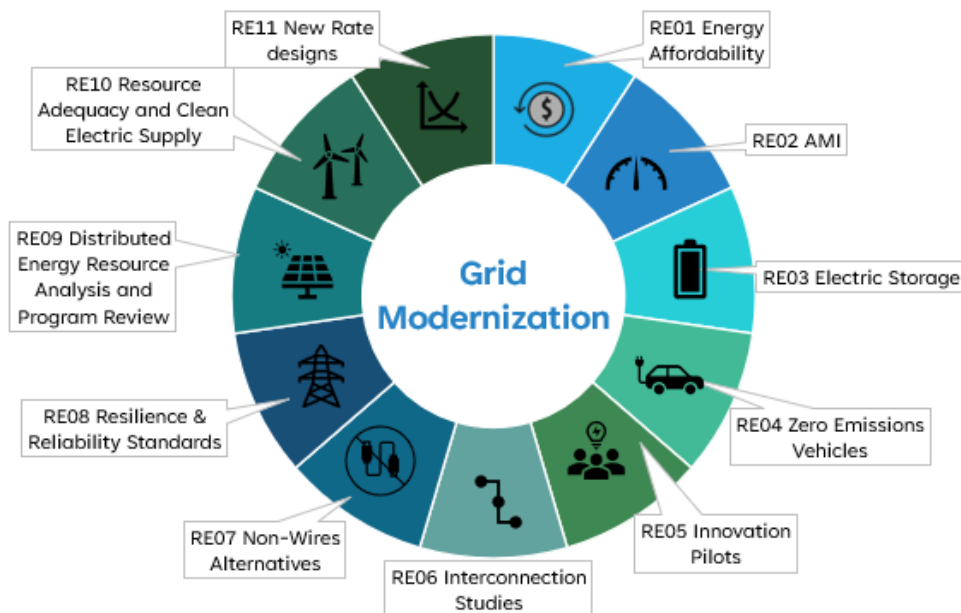
On October 2, 2019, PURA issued an [Interim Decision](#) in Docket No. 17-12-03, [PURA Investigation into Distribution System Planning of the Electric Distribution Companies](#). The Interim Decision outlines the Authority's framework for realizing an equitable modern electric grid in Connecticut (EMG 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 and the Energy Storage Solutions 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
4. 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 5 below, to help realize the EMG Framework's objectives.

Figure 5: Grid Modernization Dockets



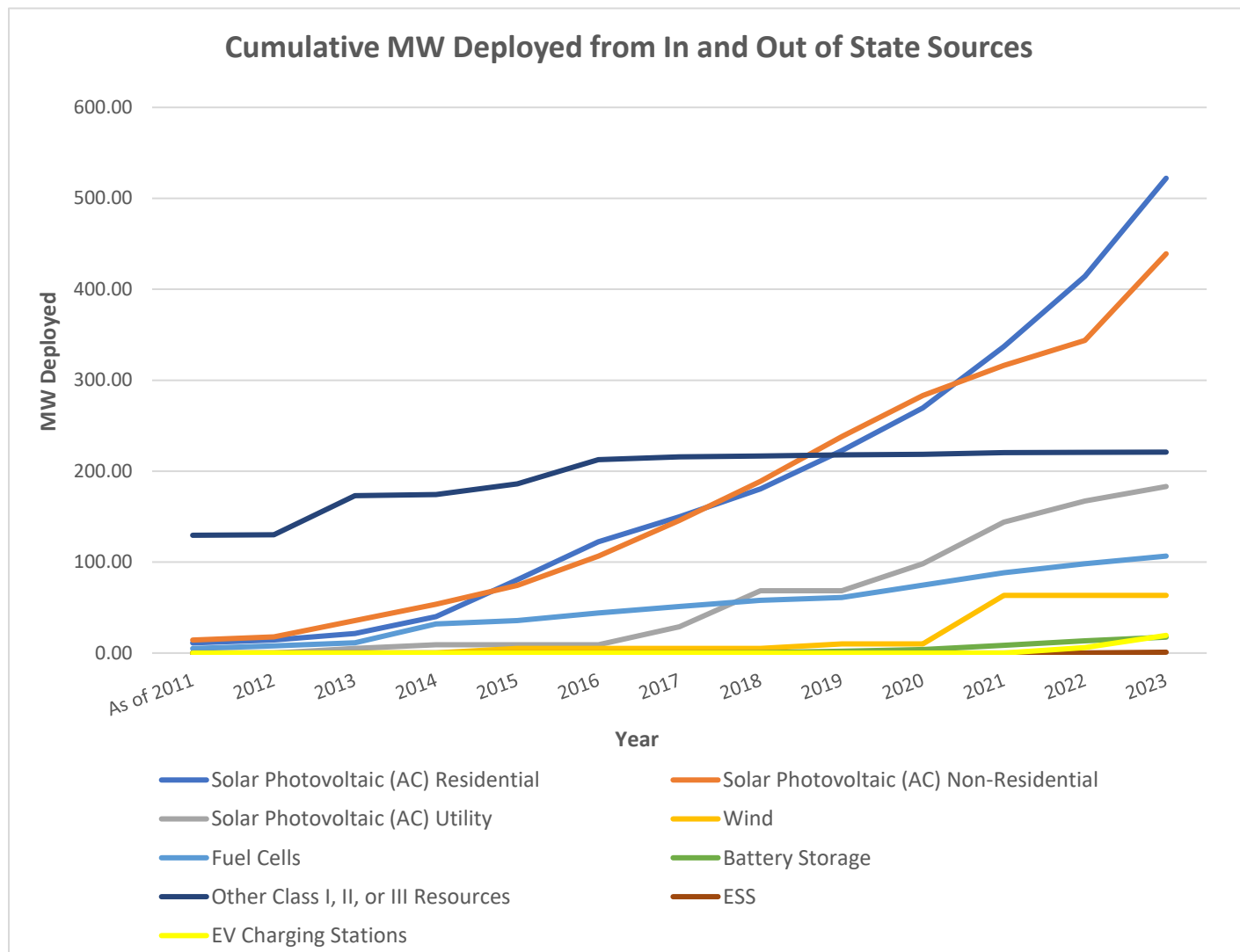
To date, the Authority has reached a final determination in ten of the eleven EMG Framework dockets, resulting in numerous new programs, processes, and frameworks established to better achieve the objectives outlined above. Major milestones in each of the dockets are shown in Figure 6 below. More information on the EMG Framework and the resulting programs, processes, and frameworks can be found on the Authority's dedicated [website](#).

Figure 6: Status of Grid Modernization Dockets



IV. Combined Program Data

Figure 7: Cumulative Resource Deployment - All Programs⁷



⁷ Docket No. 23-08-01, Interrog. Resps. CAE-033 and CAE-035.

Figure 7 above 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).⁸ It also shows the cumulative deployment of solar resources via all relevant state programs.⁹ For solar, 1 MW of installed capacity powers [approximately 130–140](#) houses in Connecticut. The data for 2023 is through September 30, aside from residential solar, which is through October 31, 2023.

Figure 7 shows the combined data for both electric distribution companies (EDCs), Eversource and UI. 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.

Table 1 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 2 below, which includes projects physically located outside of Connecticut.

⁸ Excludes the Conservation and Load Management (C&LM) Plan. The C&LM plan was excluded to improve graph scale, as the deployed MW are higher than other programs.

⁹ Residential solar PV is defined as solar deployed at a residential customer's site behind the utility meter. Non-Residential solar PV is defined as solar deployed at a commercial or industrial customer's site behind the utility meter. Utility-scale solar PV is defined as solar connected directly to the distribution grid. Definitions from Docket No. 17-12-03RE09, Interrog. Resp. CAE-1 Footnote 2, dated July 24, 2020.

Table 1: Program Deployment by Year by Technology Type¹⁰

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
Solar Photovoltaic (AC)	Residential	11.1	3.3	7.0	18.7	40.4	41.9	27.5	30.6	42.0	47.3	67.1	77.4	107.8
	Non-Residential	14.3	3.5	17.8	18.1	20.8	32.1	39.2	43.1	49.0	45.3	33.0	27.5	95.3
	Utility	-	-	5.0	4.0	-	-	20.0	20.0	-	5.0	21.0	23.2	16.0
Wind		0.1	0.0	0.0	0.0	5.0	0.0	-	-	-	-	-	-	-
Fuel Cells		5.0	3.0	3.4	20.5	3.9	8.1	7.2	6.7	3.0	13.9	13.5	9.8	8.5
Battery Storage		-	-	-	-	-	-	0.0	0.5	1.6	1.7	4.7	4.9	4.1
Energy Efficiency/Demand Response		893.3	131.8	129.4	130.7	176.8	94.8	105.3	90.4	68.5	110.5	129.0	135.9	133.0
Other Class I, II, or III Resources		129.5	0.6	42.8	1.3	3.6	5.2	2.9	1.0	1.2	0.6	2.0	0.3	0.2
ESS		-	-	-	-	-	-	-	-	-	-	-	0.1	0.9
EV Charging Stations		-	-	-	-	-	-	-	-	-	-	-	6.2	13.3

¹⁰ Docket No. 23-08-01, Interrog. Resps. CAE-033 and CAE-064.

Table 2: Overview of Programs, Including Deployment MW and Count¹¹

Overview of Programs - Including Total Deployment (In and Out of State)							
	Statutory Authority	Renewable Energy	Duration of Tariff or	Total No. of Annual	Initial Project	Total Deployment Levels	Total Deployment Levels through
Residential Solar (RSIP + RRES)	16-245ff, 16-244u	Solar PV	15-year REC contract for RSIP	0 (~10 years)	2011 (RSIP)	Deployment in MWs (AC)	330
						No. Projects In-Service	46,319
	16-244z, P.A. 19-35		20-year tariff	0 (6 years)	2022 (RRES)	Deployment in MWs (AC)	161
						No. Projects In-Service	
NRES Program	16-244z, P.A. 19-35	Solar PV	20-year tariff	0 (6 years)	2022	Deployment in MWs (AC)	1.5
						No. Projects In-Service	13
LREC/ZREC Program	16-244r, 16-244s, 16-244t	Class I RECs	15-year tariff	10 (10-yr procurement term)	2012	Deployment in MWs (AC)	411
						No. Projects In-Service	2,484
VNM Program	16-244u(5)	Class I & Class III Energy	Project life	N/A	2014	Deployment in MWs (AC)	79
						No. Projects In-Service	12
SCEF Pilot Program	16-244x	Class I Energy + RECs	20-year tariff Pilot	1 RFP (2-year Pilot program)	2017	Deployment in MWs (AC)	1.6
						No. Projects In-Service	1
SCEF Program	16-244z(a)(1)(c)	Class I Energy + RECs	20-year tariff	6 (6-year procurement term)	2020	Deployment in MWs (AC)	1.5
						No. Projects In-Service	1
DEEP Procurements	<i>Varies - See DEEP Procurements section for details</i>					Deployment in MWs (AC)	1548
						No. Projects In-Service	36

¹¹ 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,” CAE-033 UI Attachment 1 & CAE-044 UI 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& A1-CAE-044; Solar Energy Industries Association; Compliance Filing, Aug. 1, 2023, Docket No. 23-08-05, [Annual Energy Storage Solutions Program Review - Year 3](#), [Connecticut Energy Storage Solutions - Year 2 Annual Evaluation Report; Decision](#), Nov. 29, 2023, Docket No. 23-08-05, [Annual Energy Storage Solutions Program Review - Year 3](#); and [Decision](#), Nov. 29, 2023, Docket No. 23-08-06, [Annual EV Charging Program Review - Year 3](#).

CEOP/VRO Program	16-244c / 16-245p(a)	Voluntary Class I RECs only	Enroll 1-year customer contract		2005 / January 2021	Annual No. RECs Delivered (Average) ¹²	203,756
						No. Enrolled Customers (Average)	21,467
RPS Compliance	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%
						2023 Class II - Required %	4%
						2023 Class III - Required %	5%
ESS Program	P.A. 21-53, 16-11, 16-19, 16-19e, 16-244i	Energy Storage	N/A, through 2030 for the Performance Incentive	0 (9 years)	2022	Submitted and Approved Projects in MWs (AC)	77.75
						No. Projects Submitted and Approved	351
EV Charging Program	16-11, 16-244i	EV Charging Infrastructure	N/A, through 2030 for Managed Charging	0 (9 years)	2022	Ports Approved for Commercial Program	5,267
						Application Approved for Residential Program	2,760

¹² CEOP/VRO deployment is provided as annual averages (through 2022), as RECs and customer enrollments pertain to each year and do not accumulate. See Eversource Exceptions, Feb. 7, 2024.

V. Existing Programs

A. Residential Renewable Energy Solutions (RRES) Program

1. Program Description and History



Authorized by Conn. Gen. Stat. § 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.¹³ In accordance with the fifth Program Objective, the program has a target of 40% deployment among low-income populations or in distressed municipalities.¹⁴

The RRES program design was established in the February 10, 2021 [Interim Decision](#) in Docket No. 20-07-01, [PURA Implementation of Section 3 of P.A. 19-35, Renewable Energy Tariffs and Procurement Plans](#). While open to all forms of Class I renewables,

¹³ See Interim Decision, Feb. 10, 2021, Docket No. 20-07-01, [PURA Implementation of Section 3 of Public Act 19-35, Renewable Energy Tariffs and Procurement Plans](#), pp. 5–7.

¹⁴ The current distressed municipality list and criteria are defined by the CT Department of Economic and Community Development (DECD). CT.gov, “Distressed Municipalities,” available at https://portal.ct.gov/DECD/Content/About_DECD/Research-and-Publications/02_Review_Publications/Distressed-Municipalities (last visited Jan. 31, 2024).

RRES deployments have been exclusively solar projects to date. This program is administered by the EDCs in their respective service territories.

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.

PURA reviewed 2023 (Year 2) RRES deployment data and program documents for use in 2024 (Year 3) in Docket No. 23-08-02, Annual Residential Renewable Energy Solutions Program Review – Year 3. PURA issued a [Decision](#) on November 1, 2023 (Year 3 RRES Decision), which implemented several changes to better align the RRES Program with its program objectives.

The Year 3 RRES Decision updated the Buy-All and Netting tariff rates for 2024, using an enhanced tariff model to reflect updated economic and project data. As part of the updated tariff setting, the Authority increased the Buy-All rates and the low-income and distressed municipality adders for both tariffs to offset the potential decrease in savings from RRES Program participation for low-income customers who will receive the Low-Income Discount Rate beginning January 1, 2024.¹⁵ This change was intended to advance the RRES Program goal of 40% low-income and underserved customer enrollment.

¹⁵ The residential Low-Income Discount Rate (LIDR) was established in the Authority's October 19, 2022 [Decision](#) in Docket No. 17-12-03RE11, PURA Investigation into Distribution System Planning of the Electric Distribution Companies – New Rate Designs and Rates Review. See [Decision](#), Oct. 11, 2023, Docket No. 23-05-01, Annual Review of Affordability Programs and Offerings (Energy Affordability Annual Review), pp. 42–44 (implementation of LIDR).

The Year 3 RRES Decision also made several changes to ensure that RRES customers are receiving benefits from program participation. These included establishing new financial benefit tracking requirements for contractors, enabling PURA Office of Education, Outreach, and Enforcement (EOE) audits of contractor marketing materials, adjusting the process for adder auto-enrollment, and modifying the tenant financial benefit sharing requirements for multifamily affordable housing projects. In addition, the decision directed changes to enrollment forms and documentation to improve program accessibility and customer awareness.

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

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 Conn. Gen. Stat. § 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 [Residential Tariff Model](#) attached to the Year 3 RRES Decision as Appendix B is used to aid the development of these rates.

The 2024 RRES tariff rates approved in the Year 3 RRES Decision are shown in Table 3 below:

Table 3: 2024 RRES Residential Tariff Rates¹⁶

2024 RRES Residential Tariff Rates		
	Buy-All Rate (\$/kWh)	Netting REC Rate (\$/kWh)
Eversource	0.3189	0.000
UI	0.3189	0.0000
Low-Income Adder	0.055	0.035
Distressed Municipality Adder	0.0275	0.0175

The EDCs also make monthly and annual reports on RRES system deployment. As of October 2023, the RRES total and approved applications data is shown below in Table 4. Roughly **97%** of applications submitted over this period were approved.

¹⁶ Year 3 RRES Decision, p. 12 (Table 4).

Table 4: RRES Application Data: January 2022–October 2023¹⁷

RRES Application Data: January 2022 - October 2023				
	Total Applications	Total Application kW	Approved Applications	Approved kW
Eversource	27,342	216,925	26,747	212,902
UI	5,304	37,303	4,876	33,995
Total	32,646	254,228	31,623	246,897

Out of the 31,623 approved applications, **66%** have been completed and deployed across the EDCs, as seen in Table 5 below.

Table 5: RRES Deployment: January 2022–October 2023¹⁸

RRES Deployment: January 2022–October 2023		
	Total # Projects Deployed	Total kW Deployed
Eversource	18,157	146,433
UI	2,768	19,445
Total	20,925	165,878

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 the success of the program. Collaboration between PURA, the Program Administrators, and the development community to streamline the process of utilizing this program has also led to its rapid success.

B. Combined Residential Solar Program Metrics

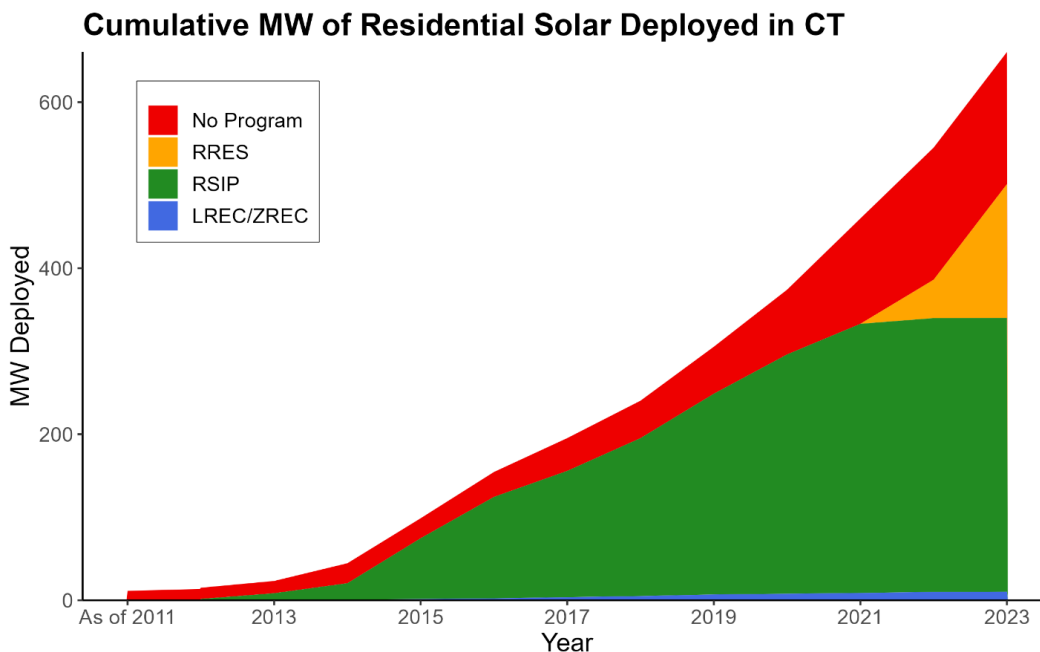
The plot below shows the cumulative deployment of residential solar in Connecticut through state residential solar programs, including the legacy Residential Solar Investment Program (RSIP), discussed in Section VII.A, and the RRES Program, through

¹⁷ EDC Order No.12 Compliance filings in Docket No. 22-08-02, [Annual Residential Renewable Energy Solutions Program Review – Year 2 \(UI Filing 1.17.23, Eversource Filing 10.13.23, UI Filing 10.16.23\)](#).

¹⁸ EDC Order No.12 Compliance filings in Docket No. 22-08-02.

October 2023. Notably, 2022 is the first year of deployment via the RRES Program. Cumulative residential solar deployment reached 699 MW by October 2023. In addition, some residential solar projects were deployed outside of the state-authorized programs, which are also shown on the plot below.

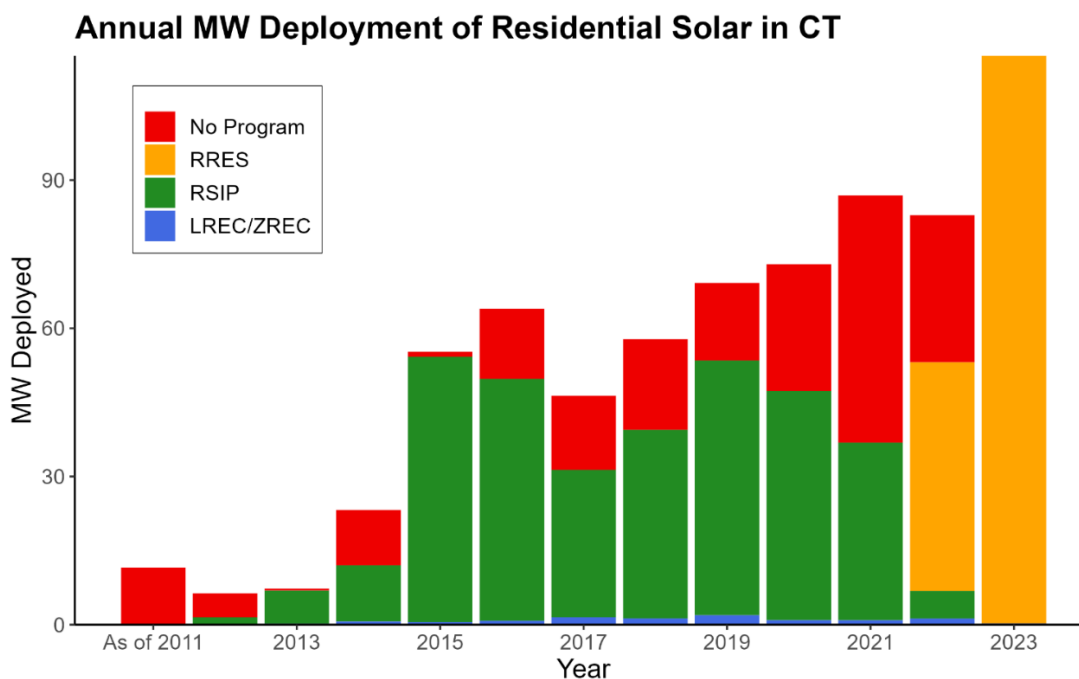
Figure 8: Cumulative MW of Residential Solar Deployed in CT by Program¹⁹



¹⁹ 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, UI CAE-055 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, A1-CAE-055; UI Compliance Filing, Nov. 15, 2023, Docket No. 23-08-01, “2023-11-15 Section B.1.b UI Cover Letter - Cross Posted Compliance Orders - 2023 Clean and Renewable Energy Program #23-08-01,” Exhibit A DN 20-07-01 Order 22 Attachment 6.

The plot below shows annual residential solar deployment by program, including deployment outside of the state-authorized programs. Notably, 2023 saw the highest annual deployment to date, nearly all of which was through the RRES Program. Further, 2023 deployment shown here only includes data through October, so the actual 2023 value will be somewhat larger.

Figure 9: Annual MW Deployment of Residential Solar in CT²⁰



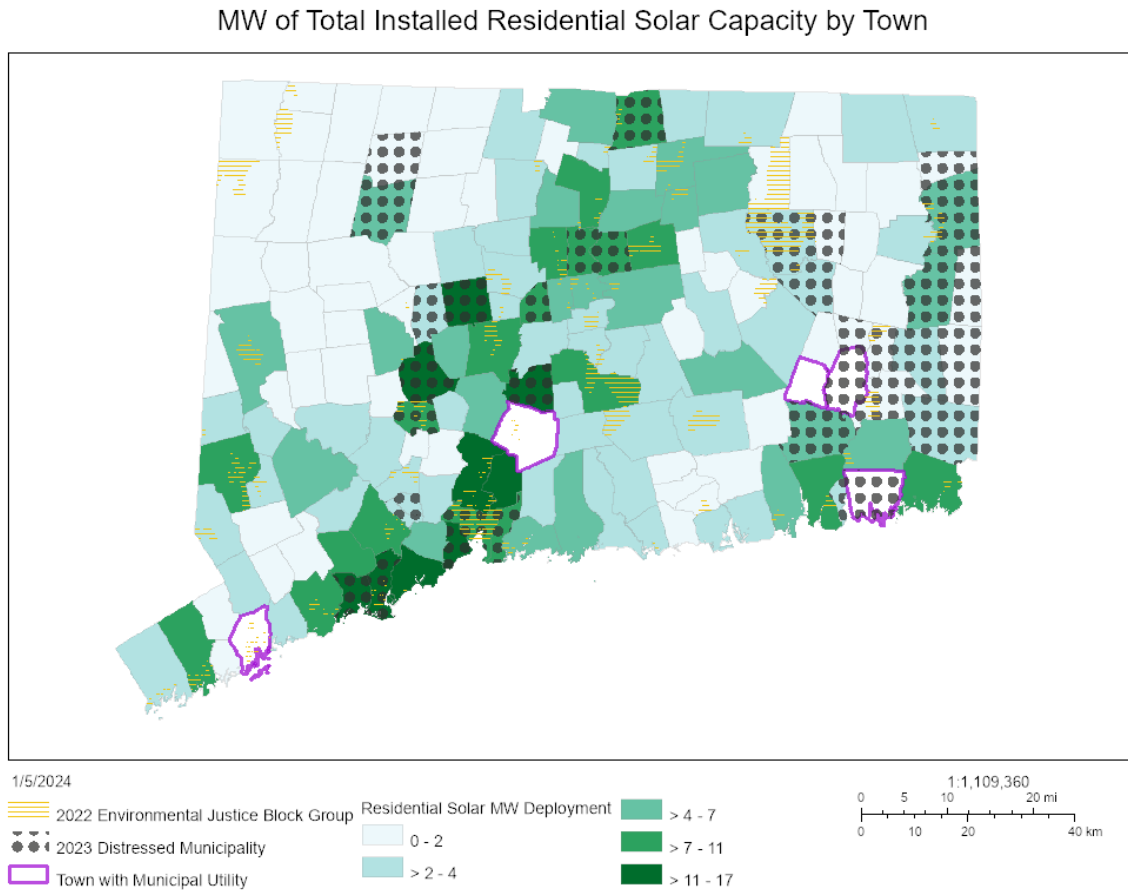
The data shown in Figure 8 and Figure 9, particularly the “No Program” data, is approximate. The out-of-program deployment value is calculated using total residential solar deployment from the EDCs’ response to Interrogatory CAE-55 and subtracting the RSIP, RRES, and LREC/ZREC data from the EDC responses to Interrogatory CAE-33.²¹ 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 but is expected to be minimal, as net metering is no longer being offered separately from the state-authorized programs.

²⁰ *Id.*

²¹ See Decision, Feb. 22, 2023, Docket No. 22-08-01, 2022 Clean and Renewable Energy Program Data and Report, p. 3 (Interrogatory CAE-33 comes from Docket No. 17-12-03RE09, and is part of the annual compliance filings). Note that UI’s response to CAE-55 did not include 2023 residential solar deployment; this was obtained from the RRES cross-posted filing in compliance with Order No. 22 in Docket No. 20-07-01.

Figure 10 below displays total cumulative residential solar deployment by town through September 2023.

Figure 10: MW of Total Installed Residential Solar Capacity by Town²²



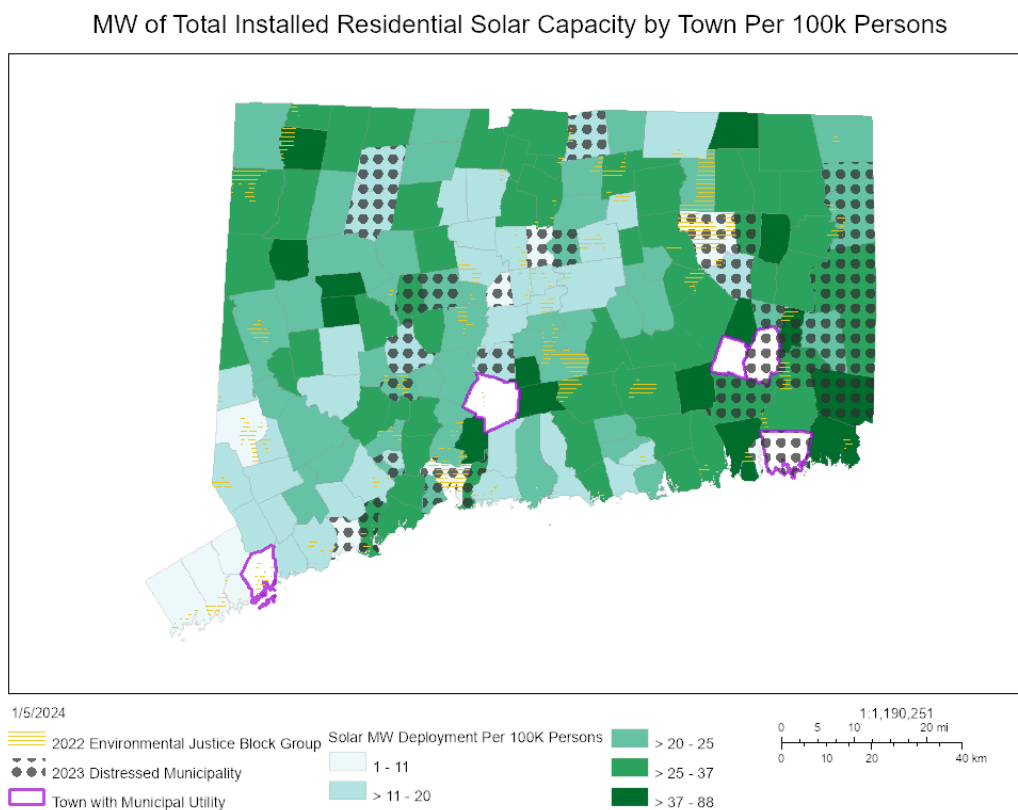
In general, higher deployment is evident in towns with higher populations, and in towns surrounding urban areas (i.e., New Haven, Bridgeport, Hartford). The map also displays Connecticut's environmental justice communities, as defined by Conn. Gen. Stat. § 22a-

²² 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," Compliance with 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; UI Compliance Filing, Nov. 15, 2023, Docket No. 23-08-01, "2023-11-15 Section B.1.b UI Cover Letter - Cross Posted Compliance Orders - 2023 Clean and Renewable Energy Program #23-08-01," Compliance with Order 22, Attachment 4.

20a.²³ Additionally, some towns have municipal utilities, and may have additional residential solar not captured in this plot.²⁴ The highest deployment is in Waterbury, with about 16.3 MW deployed, followed by Bridgeport at approximately 15.6 MW deployed.

Figure 11 below displays residential solar deployment per capita, in MW per 100,000 persons. Like Figure 10 above, it reflects residential deployment through September 2023.

Figure 11: MW of Total Installed Residential Solar Capacity by Town, Per 100k Persons²⁵



²³ 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 2023 distressed municipalities and 2022 environmental justice census block groups, as updated block groups for 2023 were not available at the time of this report.

²⁴ As shown in Figure 10, 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.

²⁵ Id.

Notably, North Haven, which has the third highest total deployment in MW, also has the second most deployment per capita in the state at approximately 60 MW per 100,000 persons. The towns with the first and third highest per capita deployment are the much smaller (in terms of population) towns of Middlefield, with about 88 MW per 100,000 persons, and Morris, with about 49 MW per 100,000 persons.

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 Conn. Gen. Statutes § 16-244z in the June 30, 2021

[Decision](#) in Docket No. 20-07-01, [PURA Implementation of Section 3 of Public Act 19-35, Renewable Energy Tariffs and Procurement Plans](#).

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.²⁶ 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

²⁶ See [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](#), pp. 7–8.

compensation rate. Zero-emission NRES projects greater than 200 kW and less than or equal to 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. A summary of the NRES project categories is found in Table 6 below. Not shown in the below table is that the MW allocation is split 80/20 between Eversource and UI.

Table 6: NRES Project Size Categories²⁷

NRES Project Size Categories			
Category	Project Size (AC)	Selection Method	MW/Year (Year 3)
Small Zero Emission	>200 kW <1,000 kW	Lottery/First-come, first-served ²⁸	30
Medium Zero Emission	≥ 1,000 kW ≤ 5,000 kW	Competitive solicitation	33
Large Zero Emission	≤ 5,000 kW	Competitive solicitation	37
Low Emission	>200 kW <1,000 kW	Competitive solicitation	10

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 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 effectively 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 RECs created at a fixed rate over a 20-year term. Regarding energy production compensation, a customer's energy consumption and monthly energy

²⁷ Year 3 NRES Decision, p. 22 (Table 4).

²⁸ 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.

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.

PURA reviewed the 2023 (Year 2) NRES deployment data and 2024 program documents in Docket No. 23-08-03, Annual Non-Residential Renewable Energy Solutions Program Review – Year 3. PURA issued a [Decision](#) on November 8, 2023 (Year 3 NRES Decision), which implemented several changes to better align the NRES Program with its program objectives.

The Year 3 NRES Decision established price caps for 2024 project bids for both the Buy-All and Netting tariffs, with a one-time adjustment to the general price cap setting methodology to account for the increase in 2023 energy supply rates. In addition, the decision amended the MW allocation between the size categories to better reflect the number of applications received across the project size categories, which was particularly high for the small zero emission category in 2023. Relatedly, this decision changed the selection process for small zero emission projects back from first-come, first served to a two-week window with random selection if bids exceed the available capacity. The solar canopy bid preference was also increased from 20 to 30%.

Further, to support program accessibility, the Year 3 NRES Decision established proof of site control requirements for leased properties and authorized the use of the Netting tariff at legacy net metering sites. The decision enacted several other changes consistent with other annual clean energy program reviews, including: (1) the approval of project extension requests beyond three years if new criteria are met; (2) the establishment of an independent ombudsperson to handle disputes between developers and the EDCs; and (3) updates to the EDCs' interconnection screening process and hosting capacity maps. Last, the decision directed changes to remove barriers for state entity participation, resulting in a state-specific to the NRES tariff agreement approved on January 19, 2024.

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

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 below for NRES Years 2 and 3 (i.e., 2023 and 2024).

Table 7: NRES Buy-All Bid Price Caps²⁹

NRES Buy-All Bid Price Caps		
Category	Year 2 Price Cap (\$/MWh)	Year 3 Price Cap (\$/MWh)
Small Zero Emission	\$200.97	\$199.82
Medium Zero Emission	\$190	\$188.9
Large Zero Emission	\$159	\$145.97
Low Emission	\$159	\$159

Table 8, below, represents the combined outcomes of the first two NRES program solicitations, occurring in February 2022 (Year 1) and February 2023 (Year 2). The August 2023 (Year 2) solicitation data was not yet available at the time of this report, but will include any unused capacity from the February 2023 Solicitation.

Table 8: NRES Solicitation Data from February 2022–February 2023³⁰

NRES Solicitation Data from February 2022 - February 2023 (Table includes Year 1 Solicitation and Year 2 February Solicitation)				
	Size Categories	Total # of Executed Agreements	Available MW	MW Executed Agreements
Eversource	Small Zero Emission	166	22	22.1
	Medium Zero Emission	48	27.8	26.4
	Large Zero Emission	18	38.2	39.3
	Low Emission	7	12.8	6.2
UI	Small Zero Emission	35	5.5	5.5
	Medium Zero Emission	18	7	8.3
	Large Zero Emission	3	9.5	4.8
	Low Emission	0	4	0
Total		295	126.8	112.5

Eversource received a total of 515 unique bids in the first two solicitations (253 in Year 1³¹ and 262 in Year 2³²). Of these total bids, 67 (13%) were disqualified. United

²⁹ Year 3 NRES Decision, p. 7 (Table 2).

³⁰ Year 3 NRES Decision, p. 5 (Table 1).

³¹ Eversource, "Connecticut Non-Residential Renewable Energy Solutions," available at <https://www.eversource.com/content/business/save-money-energy/clean-energy-options/connecticut-non-residential-renewable-energy-solutions> (last visited Jan. 16, 2024) (Year 1 Summary Report).

³² *Id.*, (Year 2 February Summary Report).

Illuminating received a total of 137 unique bids (68 in Year 1³³ and 69 in Year 2³⁴). Of these bids, 19 (14%) were disqualified. In total, across the first two solicitations, the zero emission categories executed contracts for 106.32 MW out of the 110 MW available (96.6%).

- Small Zero Emission: 27.6 MW / 27.5 MW (100.3%)
- Medium Zero Emission: 34.7 MW / 34.8 MW (99.6%)
- Large Zero Emission: 44.1 / 47.7 MW (92.4%)

The low emission categories executed 6.2 MW out of the 16.8 MW available (36.9%), although, as noted above, the August Year 2 Solicitation will solicit bids for unused capacity from the Year 2 February Solicitation.

Table 9, below, provides the average pricing for the projects selected through the Year 1 NRES solicitation.

Table 9: Average Bid Price for Selected Projects in NRES Year 1 Solicitation³⁵

Average Bid Price for Selected Projects in NRES Year 1 Solicitation <i>(Year 2 Pricing Information not yet available)</i>		
	Eversource Year 1 Average (\$/MWh)	UI Year 1 Average (\$/MWh)
Small Zero Emission	\$210.55	\$225.72
Medium Zero Emission	\$159.45	\$151.90
Large Zero Emission	\$133.52	\$160.56
Low Emission	\$136.84	N/A (no bids selected)

³³ Motion for Review & Approval of Order 18, Aug. 8, 2022, Docket No. 21-08-03, [Annual Non-Residential Renewable Energy Tariff Program Review – Year 1, UI Order No. 18 Summary of Year 1 NRES Procurement Plan](#).

³⁴ Compliance Filing, June 30, 2023, Docket No. 22-08-03, [Annual Non-Residential Renewable Energy Solutions Program Review – Year 2, UI Order No. 8 Year 2 Procurement Plan](#).

³⁵ Compliance Filing, Nov. 8, 2022, Docket No. 21-08-03, [Annual Non-Residential Renewable Energy Tariff Program Review – Year 1, Order No. 19 UI Year 1 NRES Program Summary Data](#); Compliance Filing, Nov. 8, 2022, Docket No. 21-08-03, [Annual Non-Residential Renewable Energy Tariff Program Review – Year 1, Eversource Order 19 Attachment 1](#).

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

1. Program Description and History

Pursuant to Conn. Gen. Stat. § 16-244z(a)(1)(C), the SCEF Program was established as a six-year competitive procurement effort to broaden clean energy participation in the state as 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 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 25 megawatts to SCEFs annually, and to lower or eliminate barriers to entry for subscriber organizations.

Allowing customers to subscribe to SCEF projects helps overcome these barriers, thereby expanding consumer access to renewable energy. 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 subscription management, identification, and enrollment of customers/subscribers, as well as project selection through an annual, competitive solicitation, is managed by the EDCs. 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 the subsequent three program years (2023-2025), for a total of 225 MW over the program's six-year procurement. The MW allocation is split 80/20 between Eversource and UI.

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 [Decision](#) in Docket No. 19-07-01, Review of Statewide Shared Clean Energy Facility Program Requirements. The Authority conducts an annual review proceeding each year to determine whether any adjustments to next year's procurement are necessary. This year, the 2024 Program documents and manual were reviewed and approved by PURA in the December 6, 2023 [Decision](#) in Docket No. 23-08-04, Annual Review of Statewide Shared Clean Energy Facility Program Requirements – Year 5 (Year 5 SCEF Decision).

The Year 5 SCEF Decision implemented several program changes, in addition to the annual revision and approval of the SCEF Program Manual and other program documentation. The decision established a single standard price cap across all proposed projects and maintained the existing bid preferences. Additionally, it considered agrivoltaic projects sited on prime farmland, including the determination to not include a new bid preference for such projects. Consistent with other clean energy programs, the Year 5 SCEF Decision approved the implementation of an independent ombudsperson and set provisions for projects to pursue extensions. This decision also addressed administrative barriers that stakeholders asserted had been negatively impacting subscriber participation. Lastly, the updates approved in the Year 5 Decision changed the SCEF program subscriber allocation and provided other points of clarity so that SCEF projects can gain eligibility for additional federal tax credits consistent with the Inflation Reduction Act of 2022.

2. SCEF Pilot Program

The current SCEF Program design is largely based off lessons learned from a Pilot Program administered under Conn. Gen. Stat. § 16-244x and approved by PURA in Docket No. 17-06-28, Application to Approve the Selected Projects Under the Shared Clean Energy Facility Pilot Program. In the November 8, 2017 [Decision](#) in Docket No. 17-06-28, Application to Approve the Selected Projects Under the Shared Clean Energy Facility Pilot Program, 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.³⁶

The RFP issued by DEEP to select pilot projects was conducted pursuant to Conn. Gen. Stat. §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](#).

3. Procurement Results & Deployment

Below is an overview of program procurement results through Year 4 of the SCEF Program. In April 2022, the Connecticut Legislature 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 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 10: Committed Capacity & Average Bid Prices by SCEF Program Year³⁷

Committed Capacity & Average Bid Prices by SCEF Program Year		
SCEF Program Year	Committed Capacity out of Available (MW)³⁸	Weighted Average Selected Bid Price (\$/MWh)
1	25 / 25	\$99.46
2	21.9 / 25	\$87.51
3	24.97 / 25	\$90.41
4	45 / 50	\$102.63

³⁶ DEEP Interrog. Resp. CAE-18, Nov. 17, 2023, Docket No. 23-08-01.

³⁷ Year 5 SCEF Decision, p. 21 (Table 1).

³⁸ Public Act No. 22-14 allows for uncommitted capacity to be rolled over into the next Program Year, starting with Program Year 4. See §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.

Below are the price caps and bid preferences for the Year 5 SCEF procurement.

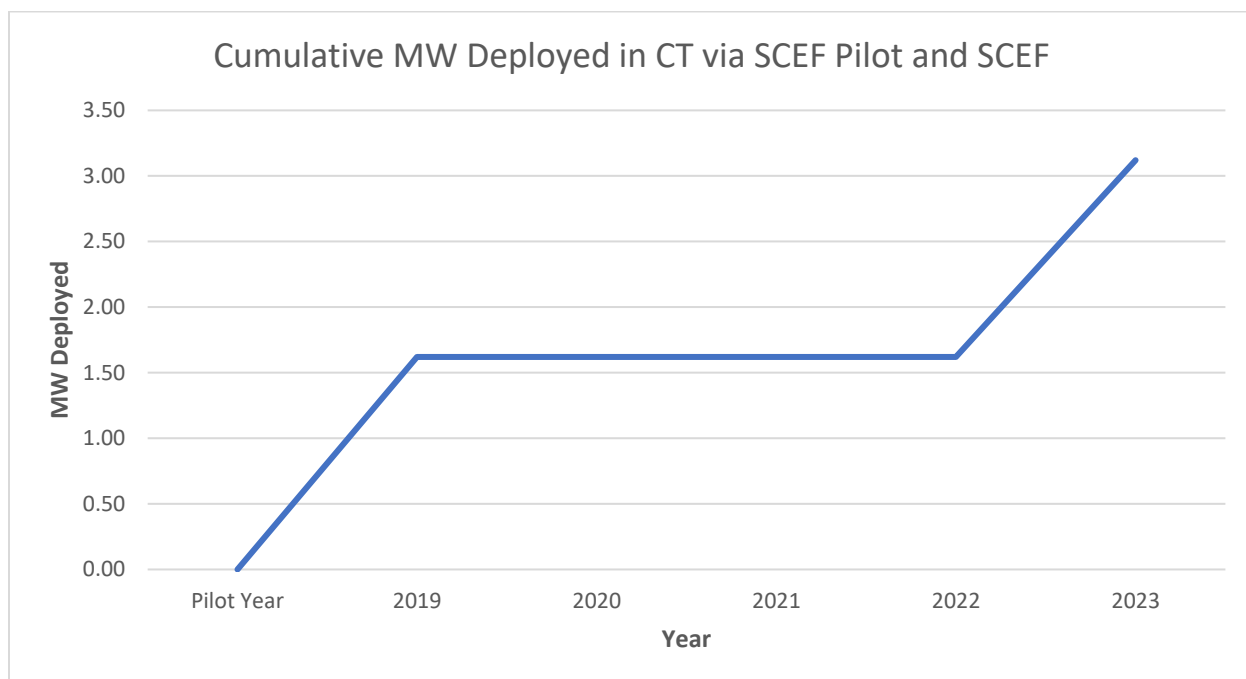
Table 11: SCEF Program Price Cap & Bid Preferences³⁹

SCEF Program Price Cap & Bid Preferences		
Year 5 Price Cap*	Bid Preference	
<i>All Projects</i>	<i>Solar Canopies*</i>	<i>Landfills/Brownfields</i>
\$0.133/kWh	30%	20%

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

Table 12, below, shows deployment under both the SCEF Pilot and SCEF Program through October 2023. Notably, the clean energy industry has faced significant hurdles to deployment in recent years with 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.

³⁹ Id., p. 13.

Table 12: Cumulative MW Deployed in CT via SCEF Pilot and SCEF⁴⁰

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 U.S. 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 fourth in terms of total solar deployment, behind states with larger geographic area and population. 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 region. As noted in Section V.B, Combined Residential Solar Program Metrics, residential installations (totaling 699 MW as of October 2023) make up over half of Connecticut's total solar deployment.

⁴⁰ 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.

Table 13: Total Solar Deployment for Northeast States through September 2023

Total Solar Deployment for Northeast States			
State	Total Solar MW Capacity Installed ⁴¹	Total Solar MW Capacity Deployed per 100,000 Persons (Rank) ⁴²	Solar MW Capacity Deployed Between 2019-2023 per 100,000 Persons (Rank) ⁴³
Connecticut	1,361 (4)	37.7 (6)	22.4 (4)
Maine	948 (6)	68.2 (1)	63.2 (1)
Massachusetts	4,376 (3)	62.7 (4)	26.6 (3)
New Hampshire	250 (9)	17.9 (8)	11.6 (8)
New Jersey	4,696 (2)	50.7 (5)	21.0 (5)
New York	4,937 (1)	25.1 (7)	16.4 (7)
Pennsylvania	1,275 (5)	9.8 (9)	6.6 (9)
Rhode Island	732 (7)	66.9 (2)	55.8 (2)
Vermont	429 (8)	66.3 (3)	18.2 (6)

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 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 Conn Gen. Stat. § 16-243ee and authorized through a July 28, 2021 [Decision](#) in Docket No. 17-12-03RE03, PURA Investigation Into Distribution System Planning Of The Electric Distribution Companies –

⁴¹ Solar Energy Industries Association (SEIA), “Solar State By State,” available at <https://www.seia.org/states-map> (last visited Jan. 24, 2024).

⁴² 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 Jan. 19, 2024).

⁴³ CGB Compliance Filing, Jan. 19, 2024, Docket No. 23-08-01, Response to CAE-80.

Electric Storage (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.

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. 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.

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, below, shows the passive dispatch parameters for the ESS Program.

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	3 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 conducted the third annual ESS Program review in Docket No. 23-08-05, Annual Energy Storage Solutions Program Review – Year 3, and issued a [Decision](#) on November 29, 2023 (Year 3 ESS Decision). The Year 3 ESS Decision reviewed Year 2 (2023) deployment data in the ESS Program and implemented multiple changes to better align the ESS Program with the ESS Program Objectives.

The Year 3 ESS Decision made several changes to increase residential enrollment, which has fallen short of the Program’s deployment target to date, including: (1) ordering a comprehensive review of the ESS enrollment process via an Application Process Working Group; (2) approving the removal of several required forms; and (3) increasing the residential upfront incentive rates by 1.25x for standard residential customers, and by 1.5x for low-income and underserved residential customers.

To increase the number of manufacturers participating in the ESS Program, the Year 3 ESS Decision also relaxed the program’s energy storage data latency requirements from 15 minutes to one month and approved the enrollment of non-electrochemical energy storage systems in the program. Further, to remove interconnection barriers, the decision approved the use of dispatch limiting schedules, so that energy storage systems would be evaluated under real-world operating conditions during the interconnection study process. Finally, the Year 3 ESS Decision enacted several other important changes to further the ESS Program Objectives, such as: (1) the approval of project extension requests if certain criteria are met; (2) the publication of additional Program data on the Program’s data dashboard; and (3) the approval of a marketing plan targeting high emission differential areas, to ensure that the program best aligns with the state’s carbon emission goals.

More information and resources are available on [PURA’s ESS Program webpage](#) and on the dedicated [ESS Program website](#).

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 21).

Table 16: ESS Program Deployment Targets (MW)⁴⁴

ESS Program Deployment Targets (MW)				
Customer Class	Tranche 1	Tranche 2	Tranche 3	Total
Residential	50	100	140	290
Commercial & Industrial	50	100	140	290
Total	100	200	280	580

⁴⁴ Year 3 ESS Decision, p. 5 (Table 1).

Table 17: Years 1 – 2 ESS Residential Customer Upfront Incentives (Tranche 1)⁴⁵

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

Table 18: Year 3 ESS Residential Customer Upfront Incentives (Tranche 1)⁴⁶

Updated ESS Residential Customer Upfront Incentives (Tranche 1)					
Incentive Step	Installed Capacity (MW)	Baseline (\$/kWh)	Underserved Community (\$/kWh)	Low-income (\$/kWh)	Grid Edge Adder
1	10	250	450	600	+50%
2	15	212.5	450	600	+50%
3	25	162.5	450	600	+50%

Table 19: Years 1 – 3 ESS Commercial and Industrial Customer Upfront Incentives (Tranche 1)⁴⁷

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

⁴⁵ *Id.*, (Table 2).⁴⁶ *Id.*, p. 10 (Table 5).⁴⁷ *Id.*, p. 5 (Table 3).

Table 20: ESS All Customer Classes Performance-Based Incentives (Tranche 1)⁴⁸

ESS All Customer Classes Performance-Based Incentives (Tranche 1)			
Years 1-5		Years 6-10	
Summer (\$/kW)	Winter (\$/kW)	Summer (\$/kW)	Winter (\$/kW)
200	25	115	15
\$225 annually		\$130 annually	

Table 21: Progress Made Toward ESS Program Goal as of January 2024⁴⁹

Progress Made Toward ESS Program Goal as of January 2024							
Customer Type	Submitted (MW)	Approved (MW)	Complete (MW)	Total (MW)	Program Goals (2022-2024) (MW)	Percent of Capacity Approved Relative to 2024 Goal	Percent of Capacity Submitted or Approved Relative to 2024 Goal
Residential	0	1.56	1.06	2.64	50	5.2%	5.3%
C&I	4.9	75.12	0.13	80.15	50	150.5%	160.3%

The average system size for ESS Program submission is 1,623 kW for C&I projects and 7 kW for residential projects.⁵⁰

Regarding approval timing, it took an average of 13 days for residential projects and 88 days for C&I projects to receive approval in 2023 through June⁵¹.

The following charts provide a breakdown of project applications and deployment in the ESS program through June 30, 2023. Larger storage projects generally have a multi-year lead time from enrollment in the program to deployment.

⁴⁸ *Id.*, (Table 4).

⁴⁹ Energy Storage Solutions Performance Report. Available at: <https://energystoragect.com/ess-performance-report/> (last visited Jan. 25, 2024).

⁵⁰ Compliance Filing, Aug. 1, 2023, Docket No. 23-08-05, [Annual Energy Storage Solutions Program Review - Year 3, Connecticut Energy Storage Solutions - Year 2 Annual Evaluation Report.](#)

⁵¹ *Id.*

Table 22: C&I Project Submissions as of January 2024⁵²

C&I Project Submissions as of January 2024			
	Projects	Total System Power Rating (MW)	Total System Energy Capacity (kWh)
<i>Large C&I</i>			
Submitted, under review	0	0	
Approved	19	53.68	131,936
<i>Medium C&I</i>			
Submitted, under review	0	0	
Approved	10	17.5	53,548
<i>Small C&I</i>			
Submitted, under review	0	0.0	
Approved	6	3.96	16,230
Completed	1	0.13	660
<i>All Sizes</i>			
Total	36	75.3	202,374

⁵² Energy Storage Solutions Performance Report. Available at: <https://energystoragect.com/ess-performance-report/> (last visited Jan. 25, 2024).

Table 23: Residential Project Submissions as of January 2024⁵³

Residential Project Submissions as of January 2024						
	Projects	Total System Power Rating (kW)	Total System Energy Capacity (kWh)	Projects Paired with Solar PV	Low Income	Underserved Community
1-4 Residential Units						
Approved	103	656	1,989	101	0	6
Completed	135	1,063	2,449	133	3	9
5 + Residential Units						
Approved	161	905.7	1,881	1	0	1
Completed	0	0	0	0	0	0
All						
Total	401	2,644	6,295	237	3	16

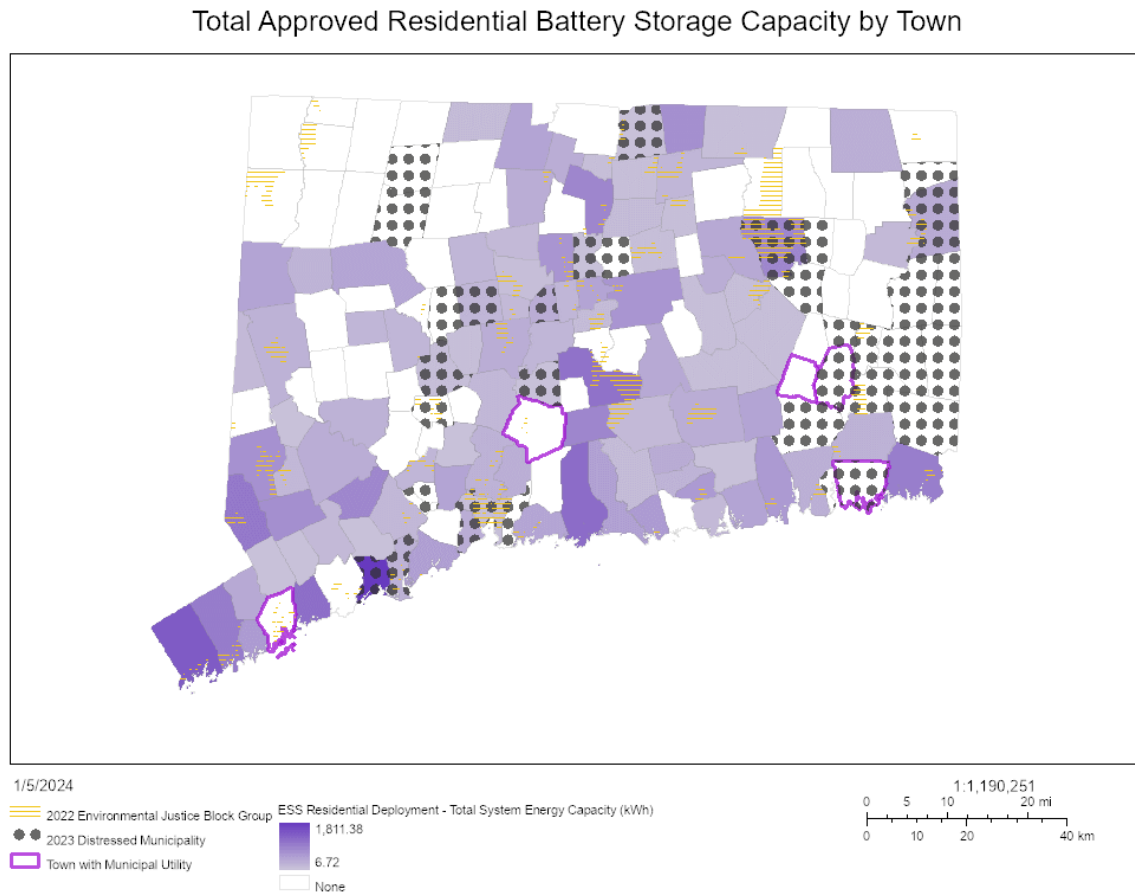
C&I program uptake has significantly outpaced expectations, exceeding the program tranche that was initially expected to last until the end of 2024 by 50%. Residential program uptake has been slower, in part due to the different use cases for residential versus C&I storage (for example, demand charges are common for C&I rate classes, but are not for residential customers). To address this divergence in program participation, PURA increased the residential program incentives in the Year 3 Final Decision, as shown in Table 18 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 to 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, the program has exceeded the goal of 40% of residential projects in underserved areas, with 44.6% of ESS approved residential projects qualifying for an equity adder.⁵⁴

⁵³ Energy Storage Solutions Performance Report. Available at: <https://energystoragect.com/ess-performance-report/> (last visited Jan. 25, 2024).

⁵⁴ Energy Storage Solutions Performance Report. Available at: <https://energystoragect.com/ess-performance-report/> (last visited Jan. 25, 2024).

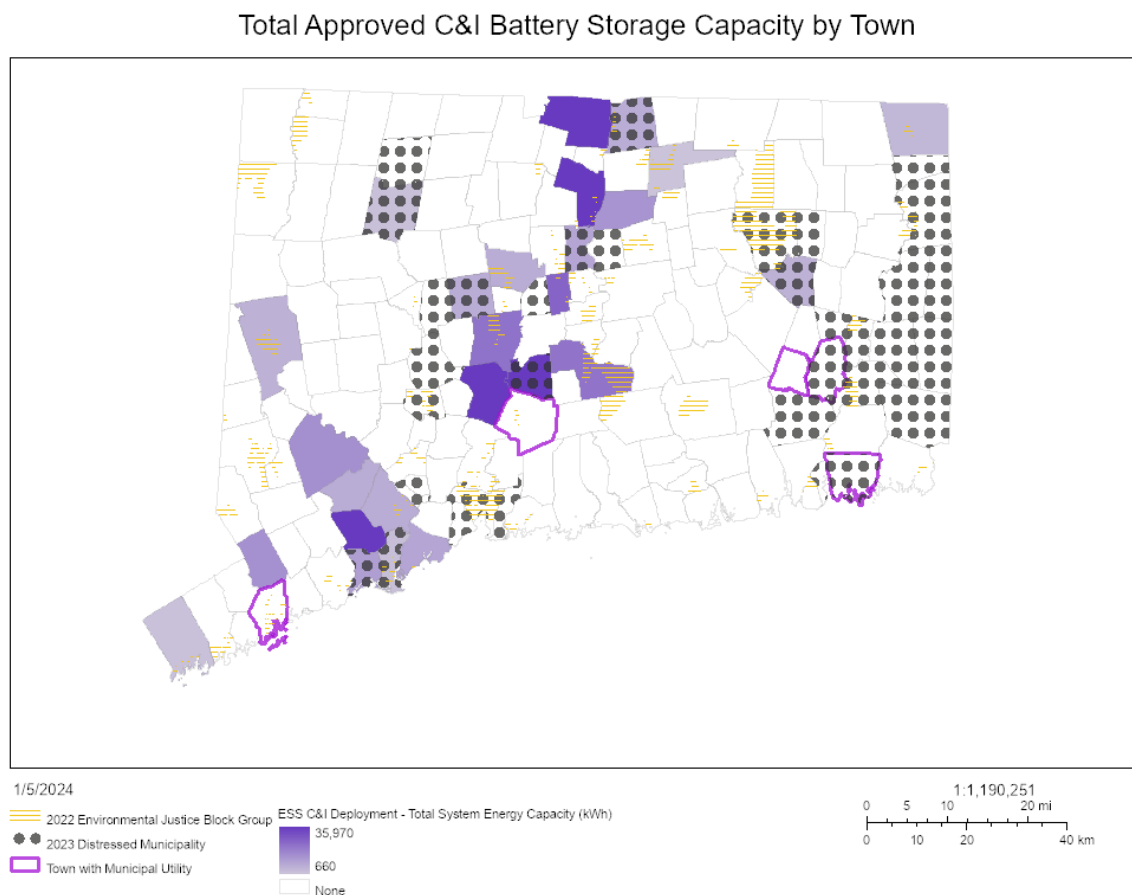
Figure 12: Total Approved Residential Storage Capacity by Town



In two 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 12 above.⁵⁵ Although the program has exceeded the goal of 40% deployment in underserved areas on project capacity basis, many 2023 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 continued progress towards overall residential deployment targets as well as the goal of 40% deployment in low-income and underserved communities.

⁵⁵ Id.

Figure 13: Total Approved Commercial and Industrial Storage Capacity by Town⁵⁶



During the first two years of ESS deployment, 36 commercial and industrial customer projects were approved for deployment or completed across 26 towns with a total system energy capacity approaching 202,374 kWh. Notably, 11 of 36 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.⁵⁷

⁵⁶ Energy Storage Solutions Performance Report. Available at: <https://energystoragect.com/ess-performance-report/> (last visited Jan. 5, 2024).

⁵⁷ Data for plot and quantitative information in text is from the CGB's Energy Storage Solutions Performance Report. Available at: <https://energystoragect.com/ess-performance-report/> (last visited Jan. 5, 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 [multi-state zero emission vehicle Memorandum of Understanding \(MOU\) for light-duty vehicles](#). The EV Charging Program is administered by the EDCs in their respective service territories.

The July 14, 2021 [Decision](#) in Docket No. 17-12-03RE04, [PURA Investigation into Distribution System Planning of the Electric Distribution Companies – Zero Emission Vehicles](#) (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. Specifically, 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.

The EV Charging Program Decision details yearly 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 rate design offerings. Additionally, the EV Charging Program includes charging incentives for direct current fast charging (DCFC) stations, managed charging options for at-home and on-the-go charging locations, and an EVSE leasing option for charging stations located at Multi-Unit Dwellings (MUDs). PURA reviewed and approved the EV Charging Program rules and documents for 2024 in the November 29, 2023 [Decision](#) in Docket No. 23-08-06, [Annual EV Charging Program Review – Year 3](#) (Year 3 EV Decision).

The Year 3 EV Decision reviewed 2023 deployment data and made several programmatic changes. The decision increased EVSE deployment targets for the MUDs DCFC program areas through 2024, as the original three-year targets were already reached by the time the decision was issued due to high demand. In addition, the Authority approved modifications to the EDCs' methodology for selecting DCFC applications based on a set of criteria, which includes prioritizing installations located in underserved communities. In addition, the decision established a requirement that DCFC installations deployed on or after June 30, 2024 be performed by Electric Vehicle Infrastructure Training Program

(EVITP)-certified electricians, consistent with the Connecticut Department of Transportation's implementation of the formula grant funding received under the NEVI program. Furthermore, the Year 3 EV Decision directed the EDCs to utilize the direct-to-driver option for a managed charging pilot at MUDs. As of January 1, 2024, the EDCs will begin offering tariffs for separately metered DCFCs and Level 2 EVSEs serving light-duty fleets with four or more ports to address the challenge of demand charges imposed on charging stations that do not yet have high utilization rates but experience periods of high demand.

More information and resources on the EV Charging Program are available at PURA's [webpage](#), Eversource's [commercial and residential program webpage](#), UI'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 24), a summary of EVSE and make ready incentives by program area (Table 25), and additional details on residential incentives and rebates (Table 26).

Table 24: EVSE Program Development Targets (# of ports)⁵⁸

EVSE Program Development Targets (# of ports)				
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)	2,426	TBD	TBD	TBD
DCFC	301	172	172	550
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

⁵⁸ Year 3 EV Decision, p. 5 (Table 1).

Table 25: EV Charging Program EVSE and Make-Ready Incentives⁵⁹

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
Incentive structure					
EVSE and Make-Ready Incentives	Up to \$500 EVSE rebate + a portion of necessary electrical upgrades	Up to 50% of EVSE cost + up to 100% make-ready installation (≥ 4 ports)		Up to 50% of EVSE cost + Up to 100% make-ready installation (≥ 4 ports)	Up to 50% of EVSE cost + Up to 100% make-ready installation (≥ 2 ports)
Maximum Incentive per Site (Including make-ready costs covered by the Program)					
Baseline	-		\$20,000		\$150,000
Underserved Communities	-		\$40,000		\$250,000

Table 26: 2023 Residential EV Charging Program Incentives⁶⁰

2023 Residential EV Charging Program Incentives	
Upfront Incentives	
New Networked Smart Charger Rebate	Up to \$500
Wiring Upgrade Rebate	Up to \$500
One-Time Managed Charging Enrollment Incentive (for eligible vehicles)	\$100
Ongoing Incentives	
Annual Managed Charging Incentive	Up to \$200

a) Residential Managed Charging

Managed Charging provides financial incentives for EV owners to not charge their vehicle during key periods of high demand over the year, with an additional enrollment incentive.

⁵⁹ Id., p. 6 (Table 2).

⁶⁰ Id., pp. 6 (Table 2), 7 (Table 3), 9 (footnote 7).

From January 1, 2022, to June 30, 2023, \$96,600 in enrollment incentives were paid to residential customers, with \$9,600 going towards underserved communities. In the same period, \$243,340 was paid in performance incentives with \$28,340 going towards underserved communities.

Below, Table 27 provides a summary of the number of residential managed charging participants by technology type (e.g., vehicle telematics), while Table 28 provides a summary of all residential incentives paid and the number of program applications (i.e., participants).

Table 27: Residential Single-Family Managed Charging Participant Data - Year 2⁶¹

Residential Single-Family Managed Charging Participant Data - Year 2 (January 1, 2023 - August 31, 2023)		
Category	Utility	Participants Enrolled
Networked Level 2 Charger	Eversource	1,168
	UI	137
	Total	1,305
Vehicle Telematics	Eversource	475
	UI	78
	Total	553
Advanced Metering Infrastructure (AMI)	Eversource	N/A
	UI	1
	Total	1

Table 28: Residential Single-Family EVSE & Wiring Upgrade Incentives - All Data⁶²

Residential Single-Family EVSE & Wiring Upgrade Incentive Data - All Data (through July 31, 2023)		
Category	Approved Applications	Incentives Reserved
New L2 Charger Incentive	560	\$279,142
Wiring Upgrade Incentive	704	\$347,289
Wiring Upgrade & Charging Incentives	1,496	\$1,457,100
Total	2,760	\$2,083,531

⁶¹ Eversource Letter in Lieu of Written Exceptions - Supplemental Filing, Nov. 20, 2023, Docket No. 23-08-06, Annual EV Charging Program Review - Year 3.

⁶² Year 3 EV Decision, pp. 9–10.

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 July 31, 2023:

- Multi-Unit Dwellings (L2): 95% of goal
- Direct Current Fast Chargers (DCFCs): 100% of goal
- Destination (L2): 89% of goal
- Workplace & Light-Duty Fleets (L2): 55% of goal

Table 29 provides a more complete breakdown of commercial deployment by utility and program area.

Table 29: EDCs' Commercial Port Deployment Data⁶³

EDCs' Commercial Port Deployment Data (as of July 31, 2023)					
Program Area	Utility	2022–2024 Port Deployment Goal	2022 Actual Ports Reserved/Paid	2023 Actual Ports Reserved	Percent of 2022–2024 Port Goal
Multi-Unit Dwellings (Level 2)	Eversource	1,940	970	977	100%
	UI	486	202	150	72%
	Total	2,426	1,172	1,127	95%
DCFC	Eversource	247	110	137	100%
	UI	54	26	28	100%
	Total	301	136	165	100%
Destination (Level 2)	Eversource	1,262	731	410	90%
	UI	316	90	170	82%
	Total	1,578	821	580	89%
Workplace & Light-Duty Fleets (Level 2)	Eversource	1,851	832	282	60%
	UI	463	78	74	33%
	Total	2,314	910	356	55%

⁶³ *Id.*, p. 18 (Table 15).

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 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 30, 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 assure 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.⁶⁴

Any processes outside of the DEEP evaluation and selection process and the regulatory approval process outlined above 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. Payment for any of the products delivered is established in the PPA and may either be fixed price or formula-based, dependent on the solicitation rules under which the project was selected. However, the interconnection

⁶⁴ 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.

process is separate from the PPAs and all requirements for delivery are the responsibility of the seller (i.e., project owner and/or developer).

The EDCs currently sell the energy and RECs produced from the 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](#).

2. Past Procurements for Grid-Scale Renewable Resources

The below table summarizes the energy generation procured and deployed pursuant to DEEP solicitations. The 2023 Offshore Wind, land-based Zero Carbon, and Storage procurements are not shown, as these solicitations are ongoing. For more information on DEEP-led renewable energy procurements, visit the [DEEP Grid Scale Competitive Procurements website](#).

Table 30: DEEP Cumulative PPA Deployment⁶⁵

DEEP Cumulative PPA Deployment					
Public Policy Contracts / PPAs	Public Act(s)	PURA Docket Nos.	Renewable Energy Source(s)	Deployment (Metric)	Deployment (As of 2023)
Project 150	Amended by Section 124, PA 07-242	07-04-27; 08-03-03	Biomass, Fuel Cells	Total Deployments in MWs (AC)	48.33
				No. of Projects In-Service	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)	19.98
				No. of Projects In-Service	4

⁶⁵ 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-038 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-038. Note that Eversource’s response to CAE-038 included Passive Demand Response resources, while UI’s did not. For consistent reporting, the passive demand response resources have been excluded from this line.

Section 6	PA 13-303, Section 6	13-09-19	Solar	Total Deployments in MWs (AC)	20.00
				No. of Projects In- Service	2
Clean Energy RFP (Large Scale PPAs)	PA 15-107(c)	17-01-10	Solar, Wind	Total Deployments in MWs (AC)	137.37
				No. of Projects In- Service	10
Section 8	PA 13-303, Section 8	14-02-02	Biomass	Total Deployments in MWs (AC)	28.56
				No. of Projects In- Service	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)	10.00
				No. of Projects In- Service	2
Small Scale PPAs	PA 15-107, Section 1(b)	17-01-11	Solar, Wind	Total Deployments in MWs (AC)	95.16
				No. of Projects In- Service	14
Zero Carbon PPAs	PA 17-3, Section 1	18-05-04; 20-02-04	Nuclear, Solar, Offshore Wind, Solar w/ Storage	Total Deployments in MWs (AC)	1,269.05
				No. of Projects In- Service	4
Section 3	PA 18-50, Section 3	18-07-02	Biomass	Total Deployments in MWs (AC)	7.50
				No. of Projects In- Service	1
Offshore Wind PPA (Vineyard Wind)	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 Conn. Gen. Stat. § 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, including 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 update filed in 2023](#), 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.⁶⁶

2. Incentives & Deployment

The tables below show the C&LM Plan goals and savings relative to those goals (Table 31), as well as spending and gas and electric usage (MWh) and demand (MW) savings in a given year from 2013 to 2022 (Table 32).

Table 31: 2023 C&LM Plan Overview⁶⁷

2023 C&LM Overview				
	2023 Lifetime Savings (Thousand MMBtu)	% of 2023 Goal Achieved	2023 Lifetime Savings (MWh)	% of 2023 Goal Achieved
Eversource	10,348	141%	1,110,568	101%
UI	1,436	114%	263,455	72%
Combined Total	11,784	137%	1,374,023	94%

Table 32: C&LM Plan Data by Year (2013–2022)⁶⁸

C&LM Summary - 2013-2022					
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
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

⁶⁶ More information available at DEEP's [C&LM Webpage](#).

⁶⁷ Connecticut Energy Efficiency Dashboard. Available at: ctenergydashboard.com/Public/PublicHome.aspx (last visited Jan. 16, 2024); Eversource Exceptions, Feb. 8, 2024.

⁶⁸ *Id.*

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	\$204,997,599	\$44,877,988	2,409,502	142	80,127,260

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

The VRO Program⁶⁹ 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 is a modification and continuation of the legacy CEOP, discussed below, and establishes rules for power generation supply offers marketed as including renewable energy attributes that exceed the RPS requirement.

The VRO Program provides customers who utilize their utility's Standard Service (SS) generation supply with an option to support additional renewable energy through the purchase of incremental RECs. Any REC-only and VRO offers must follow Authority-approved rulings, including 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 Conn. Gen. Stat. § 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.

⁶⁹ See [Decision](#), October 21, 2020, Docket No. 16-12-29, [PURA Development of Voluntary Renewable Options Program](#), in which the Authority modified and approved continuation of the CEOP, and established rules for voluntary renewable offers.

1. CEOP Background

Pursuant to Conn. Gen. Stat. § 16-244c, PURA established the CEOP in 2005 to allow consumers to support renewable energy above the minimum RPS.⁷⁰ 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.⁷¹

2. CEOP to VRO

Since 2005, nationwide REC markets have 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. Over time, the number of suppliers offering voluntary renewable offers has increased.

Due to the presence of voluntary renewable offers in the market, in 2016 the Authority announced it would develop and implement a new program in place of CEOP to advance Connecticut's voluntary renewable market and established a proceeding to do so.⁷² Although the Authority indicated it was ending CEOP at the time, it continued the program pending approval of a successor program.⁷³ As noted above, the successor program to the CEOP is the VRO Program, which was approved through the October 21, 2020 [Decision](#) in Docket No. 16-12-29, PURA Development of Voluntary Renewable Options Program (VRO Decision).

3. Key Elements of VRO Program

The VRO Program began in January 2021. There are only three REC-only suppliers until 2025 (Sterling Planet, Community Power, and 3 Degrees), and two REC-only options for customers – a 50% or 100% option. PURA monitors the program and participation

⁷⁰ See Interim Decisions, [April 21](#) and [October 20, 2004](#), and [Decision](#), February 17, 2005, Docket No. 03-07-16, Investigation of Alternative Transitional Standard Offer Services for United Illuminating and CL&P Customers.

⁷¹ See [Interim Decision](#), September 27, 2007, Docket No. 07-01-09, DPUC Consideration of the Connecticut Clean Energy Options Program for 2008; See also, [Decision](#), March 30, 2011, Docket No. 10-05-07, PURA Review of the Connecticut Clean Energy Options Program.

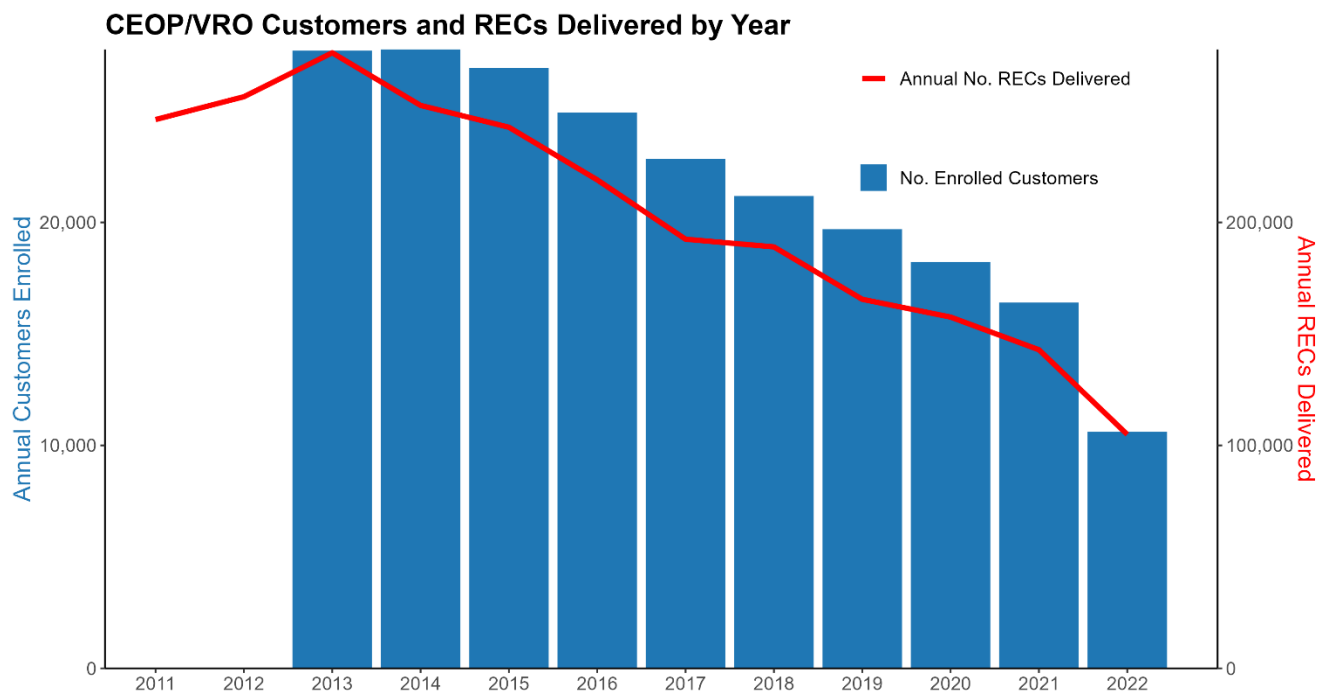
⁷² [Decision](#), December 21, 2016, Docket No. 10-05-07RE01, PURA Review of the Connecticut Clean Energy Options Program.

⁷³ Motion No. 5 Rulings, July 11, 2018 and October 2, 2019, Docket No. 16-12-29, PURA Development of Voluntary Renewable Options Program.

through compliance filings under Docket No. 16-10-22 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, [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. Complete data for 2023 was not available at the time of creation of the report. Note that customer enrollment data in the CEOP Program was not available for all utilities for 2011 and 2012, so is not displayed here.

Figure 14: CEOP/VRO Customers and RECs Delivered⁷⁴

VI. Renewable Portfolio Standard (RPS)

A. RPS Summary

The RPS was designed and implemented at the beginning of electric deregulation to bring online renewable energy resources supporting state policy goals not otherwise supported in the regional markets. 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 Conn. Gen. Statute § 16-1(a)(20), include most zero carbon emitting

⁷⁴ 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-038 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-038.

resources such as solar and wind.⁷⁵ Class II renewables include eligible trash-to-energy facilities.⁷⁶ 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.⁷⁷

Each year, electric suppliers in Connecticut must comply with the RPS⁷⁸ by procuring and properly settling the necessary amount of renewable energy certificates (RECs)⁷⁹ to meet the percentage targets for each RPS Class,^{80,81,82} 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 which 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 33, below, shows the RPS requirements by year by resource type.

⁷⁵ Class I renewables are defined as 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 run-of-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. See Conn. Gen. Stat. § 16-1(a)(20).

⁷⁶ Conn. Gen. Stat. § 16-1(a)(21).

⁷⁷ Conn. Gen. Stat. § 16-1(a)(38).

⁷⁸ Pursuant to Conn. Gen. Stat. §§ 16-245a, 16-244c(h)(1), and 16-243q.

⁷⁹ One MWh of renewable energy = one REC.

⁸⁰ Class I: Solar, wind, fuel cell, geothermal, landfill methane gas, anaerobic digestion or other biogas derived from biological sources, run-of- river hydro, and sustainable biomass. Conn. Gen. Stat. § 16-1(a)(20).

⁸¹ Class II: Trash-to-energy facility. Conn. Gen. Stat. § 16-1(a)(21).

⁸² Class III: Combined heat and power systems, waste heat recovery and electric savings from conservation and load management programs or demand side management projects. Conn. Gen. Stat. § 16-1(a)(38). Note: After January 1, 2014, programs supported by ratepayers are not eligible for Class III.

Table 33: RPS Obligations by Year

Class I, Class II, and Class III RPS compliance obligation by year⁸³				
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%	4.00%	38.00%
2026	32.00%	4.00%	4.00%	40.00%
2027	34.00%	4.00%	4.00%	42.00%
2028	36.00%	4.00%	4.00%	44.00%
2029	38.00%	4.00%	4.00%	46.00%
2030	40.00%	4.00%	4.00%	48.00%

In lieu of procuring and settling RECs, a load serving entity (LSE) can make an Alternative Compliance Payment (ACP) to satisfy all or a portion of their annual RPS obligation. In addition, an LSE can 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 Legislature removed the previous allowance that Class II compliance obligations could be met with Class I RECs and specified that any ACPs for Class II RECS would go towards a newly-established sustainable materials management account.⁸⁴

While the value of RECs associated with the Connecticut RPS may historically have been sufficient to drive some level of new resource deployment, for many project types (e.g., most solar projects, offshore wind, etc.), it is not. Connecticut has implemented a series

⁸³ Conn. Gen. Stat. § 16-245a.

⁸⁴ Sections 163 and 164 of P.A. 22-118.

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 dockets initiated by PURA. For the 2022 Compliance Year, Docket 23-06-01, Annual Review of Connecticut's Electric Suppliers' and Electric Distribution Companies' Compliance with Connecticut's Renewable Energy Portfolio Standards in the Year 2022, is where entities were required to demonstrate that an appropriate amount of their retail load was supplied by renewable resources. For obligations tied to 2022 load, load serving entities were ordered to pay approximately \$15 million in ACPs (see below for description).

Table 34: REC Trading Periods

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

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 (6) to nine (9) months after the calendar period dates, as seen in Table 34.

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.⁸⁵ 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. Conn. Gen. Stat. §16-244c(h)(1). These payments, known as the ACP, are returned to ratepayers.⁸⁶ Previously, the statutes set the ACP at \$55 per MWh for both Class I and II; however, this was amended in 2017 to be four cents per kilowatt hour (\$40 per MWh) for Class I and two and a half cents per kilowatt hour (\$25 per MWh) for Class II effective in 2021.⁸⁷ In [Public Act No. 23-170, An Act Concerning the Management of Solid Waste and Establishing the MIRA Dissolution Authority](#), the ACP for Class II resources was increased from 2.5 cents per kWh (\$25 per MWh) to 3 cents per kWh (\$30 per MWh) beginning in calendar year 2024.⁸⁸

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 Conn. Gen. Stat. § 16-243q(b), the February 16, 2006 [Interim Decision](#) in Docket Nos. 05-07-19, [DPUC Proceeding to Develop A New Distributed Resources Portfolio Standard \(Class III\)](#), and the February 11, 2010 [Decision](#) in Docket No. 05-07-19RE02, [DPUC Proceeding to Develop a New Distributed Resources Portfolio Standard \(Class III\) – 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.

Table 35 provides a summary of historical and current ACPs by resource type.

⁸⁵ Pursuant to Conn. Agencies Regs. § 16-245a-1(g).

⁸⁶ Conn. Gen. Stat. §§ 16-245(k) and 16-244c(h)(1).

⁸⁷ Amended per sections 4 and 5 of [Public Act No. 17-144, An Act Promoting the Use of Fuel Cells for Electric Distribution System Benefits and Reliability and Amending Various Energy-Related Programs and Requirements](#).

⁸⁸ Section 19 of Public Act No. 23-170.

Table 35: Class I, Class II, and Class III ACP

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

VII. Legacy Programs

A. Residential Solar Investment Program (RSIP)

1. Program Description and History

Initially authorized in 1998 under Conn. Gen. Stat. §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.⁸⁹

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

⁸⁹ For more information on the RSIP, see: <https://www.ctgreenbank.com/strategy-impact/societal-impact/successful-legacy-programs/residential-solar-investment-program-rsip/>.

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,⁹⁰ 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.⁹¹ 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 achieved by January 31, 2022.⁹²

With the achievement of the RSIP's statutory deployment goal, the state transitioned to the RRES Program, authorized in Conn. Gen. Stat. §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, 2022.⁹³ 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 [Decision](#) 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.

⁹⁰ The program was also updated substantively several other times, including in 2015 and 2016.

⁹¹ CGB Brief, November 12, 2020, Docket Nos. 17-12-03RE09, PURA Investigation into Distribution System Planning of the Electric Distribution Companies – Clean and Renewable Energy Resource Analysis and Program Reviews, pp. 1–2 (also posted in Docket No. 19-06-36, Application of Low and Zero Emissions Renewable Energy Credit Program - Year 9 and 10 Solicitations).

⁹² CGB Exception to Draft Decision, January 21, 2022, 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, p. 1.

⁹³ Motion No. 18 Ruling, September 17, 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.

2. Rates & deployment

Table 36: RSIP Development by Year (MW AC)⁹⁴

RSIP Development by Year (MW-AC)			
Completed Year	Eversource Energy	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
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		0.008
Total	249.906	79.939	329.845

⁹⁴ 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.

Table 37: RSIP Development by Year⁹⁵

RSIP Development by Year (# of Projects)			
Completed Year	Eversource Energy	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		1
Total	34,024	12,295	46,319

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 Conn. Gen. Stat. §§ 16-244r, § 16-244s, and § 16-244t.⁹⁶ The program ran for ten years and required the EDCs to enter into 15-year contracts to purchase RECs⁹⁷ 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

⁹⁵ *Id.*

⁹⁶ Section 2 of Public Act No. 19-35, *An Act Concerning a Green Economy and Environmental Protection*, amended Conn. Gen. Stat. § 16-244r(c) to extend the LREC/ZREC Program for Year 9 (2020) and Year 10 (2021).

⁹⁷ 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.

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 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.⁹⁸ 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)⁹⁹ 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.

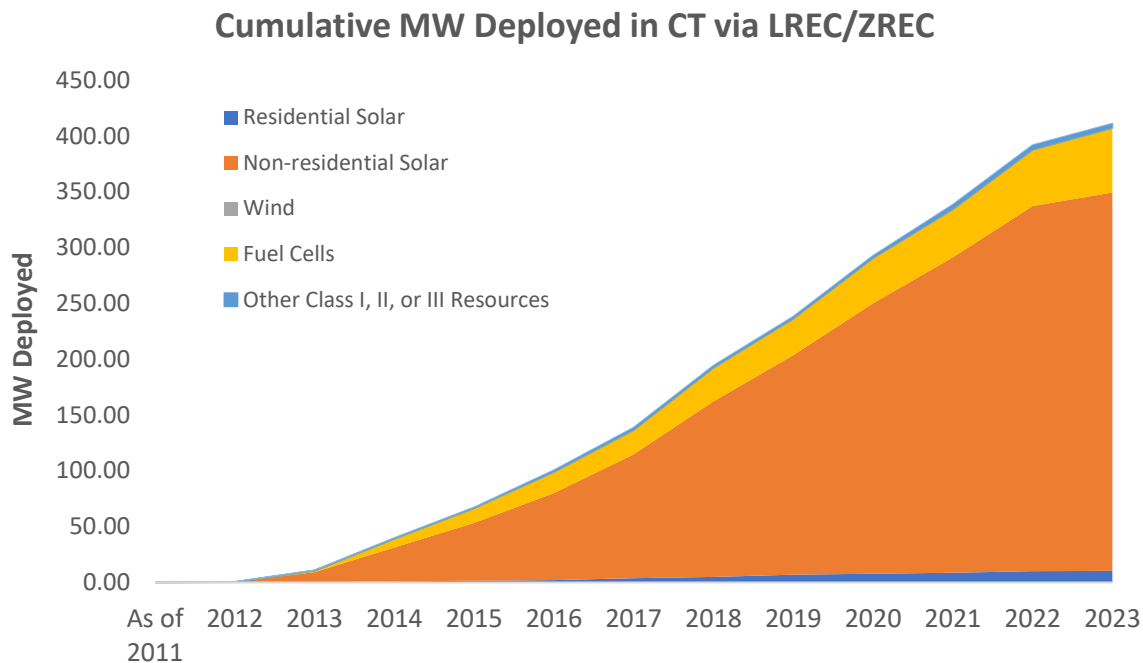
The LREC/ZREC Program ended after the conclusion of the Year 10 procurement in 2021. It was succeeded by the NRES Program, established in the June 30, 2021 Decision in Docket No. 20-07-01 and effective January 1, 2022, as discussed in Section V.C of this report. While some LREC/ZREC projects approved prior to the end of the program continued to be deployed in 2022 and 2023, the program is no longer accepting new enrollments.

⁹⁸ Significant legislation associated with the LREC/ZREC Program can be found in Appendix 1: Additional Resources & Documents.

⁹⁹ Maximum number of LRECs or ZRECs that the EDC is obligated to purchase in any Contract Year under the Agreement.

3. Procurement Results & Deployment

Figure 15: Cumulative MW Deployed in CT via LREC/ZREC¹⁰⁰



¹⁰⁰ 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.

Table 38: LREC/ZREC Deployment Overview¹⁰¹

LREC/ZREC Deployment Overview															
LREC/ZREC Program Categories		As of 2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	TOTAL
LREC	Annual Deployment in MWs (AC)	-	-	1.3	6.4	5.7	5.4	9.7	16.0	3.6	19.3	13.9	24.7	9.8	115.8
	No. of Projects In-Service	-	-	2.0	14.0	8.0	11.0	13.0	16.0	6.0	17.0	13.0	18.0	11.0	129.0
Large ZREC	Annual Deployment in MWs (AC)	-	-	2.1	9.1	8.3	11.2	12.8	20.5	15.0	18.7	14.9	16.5	3.5	132.5
	No. of Projects In-Service	-	-	5.0	16.0	12.0	18.0	21.0	29.0	23.0	28.0	23.0	20.0	5.0	200.0
Medium ZREC	Annual Deployment in MWs (AC)	-	0.3	5.2	9.2	6.5	9.4	6.6	10.1	13.8	8.2	9.2	4.5	2.5	85.5
	No. of Projects In-Service	-	1.0	27.0	50.0	35.0	52.0	41.0	61.0	64.0	42.0	49.0	23.0	13.0	458.0
Small ZREC	Annual Deployment in MWs (AC)	0.1	0.1	1.6	4.3	7.2	7.2	8.8	9.1	11.6	8.2	8.0	7.6	3.4	77.3
	No. of Projects In-Service	2.0	2.0	67.0	104.0	153.0	176.0	212.0	208.0	253.0	156.0	150.0	157.0	57.0	1,697.0

¹⁰¹ 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-038 Attachment 1 and UI CAE-039 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-038 and A1-CAE-039.

C. Virtual Net Metering (VNM) Program

1. Program Description and History

VNM is the process of combining the electric meter readings and billings between a host and a beneficial account related to the host account. It allows a renewable energy system's owner to share the billing credits that are generated when the system produces more power than the owner uses. 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.¹⁰² Pursuant to Conn. Gen. Stat. § 16-244u(5), the VNM Program allowed Customer Hosts (customers who operate behind-the-meter generation)¹⁰³ 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.¹⁰⁴

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).¹⁰⁵ 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).¹⁰⁶

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

¹⁰² 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.

¹⁰³ Behind-the-meter generation refers to energy systems located on the customer's side of the utility meter.

¹⁰⁴ 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

¹⁰⁵ Beneficial Account defined pursuant to Conn. Gen. Stat. § 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."

¹⁰⁶ VNM credit defined pursuant to Conn. Gen. Stat. § 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."

anaerobic digestion Class I renewable energy source. The Individual Customer Host annual cap was based on estimated kWh production and rates in effect at the time of application. When an Individual Customer Host annual cap is reached in a calendar 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. 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:

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

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



Facilities connected to a microgrid.

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

2. Rates & Deployment

Table 39: VNM Program Overview

VNM Program Overview								
	Statutory Authority (Conn. Gen. Stat.)	PURA Dockets	Renewable Energy Sources		Municipal Sector	State Sector	Agriculture Sector	Agriculture Anaerobic Digester Sector
Eversource	16-244u(5) and (6)	DN 13-08-14; DN 15-09-08	Class I (All) and Class III (Municipal & State)	Amount Subscribed	\$11,200,000	\$3,543,334	\$6,056,666	\$2,400,000
				No. Applications in Queue	32	0	6	0
				Total Deployed in MWs	40.8	11.0	19.7	1.1
UI	16-244u(5) and (6)	DN 13-08-14; DN 15-09-08	Class I (All) and Class III (Municipal & State)	Amount Subscribed	\$2,597,413	\$828,012	\$701,210	\$ -
				No. Applications in Queue	2	0	0	0
				Total Deployed in MWs	4.65	0	2	0

Table 40: VNM Program Info by Sector¹⁰⁷

VNM Program Info by Sector					
VNM Program		Municipal Sector	State Sector	Agriculture Sector	Agriculture Anaerobic Digester Sector
Eversource	Total Annual Cap	\$ 11,200,000	\$ 3,543,334	\$ 6,056,666	\$ 2,400,000
	Cap Subscribed	\$ 11,200,000	\$ 3,543,334	\$ 6,056,666	\$ 2,400,000
	No. Projects Subscribed	40.0	12.0	19.0	4.0
	No. Applications Waiting List	32.0	-	6.0	-
	Total MW Deployed (Fuel Cells)	0.8	-	-	-
	Total MW Deployed (Solar)	38.4	10.0	19.7	-
	Total MW Deployed (Other)	1.6	1.0	-	1.1
UI	Total Annual CAP	\$ 2,597,413	\$ 1,200,000	\$ 1,200,000	\$ 600,000
	CAP Subscribed	\$ 2,597,413	\$ 828,012	\$ 701,210	\$ -
	No. Projects Subscribed	7.7	2.0	2.0	-
	No. Projects Provisional	1.3	-	-	-
	No. Applications Waiting List	2.0	-	-	-
	Total MW Deployed (Fuel Cells)	0.9	-	-	-
	Total MW Deployed (Solar)	2.5	-	2.0	-
	Total MW Deployed (Other)	1.2	-	-	-

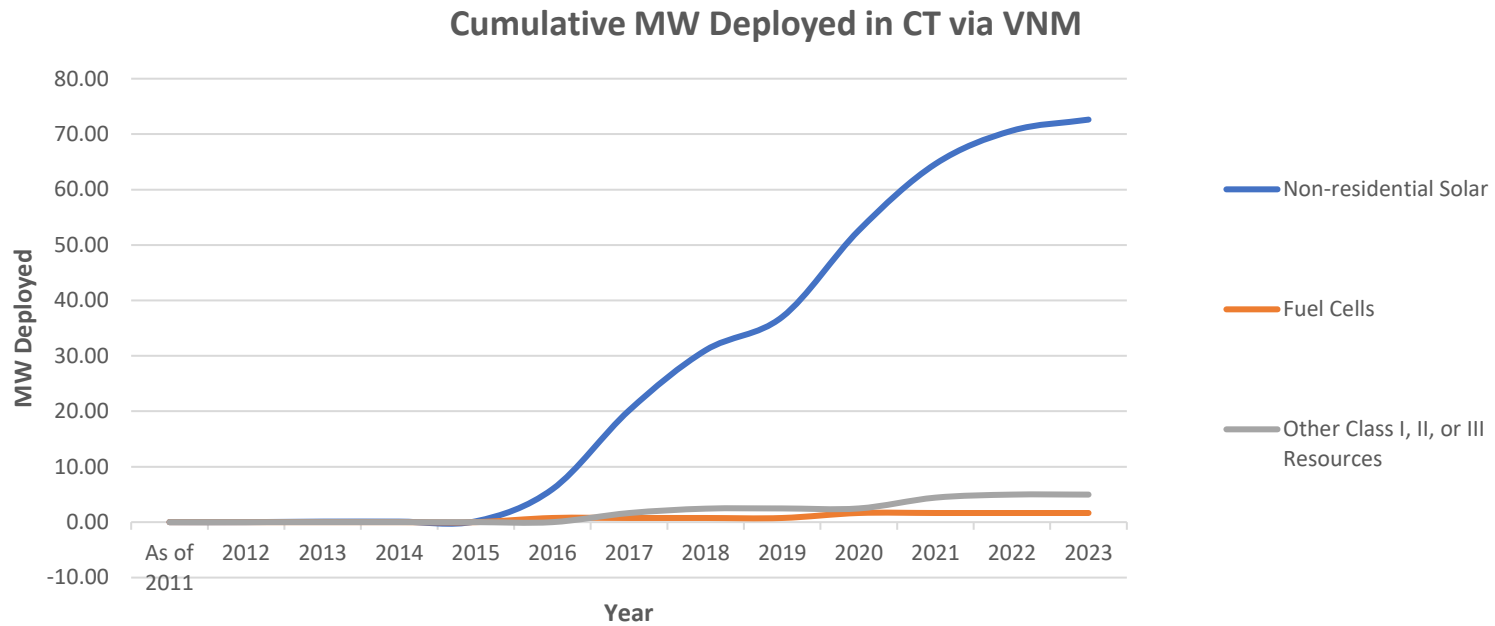
¹⁰⁷ Id.

Table 41: Cumulative MW Deployed in CT via VNM¹⁰⁸

Cumulative MW Deployed in CT via VNM													
	As of 2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Non-residential Solar	-	-	0.1	0.1	0.2	5.9	20.1	31.0	37.0	52.6	64.6	70.6	72.6
Fuel Cells	-	-	-	-	-	0.8	0.8	0.8	0.8	1.7	1.7	1.7	1.7
Other Class I, II, or III Resources	-	-	-	-	-	-	1.6	2.4	2.5	2.5	4.4	5.0	5.0

¹⁰⁸ 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.

Figure 16: Cumulative MW Deployed in CT via VNM¹⁰⁹



¹⁰⁹ 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.

VIII. Clean Energy Employment¹¹⁰

According to the 2022 Connecticut Clean Energy Industry Report, at the end of 2021, Connecticut had roughly 43,000 clean energy jobs, an increase of roughly 1,500 jobs, or roughly 3.6%, from the prior year. This increase, as compared to the roughly 4–6% increase found in Connecticut’s overall economy and in the clean energy industry in other nearby states and at the national level, indicates that the State’s clean energy industry is recovering from the effects of the COVID-19 pandemic at a pace slower than Connecticut’s peer states.¹¹¹

The energy efficiency sector was largely responsible for the industry’s underperformance, having only increased 1.6% (533 jobs) in 2021 and falling short of the 2019 employment level by nearly 1,900 jobs. All other technology types surpassed their respective 2019 employment levels. In particular, the alternative transportation sector saw “unprecedented growth” (572 jobs, or a roughly 29% increase).

The State’s clean energy industry positively contributes to the State’s overall economy. Specifically, in 2021, the State’s clean energy economy “contributed roughly \$7.07 billion to statewide [gross regional product (GRP)], accounting for almost three percent of total GRP.”

The below graphs highlight employment trends in the State’s clean energy economy, showing the number of jobs by clean energy sector and by clean energy generation technology type, from 2017 to 2021.

¹¹⁰ See the [2022 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 Jan. 16, 2024).

¹¹¹ The [2021 Connecticut Clean Energy Industry Report](#) predicted that Connecticut’s clean energy industry would rebound in 2021, recovering all of the jobs lost in 2020 and then some to reach 44,890 clean energy jobs. *Id.* We also note, however, that in 2020, Connecticut’s clean energy industry outperformed other states and experienced fewer job losses from the pandemic.

Figure 17: Number of Jobs in Connecticut by Clean Energy Sector

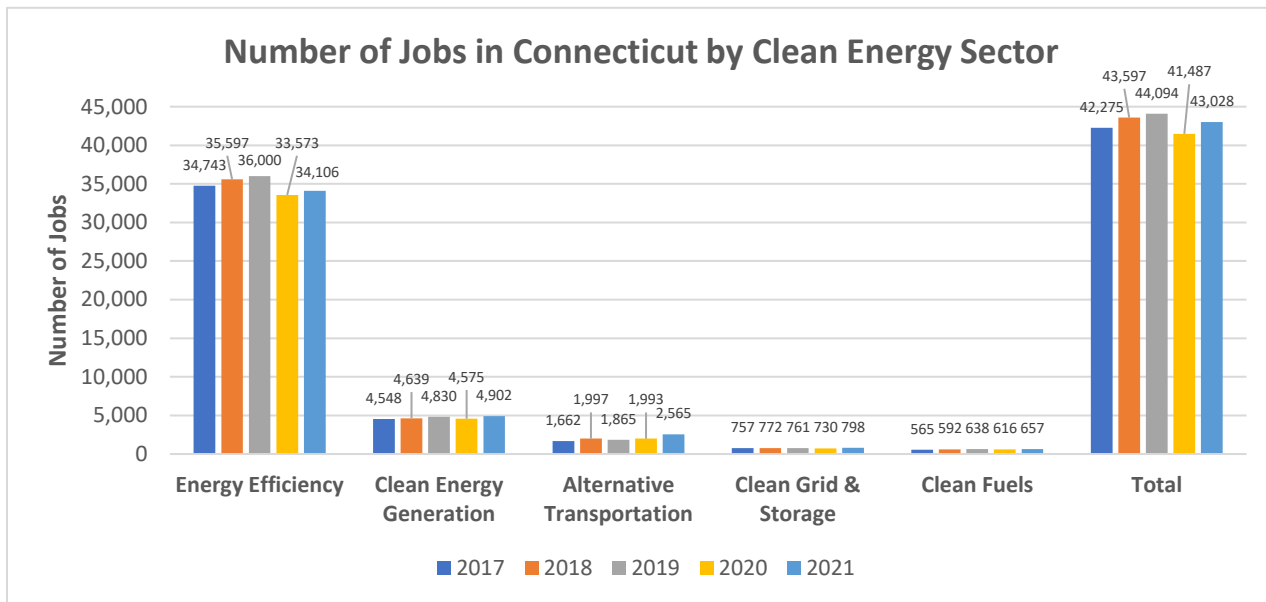
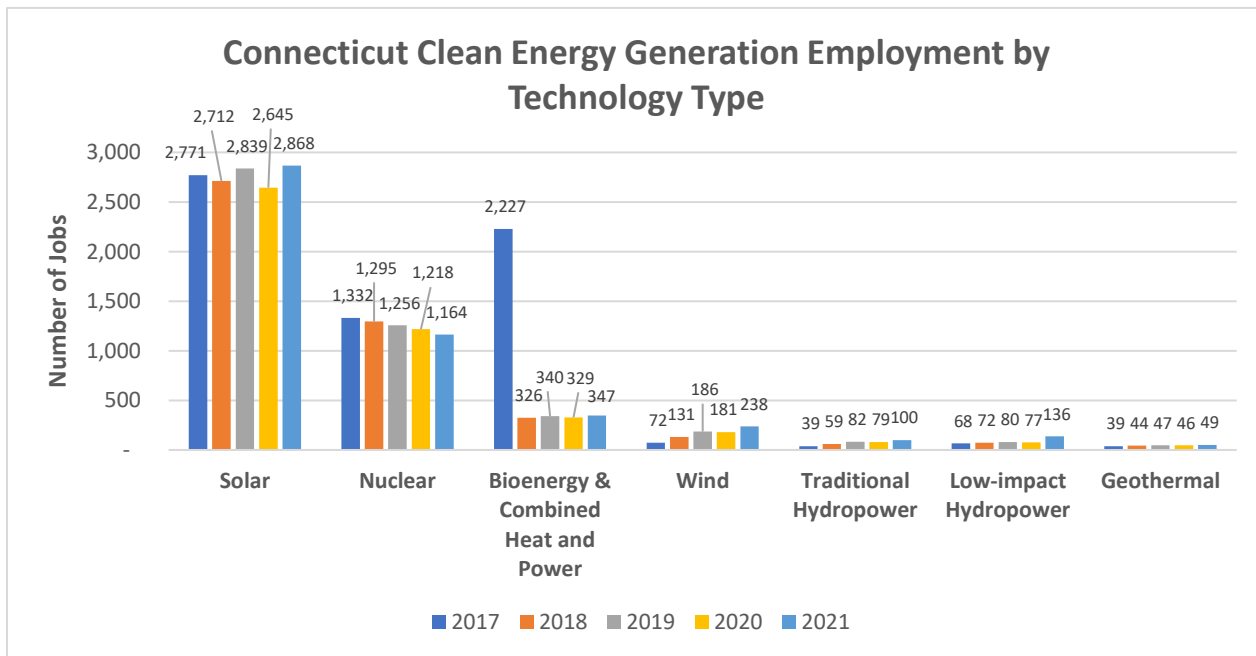


Figure 18: Connecticut Clean Energy Generation Employment by Technology Type



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, 2024)

[Frequently Asked Questions](#) (effective January 1, 2024)

NRES Program

[PURA NRES Program Webpage](#)

[Eversource Program Website](#)

[UI Program Website](#)

[Program Manual](#) (effective January 1, 2024)

[Frequently Asked Questions](#) (effective January 1, 2024)

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 Manual](#)

[Eversource Program Website](#)

[Eversource FAQ](#)

[UI Program Website](#)

[UI FAQ](#)

DEEP Procurements

[DEEP Integrated Resources Plan](#), dated October 2021

Grid-Scale Procurement Authority

Legislation	Conn. Gen. Stat. §	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).
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; Public Act No. 15-107, Section 1 (c)	16a-3g; 16a-3j(c)	Large-Scale Procurement	Three-state (Connecticut, Massachusetts, and Rhode Island) solicitation for large-scale clean energy projects and transmission.
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 No. 11-80, Sections 94 & 110	16-244c (h)(2); 16-244o; 16-244t	Project 150	Allows for long-term PPAs (no additional solicitations will be issued).
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.
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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 5 years of LREC and up to 6 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, same statutory budgets as year 6;
- Public Act No. 18-50, which authorized Year 8 procurement, same statutory budgets as year 6 with the exception of Small ZREC (combined year 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 year 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, PURA Development of Voluntary Renewable Options Program, Final Decision dated October 21, 2020.
- Docket No. 16-12- 29RE01, PURA Development of Voluntary Renewable Options Program - Modification of Implementation Dates, 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' responses to Interrogatory CAE-60 in Docket No. 23-08-01.

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;
2. 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;
4. 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
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