

2023 Plan Update to Connecticut's 2022-2024 Conservation & Load Management Plan

Connecticut's Energy Efficiency & Demand Management Plan
Connecticut General Statutes—16-245m(d)

Submitted by: Eversource Energy, United Illuminating, Connecticut Natural Gas Corporation, and Southern Connecticut Gas

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EXECUTIVE SUMMARY

Pursuant to Connecticut General Statutes § 16-245(m) and § 16-32(f), Connecticut’s Electric and Natural Gas Companies¹ are proud to deliver this 2023 Plan Update to the 2022-2024 Conservation & Load Management Plan (hereinafter, the 2023 Plan Update), to the Connecticut Department of Energy and Environmental Protection (DEEP).

On November 1, 2021, pursuant to Conn. Gen. Stat. § 16-245m, the Companies, in consultation with the Energy Efficiency Board (EEB), developed and submitted to DEEP the 2022-2024 Conservation & Load Management Plan (2022-2024 Plan or Plan).² As part of DEEP’s review of the 2022-2024 Plan, the agency submitted Requests for Information to the Companies soliciting additional information, held technical meetings, and requested public input through several Public Input Sessions and a round of public comments on DEEP’s Draft Determination.³ On June 1, 2022, DEEP issued its Final Determination⁴ which included Conditions of Approval, Updates to Connecticut’s Conservation & Load Management Cost-Effectiveness Testing, Summarized Public Comments to DEEP’s Technical Hearings, Draft Weatherization Standard, and Summarized Public Comments to DEEP’s Draft Determination.

The 2022-2024 Plan was designed as a living document to be modified throughout the 2022-2024 term via annual Plan updates and budget reconciliation filings. This 2023 Plan Update is the first of two Plan updates⁵ and reports on program modifications and changes to budgets and goals made in response to DEEP’s Final Determination and Conditions of Approval, new legislation, code standards, and state policies. The Companies will also file two more budget reconciliation filings during the 2022-2024 term.⁶ These annual filings allow the Companies to report year-end actual budgets spent, goals achieved for the prior program year, make adjustments accordingly to the current

¹ The Electric Companies are The Connecticut Light and Power Company doing business as Eversource Energy (Eversource) and The United Illuminating Company (United Illuminating). The Natural Gas Companies are the Connecticut Natural Gas Corporation (CNG), Southern Connecticut Gas (SCG), and Yankee Gas Services Company doing business as Eversource. For the purposes of this Plan, any reference to both the Electric and Natural Gas Companies will be (collectively, the Companies). If a program or policy is designed for only the Electric Companies or Natural Gas Companies and/or individual utilities, the Plan Update text will explicitly state the responsible party.

² [2022-2024 Conservation & Load Management Plan](#), the 2022-2024 Plan was refiled on March 1, 2022.

³ [DEEP Draft Determination: Approval With Conditions of the 2022-2024 Plan](#), April 12, 2022.

⁴ [DEEP Final Determination: Approval with Conditions of the 2022-2024 Plan, Attachment A: Schedule of Conditions of Approval, Attachment B: Updates to Connecticut Conservation & Load Management Effectiveness Testing, Attachment C: Summarized Public Comments Regarding the 2022-2024 Plan, Attachment D: Draft Weatherization Standard, and Attachment E: Summarized Public Comments Regarding DEEP’s Draft Determination](#), June 1, 2022.

⁵ The 2024 Plan Update will be filed on November 1, 2023.

⁶ A 2021 [budget reconciliation filing](#) was submitted on March 1, 2022 (for the 2021 Program Year). This document was the budget reconciliation filing for the 2021 Program Year and included 2021 year-end actual budgets spent, goals achieved in 2021, and made adjustments to the 2022 program year’s budgets and savings. Two additional budget reconciliation filings will be filed on March 1, 2023 (for the 2022 Program Year), and March 1, 2024 (for the 2023 Program Year).

program year's budgets and savings, as well as make program modifications in response to DEEP compliance orders, legislation, and feedback from contractors, regulators, and other stakeholders.

The Companies worked collaboratively with the Energy Efficiency Board (EEB), EEB Technical Consultants, regulators, and stakeholders to develop the 2023 Plan Update's budgets and program modifications. The EEB and DEEP held two Public Input Sessions where contractors, municipal officials, regulators, and other stakeholders were able to voice their suggestions for modifications, improvements, new initiatives, and qualifying energy-efficient technologies.⁷ Throughout the year, the EEB and the Companies solicit feedback through annual Public Input Sessions, as well as invite public comments at the EEB's monthly committee and board meetings, which also informed the development of the 2023 Plan Update.

2022-2024 Savings and Benefits

The 2022-2024 Plan is a \$713 million investment in making Connecticut more energy efficient. Connecticut's energy efficiency and demand management programs drive energy savings, reduce greenhouse gas emissions and other air pollutants,⁸ train and employ a highly skilled and local clean energy workforce, and strengthen the state's economy by increasing energy affordability and improving business productivity. Connecticut's energy efficiency and demand management initiatives provide significant economic and environmental benefits to the state's residents and businesses.

For the 2022-2024 term, the Companies' energy-saving initiatives will generate \$2.33 into Connecticut's economy for every \$1 invested in energy efficiency and provide an economic lifetime benefit of \$1.7 billion dollars. These benefits are reinvested into the state's economy and workforce through direct and indirect services, training initiatives, and professional development. In Connecticut, energy efficiency programs create and support 33,573 jobs annually.⁹ In addition to these quantifiable benefits, installed measures improve the efficiency of industrial and commercial

⁷ For more information and stakeholder comments (verbal and written) from the two Public Input Sessions, please see Appendix B.

⁸ The primary greenhouse gas reduced by energy efficiency and demand management programs is carbon dioxide (CO₂). Other air pollutants that are reduced due to the implementation of the 2022-2024 Plan's programs include nitrous oxides (NO_x) and sulfur oxides (SO_x). The Companies track the resulting reductions of CO₂, NO_x, and SO_x and these numbers are reported in various figures and tables throughout this Plan Update document.

⁹ Source: BW Research, on behalf of the Joint Committee of the Energy Efficiency Board and the Connecticut Green Bank Board of Directors, [2021 Connecticut Clean Industry Energy Report](#), rel. January 24, 2022. The report reflects 2020 data and reports clean energy employment declined by 5.9 percent (2,600 workers) in 12 months. The COVID-19 pandemic resulted in wiping out nearly four years of clean energy employment growth across the state, sending the clean energy labor market back to 2016 employment levels. Clean energy investment supports 41,500 Connecticut jobs in HVAC, electrical, manufacturing, insulation, weatherization and solar industries. This includes 33,573 energy efficiency jobs. Despite these losses, the clean energy industry is projected to see an 8.2 percent employment growth in 2021 with the addition of around 3,400 clean energy jobs.

operations and several initiatives provide and support customized strategic energy management and sustainable business practices to commercial and industrial (C&I) and municipal customers.

During the 2022-2024 term, the energy efficiency and demand reduction measures installed will result in emission reductions of 4.4 million tons of carbon dioxide and further reductions in other air pollutants, such as sulfur oxides and nitrous oxides. In addition, Connecticut initiatives will result in:

- Electric lifetime savings of 4.4 billion kilowatt-hours (kWh),
- Natural gas lifetime savings of 19.3 billion cubic feet of natural gas (Bcf),
- Oil lifetime savings of 81.1 million gallons,
- Propane lifetime savings of 18.4 million gallons, and
- A combined annual peak demand reduction (active and passive) of 405 Megawatts (MW).

The figure below details the annual operating budgets and lifetime and annual energy savings forecasted for the 2022, 2023, and 2024 program years.

2022-2024 Savings & Benefits*

Year	Budgets (\$000)			Annual Savings							Lifetime Savings	
	Electric	Natural Gas	Total	Electric (GWh) *	Peak (MW) **	Natural Gas (MMcf)	Oil (gallons)	Propane (gallons)	Annual Savings Million (MMBtus) ***	CO ₂ Emissions (tons)	Lifetime Benefit (\$000)	Lifetime Savings (MMBtus) ***
2022	\$199,845	\$44,878	\$244,723	197	135	382	1,548,671	294,364	1.3	126,510	\$598,196	16.8
2023	\$178,992	\$54,642	\$233,635	153	131	482	1,287,687	321,956	1.2	114,416	\$526,840	15.6
2024	\$180,119	\$55,231	\$235,350	146	139	472	1,457,481	372,845	1.2	113,984	\$534,668	15.6
Total	\$558,956	\$154,751	\$713,707	496	405	1,337	4,293,839	989,166	3.8	354,909	\$1,659,703	47.9

*Abbreviation for Gigawatt hours.

**Savings include demand response programs.

***In millions of MMBtu (one million British Thermal Units). Figures listed are site MMBtus and address only the energy saved at the meter level.

2022-2024 Energy Efficiency and Demand Management Initiatives will:

Benefit the economy

Programs generate \$2.34 into Connecticut's economy for every \$1 invested in energy efficiency and provide an economic lifetime benefit of \$1.7 billion dollars



Support jobs

In Connecticut, energy efficiency programs create and support 33,573 jobs annually*

Generate energy savings

- Electric lifetime savings of 4.5 billion kilowatt-hours (kWh)
- Natural gas lifetime savings of 19.3 billion cubic feet of natural gas (Bcf)
- Oil lifetime savings of 80.16 million gallons
- Propane lifetime savings of 17.9 million gallons
- Combined annual peak demand reduction (active and passive) of 405 Megawatts (MW)



Reduce carbon emissions

Energy efficiency and demand reduction measures installed will result in emission reductions of 4.4 million tons of carbon dioxide and further reductions in other air pollutants, such as sulfur oxides and nitrous oxides

References

*Source: BW Research, on behalf of the Joint Committee of the Energy Efficiency Board and the Connecticut Green Bank Board of Directors, 2021 Connecticut Clean Industry Energy Report, rel. January 24, 2022. The report reflects 2020 data.

SECTION ONE: OVERVIEW

1.1 Legislative History

For a complete legislative history regarding Connecticut’s energy efficiency and demand management programs, please refer to the 2022-2024 Plan.¹⁰ In 1998, the Connecticut Energy Efficiency Fund (Fund) was established by the Connecticut General Assembly’s passage of *Public Act 98-28—An Act Concerning Electric Restructuring*. Public Act 98-28 also established the Energy Conservation Management Board (known today as the EEB) to advise Connecticut’s Electric Companies in developing their annual energy efficiency and load management plans. In 2005, the Connecticut General Assembly passed *Public Act 05-01—An Act Concerning Electricity and Energy Efficiency*. This legislation created a funding mechanism for the Natural Gas Companies to develop and implement cost-effective programs that reduce natural gas consumption for residential and C&I customers. Under Public Act 05-01, the EEB’s role was expanded to provide guidance for the Electric and Natural Gas Companies in their development of energy efficiency programs for electric and natural gas customers.

The 2023 program year covers year 24 of electric conservation programs since the passage of Connecticut’s electric restructuring act (Public Act 98-28)¹¹ and will cover year 17 of natural gas conservation programs since energy independence legislation (Public Act 05-01) was passed.¹²

1.1.A MMBtu Savings

In 2018, the Connecticut General Assembly passed *Public Act 18-50—An Act Concerning Connecticut’s Energy Future*.¹³ Public Act 18-50 also revised the state’s general statutes, specifically § 16-245, adding “demand management” to the Companies’ legislatively directed program mandates,¹⁴ required the Companies to be fuel blind in the delivery of energy efficiency programs, and requires the Companies to meet set MMBtu (one million British thermal units) goals.¹⁵ The figure below details the planned MMBtu savings for the 2022-2024 term.

The Companies exceeded the mandated goal energy reductions by delivering 1.9 million MMBtus for both the 2020 and 2021 program years.¹⁶ The Connecticut General Assembly initially established these MMBtu goals when lighting

¹⁰ 2022-2024 Conservation & Load Management Plan, pp. 20-22.

¹¹ [Public Act 98-28](#), *An Act Concerning Electric Restructuring*, April 28, 1998.

¹² [Public Act 05-01](#), *An Act Concerning Electricity and Energy Efficiency*, July 21, 2005.

¹³ [Public Act 18-50](#), *An Act Concerning Connecticut’s Energy Future*, approved May 24, 2018. Also known as Senate Bill 9 (SB 9).

¹⁴ Public Act 18-50, § 9(d)(1). “...of implementing “cost effective energy conservation programs, demand management and market transformation initiatives.” This directive started in 2020.

¹⁵ Public Act 18-50, § 9(d)(1). “...provided a customer of an electric distribution company may not be denied such services based on the fuel such customer uses to heat such customer’s home.”

¹⁶ Figures listed are site MMBtus and address only the energy saved at the meter level.

savings (electric) from the Residential Retail Products program were significantly high. As the market transformed to light-emitting diode (LED) technology, the Companies have seen a substantial reduction in claimable electric savings and had to adjust their MMBtu goals accordingly. Therefore, the Companies will need to braid other energy efficiency measure funding sources to reach their legislative MMBtu goals in the 2022-2024 term. This includes leveraging funding from private and public entities, including the Department of Energy’s (DOE) Weatherization Assistance Program (WAP). Based on the current average MMBtu’s savings per dollar funding, the Companies estimate an additional \$50M to \$70M in annually funding would be needed to achieve the 1.6M annual MMBtu savings goal.

2022-2024 Plan Million MMBtu Savings (Annual)*

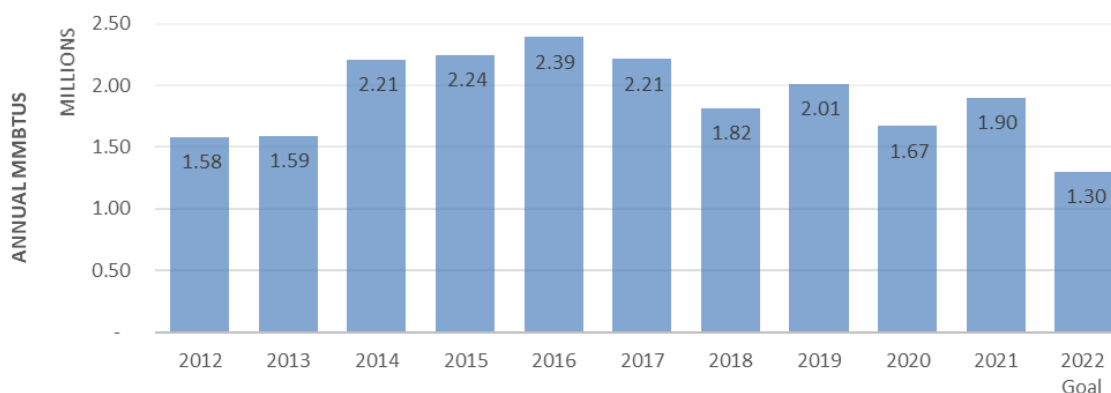
Year	2022	2023	2024
Legislative Goal	1.6	1.6	1.6
Companies’ Goal	1.3	1.2	1.2

**In millions of MMBtus.*

1.2 Energy Savings

The Companies have a proven record of developing and administering energy efficiency and demand management programs generating sustainable annual and lifetime energy savings for Connecticut’s residents and businesses. Since 2000, the Electric Companies’ energy-saving programs have achieved 6,624 annual gigawatt-hour (GWh) and 77,281 lifetime GWh savings. The Natural Gas Companies have helped customers realize 6,292 MMcf annually and 93,585 lifetime MMcf savings.

Annual Energy Savings in MMBtus (2012-2022)

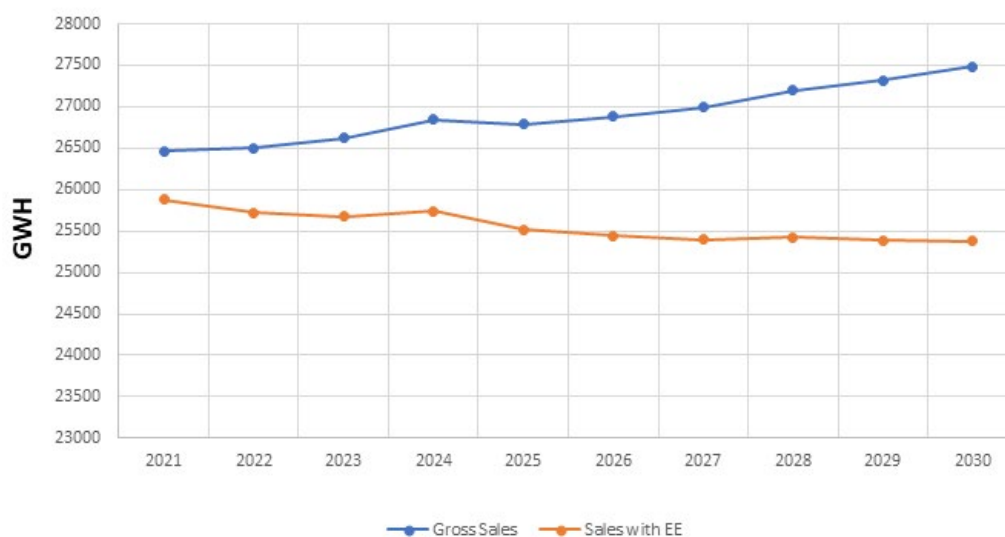


1.2.A Electric Savings

For the 2022-2024 term, the Companies expect to achieve 524 annual GWh savings and 1,424 MMcf annual savings, which is enough to power approximately 85,000 homes for one year. The figure below depicts the projected electric

savings (in GWh) resulting from the Companies' energy efficiency and demand management programs and how energy efficiency is a valuable resource for the state to decrease electricity consumption in Connecticut. The *Gross Sales* data (blue line) details the forecasted electric consumption unchecked by the projected impacts of energy efficiency efforts in Connecticut. The *Sales with Energy Efficiency* data (red line) reflect the projected impacts to electricity consumption due to Connecticut's energy efficiency programs. The difference between the lines is the savings due to energy efficiency.

Projected Electric Savings (2021 – 2030)



The figures below provide a summary of the projected annual and lifetime savings from the Electric Companies' energy efficiency programs in the 2022-2024 term and the percentage of electric sales.

Electric Companies—Summary of Annual Savings and Percentage of Sales

Companies	2022			2023			2024			2022-2024		
	GWh Sales	Annual Savings (GWhs)	% of Sales	GWh Sales	Annual Savings (GWhs)	% of Sales	GWh Sales	Annual Savings (GWhs)	% of Sales	GWh Sales	Annual Savings (GWhs)	% of Sales
Eversource Electric	20,212	158.8	0.79%	20,166	118.5	0.59%	20,503	113.6	0.55%	60,881	390.9	0.64%
United Illuminating	4,727	38.6	0.82%	4,674	34.4	0.74%	4,622	32.5	0.70%	14,023	105.5	0.75%
Total	24,939	197.4	0.79%	24,840	153.0	0.62%	25,125	146.1	0.58%	74,904	496.4	0.66%

* Totals may vary due to rounding.

Electric Companies—Summary of Lifetime Savings

	2022		2023		2024		2022-2024		
	Eversource Lifetime Savings (GWhs)	United Illuminating Lifetime Savings (GWhs)	Eversource Lifetime Savings (GWhs)	United Illuminating Lifetime Savings (GWhs)	Eversource Lifetime Savings (GWhs)	United Illuminating Lifetime Savings (GWhs)	Eversource Lifetime Savings (GWhs)	United Illuminating Savings (GWhs)	Total Lifetime Savings (GWhs)
Residential	359.2	65.6	197.0	52.6	143.3	53.2	699.5	171.4	870.9
C&I	1,072.2	286.4	859.3	256.4	858.8	242.5	2,790.3	785.3	3,575.6
Total	1,431.4	352.0	1,056.4	309.0	1,002.1	295.7	3,489.8	956.7	4,446.5

* Totals may vary due to rounding.

Electric Companies—Summary of Actual Annual and Lifetime Savings (through Q2 2022)

Companies	2022 Actual Annual Savings			2022 Actual Lifetime Savings		
	GWh Sales	Annual Savings (GWhs)	% of Sales	Residential (GWhs)	C&I (GWhs)	Total (GWhs)
Eversource Electric	9,919	95.6	0.96%	239.2	563.6	802.8
United Illuminating	2,232	21.0	0.94%	74.8	170.4	245.2
Total	12,151	116.6	0.96%	314.0	734.0	1,048.0

* Totals may vary due to rounding.

1.2.B Natural Gas Savings

The figures below detail the projected annual and lifetime savings from the Natural Gas Companies' energy efficiency programs and percentage of natural gas sales.

Natural Gas Companies—Summary of Annual Savings and Percentage of Sales

Companies	2022			2023			2024			2022-2024		
	MMcf Sales	Annual Savings (MMcf)	% of Sales	MMcf Sales	Annual Savings (MMcf)	% of Sales	MMcf Sales	Annual Savings (MMcf)	% of Sales	MMcf Sales	Annual Savings (MMcf)	% of Sales
Eversource Gas	53,155	152.9	0.29%	54,615	238.0	0.44%	55,499	234.5	0.42%	163,269	625.4	0.39%
Connecticut Natural Gas	37,235	124.1	0.33%	37,369	127.5	0.34%	37,525	125.0	0.33%	112,128	376.6	0.34%
Southern Connecticut Gas	33,067	104.9	0.32%	33,510	116.7	0.35%	33,851	112.9	0.33%	100,428	334.5	0.33%
Total	123,457	381.9	0.31%	125,494	482.2	0.38%	126,875	472.3	0.37%	375,825	1,336.5	0.36%

* Totals may vary due to rounding.

Natural Gas Companies—Summary of Lifetime Savings

Sector	2022 Lifetime Savings (MMcf)	2023 Lifetime Savings (MMcf)	2024 Lifetime Savings (MMcf)	2022-2024 Lifetime Savings (MMcf)
Residential	3,791.0	3,861.4	3,643.0	11,295.4
C&I	2,034.6	2,969.6	2,969.2	7,973.4
Total	5,825.6	6,830.9	6,612.2	19,268.8

* Totals may vary due to rounding.

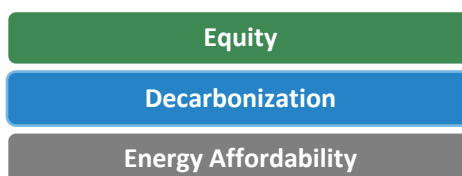
Natural Gas Companies—Summary of Actual Annual and Lifetime Savings (through Q2 2022)

Companies	2022 Actual Annual Savings			2022 Actual Lifetime Savings		
	MMcf Sales	Annual Savings (MMcf)	% of Sales	Residential (MMcf)	C&I (MMcf)	Total (MMcf)
Eversource Gas	30,363	115.9	0.38%	1,467.4	552.8	2,020.3
Connecticut Natural Gas	20,894	62.7	0.30%	834.1	218.5	1,052.6
Southern Connecticut Gas	19,496	50.2	0.26%	815.6	155.2	970.8
Total	70,753	229	0.32%	3,117	927	4,044

* Totals may vary due to rounding.

1.3 Plan Priorities

The 2022-2024 Plan's climate-forward framework is structured around three priorities:



To develop the 2023 Plan Update, the Companies worked collaboratively with the EEB, EEB Technical Consultants, regulators, and stakeholders to advance the 2022-2024 Plan's priorities during the 2023 and 2024 program years. In the figure on the next page, the Companies have highlighted how they plan to address these three priorities across the Residential, C&I, and Education, Workforce & Community Outreach Portfolios.

2022-2024 Plan Priorities

Residential	Commercial & Industrial	Education, Workforce Development & Community Outreach
Equity		
<ul style="list-style-type: none"> • Use DEEP’s Energy Efficiency Equity baseline (E3b) to identify areas of the state with lower participation and to inform new targeted customer outreach efforts. • Continue to analyze customer data and target customers in distressed municipalities/environmental justice communities and market sectors with untapped potential. • Market to customers in non-English languages to increase audience engagement. • Partner with a local supplier diversity organization to reach more diverse suppliers and new entrants. • Work with EEB’s diversity, equity and inclusion (DEI) consultant to help modify and refocus programs with an equity lens. 	<ul style="list-style-type: none"> • Continue to analyze customer data and target customers in distressed municipalities, environmental justice communities, and market sectors with untapped potential. • Market to customers in non-English languages to increase audience engagement. • Partner with a local supplier diversity organization to reach more diverse suppliers and new entrants. • Work with EEB’s DEI consultant to help modify and refocus programs with an equity lens. 	<ul style="list-style-type: none"> • Use Community Partnership Initiative to reach customers in distressed municipalities and environmental justice and non-English speaking communities. • Ensure 60 percent of the <i>Energize CT Energy in Action</i> mobile exhibit’s school tours and community events are in distressed municipalities and environmental justice communities. • Implement proactive Workforce Development Strategy focusing on growing workforce and recruiting/training workers from underrepresented communities, such as ethnic and racial minorities, and women. • Include extra weighting for certified minority/women/veteran-owned businesses when evaluating/scoring competitive vendor proposals.
Decarbonization		
<ul style="list-style-type: none"> • Educate consumers on benefits of heat pump technologies and develop contractor locator tool to direct customers to qualified installers. • Promote existing homes’ weatherization efforts through Home Energy Solutions (HES)/HES-Income Eligible programs. • Promote all-electric and sustainable building practices (e.g., Zero Energy Homes, Leadership in Energy and Environmental Design, and Passive House) to new construction market actors. • Expand demand response offerings to support fuel and carbon neutrality, including smart thermostats, air conditioning load control, battery storage, and electric vehicle chargers. • Maintain Qualified Products List (QPL) to standardize efficiency and qualifying criteria for heat pump technologies in Northeast. 	<ul style="list-style-type: none"> • Promote all-electric and sustainable building practices (e.g., Net Zero Energy Buildings). • Enhance weatherization efforts and use building energy management control strategies for commercial and municipal buildings. • Educate contractors and customers on heat pump technologies and benefits. • Expand demand response offerings to support fuel and carbon neutrality, including smart thermostats, air conditioner load control, lighting/dimming, battery storage, industrial load shifting, and electric vehicle chargers. • Claim savings for delivered fuels (oil and propane) resulting from the installation of energy efficiency measures. 	<ul style="list-style-type: none"> • Leverage manufacturer and distributor education and training efforts to promote heat pump technologies. • Encourage contractors to attend and complete manufacturer-led heat pump trainings to broaden base of qualified installers. • Coach contractors to recognize prime opportunities such as replacement of end-of-life air conditioning systems with heat pumps. • Increase the number of Building Professional Institute qualified weatherization contractors to serve both the residential and commercial markets. • Partner with local workforce development training partners to increase the number of weatherization specialists in the Connecticut workforce.
Energy Affordability		
<ul style="list-style-type: none"> • Leverage funding from Low-Income Heating Energy Assistance Program (LIHEAP), <i>American Rescue Plan Act</i>, DOE’s WAP and the <i>Inflation Reduction Act</i> to address weatherization health and safety barriers and impact more low-income customers. • Increase stocking/sale of efficient equipment at retailers. • Enhance and deploy web-based resources to educate customers about low-carbon technologies, high-efficiency products, and active demand response (ADR) offerings. • Continue to offer virtual pre-assessments through HES/HES-Income Eligible programs to support installation of measures. • Use Census Tract Tool to streamline customer outreach efforts for contractors. • Hire an Add-On Measure coordinator to develop a network of contractors across the state to support the installation of energy efficiency and ADR measures for the HES-Income Eligible program. 	<ul style="list-style-type: none"> • Enhance promotion of existing loan products, such as CPACE, and increase financing options to C&I customers to support long-term investments that provide immediate energy savings with little/no upfront capital costs. • Offer virtual, pre-assessments through the Small Business Energy Advantage program to support the installation of energy efficiency and active demand reduction measures. • Conduct additional education and outreach to businesses to increase participation in energy efficiency and active demand response across market segments and customer classes. • Increase small business participation in weatherization measures, including targeting businesses in converted residences. 	<ul style="list-style-type: none"> • Provide energy efficiency seminars to schools and community-based organizations to help educate students and educators on various careers/paths in energy efficiency available to students. • Target residential and small business customers in distressed municipalities, environmental justice, and non-English speaking communities through community and direct outreach campaigns.

Priority 1: Equity

The Companies prioritized equity for the 2022-2024 Plan to ensure that the benefits of energy efficiency are spread equitably across the state, communities, neighborhoods, market segments, and customer types (e.g., residential, income-eligible, small business) they serve. For the 2023 and 2024 program years, the Companies will work with the EEB's diversity, equity and inclusion (DEI) consultant to help modify and refocus programs with an equity lens.

The Companies will also continue to conduct targeted outreach to customers, particularly those in distressed municipalities¹⁷ and environmental justice¹⁸ and non-English speaking communities. This outreach will continue to be primarily conducted through the Community Partnership Initiative. The Companies also continue to make progress on their workforce deliverables outlined in the 2022-2024 Plan and have added a goal of partnering with a local supplier diversity organization to reach more diverse suppliers and new entrants. In addition, the Companies will create an online platform for new recruits to apply for employment opportunities in energy efficiency. This will expand equity in the workforce.

Throughout 2022, the Companies continuously modified their program offerings and made efforts to streamline access and qualification, especially for low-income residential customers. The Companies continue to develop tools to help contractors identify customers and communities throughout the state who are deemed "income eligible" through US census tract data. In 2023, the Companies will continue to build on these efforts to reach more customers.

For the 2023 and 2024 program years, the Companies will continue to focus on reaching all C&I market segments. To determine targeted quartiles and sectors to reach their C&I equity metrics, the Companies analyze participation rates, fund contributions received, energy usage, annual kilowatt-hour (kWh) savings, and lifetime kWh savings. The equity metric helps the Companies focus on reaching customers and market segments with historically lower participation rates to ensure equity across the entire C&I customer base. In 2023, the Companies will continue to focus on reaching all C&I market segments.

¹⁷ For the purposes of the 2022-2024 Plan and 2023 Plan Update, the Companies define "distressed municipalities" in alignment with the Connecticut Department of Economic and Community Development's (DECD) definition of "distressed municipalities." According to Conn. Gen. Stat. § 32-9p: "a distressed municipality should be based on high unemployment and poverty, aging housing stock and low or declining rates of growth in job creation, population, and per capita income." The DECD's list of the 25 distressed municipalities is updated annually by DECD and is available [online](#).

¹⁸ Per Conn. Gen. Stat § 22a-20a, "environmental justice communities" are defined as a municipality on the DECD list of distressed municipalities (See footnote 10 above) or in a defined US census block. These defined census blocks are in municipalities that are not "distressed;" however, they have census block groups with 30 percent of their population living below 200 percent of the federal poverty level. A current list of these census blocks is available on the [DEEP website](#).

Priority 2: Decarbonization

Energy efficiency and demand management programs are key tools to help protect the environment through the reduction of carbon dioxide and other greenhouse gas emissions, such as nitrous oxides, sulfur oxides, and hydrochlorofluorocarbons (from refrigerants). Efforts during the 2022-2024 term will help transition the state to a zero-carbon economy.¹⁹ In 2023, the Companies will increase the number of Building Professional Institute (BPI) qualified weatherization contractors to serve both the residential and commercial markets. The Companies are partnering with local workforce development training partners to increase the number of weatherization specialists in the Connecticut workforce.

In 2023, the Companies will remain focused on promoting decarbonization efforts that include high-efficiency, low-carbon space and water heating technologies, such as heat pumps and heat pump water heaters. By January 1, 2023, the Companies will transition the residential Heat Pump pilot to a full-fledged program. While the current pilot is for oil and propane customers, the offering has transitioned to an open market program through a downstream rebate that will include conversions of electric resistance heating. In addition, the Companies have increased efforts to build out the Heat Pump Contractor Network and to provide additional customer support services.

Additional decarbonization and fuel neutrality strategies include an increase in promoting Zero Net Energy, Zero Net Energy Ready, and Passive House certifications for commercial, multifamily, and residential new construction projects. In 2023, the Residential New Construction program will transition to an all-electric offering. Additionally, the Companies also plan to heavily promote weatherization (e.g., insulation and air sealing measures) to Small Business Energy Advantage program participants and will provide training and support to contractors. The Companies will also expand the Residential Portfolio's Early Retirement Initiative (removing and recycling old, inefficient refrigerators and freezers) to the C&I Portfolio. For C&I customers, this expansion will allow equipment recycling for commercial kitchen equipment.

The Companies will continue to promote the co-delivery of energy efficiency and demand management programs that support decarbonization and carbon neutrality, including smart thermostats, electric vehicle chargers, and battery storage. Additionally, several of the Public Utility Regulatory Authority's (PURA) grid modernization efforts

¹⁹ In 2008, the Connecticut General Assembly passed Public Act 08-98—*An Act Concerning Global Warming Solutions* (Global Warming Solutions Act). The Global Warming Solutions Act requires the state to reduce greenhouse gas emissions to 10 percent below 1990 levels by January 2020 and to reduce greenhouse gas emissions to 80 percent below 2001 levels by January 2050.

were launched on January 1, 2022 (electric vehicle chargers and battery storage).²⁰ In 2023, the Companies will continue to promote grid mod programs to energy efficiency program participants to deliver holistic clean energy solutions.

Priority 3: Energy Affordability

Energy affordability is the third priority for the 2022-2024 term. According to the ACEEE, a household’s or business’s energy burden—the percentage of household or business income spent on energy bills—provides an indication of energy affordability.²¹ Connecticut’s energy efficiency programs offer a long-term solution to high energy burdens and can help households and businesses reduce their energy usage through insulation, heating and cooling system upgrades, and energy-efficient appliances. These measures can help lower energy bills and improve building health, comfort, and safety.

Efficiency programs targeting low-income households are well suited to addressing high energy burdens. These programs are tailored to the needs of low-income communities and typically provide weatherization and efficiency upgrades at no cost to participants. Households with a six percent energy burden or higher are defined as households with high energy burdens. For the Residential Portfolio, the Companies will remain focused on reducing the energy burdens of low and moderate-income households who pay a disproportionate share of their household income toward energy bills. “Low income” is defined as a household whose income is at or below 60 percent State Median Income and “moderate income” is defined in Connecticut as a household whose income is at or below 80 percent of the State Median Income and above 60 percent.²² In accordance with DEEP’s findings and recommendations in the [Equity Energy Efficiency \(E3\) proceeding](#), the Companies will continue to monitor moderate-income participation and are prepared to adjust program outreach and incentives accordingly.²³

The Companies recognize that many customers need more information, guidance, or resources to help them identify the next steps and to better understand the importance of making these improvements and learning new

²⁰ PURA, Interim Decision, Docket No. 17-12-03: PURA Investigation into Distribution System Planning of the Electric Distribution Companies, Oct. 2, 2019, available [online](#). This interim decision outlined [PURA’s framework](#) for investigating methods for realizing an equitable modern electric grid in Connecticut, including energy storage.

²¹ ACEEE, [Topic Brief: Understanding Energy Affordability](#), rel. Sep 2, 2019.

²² See 2022-2024 Plan, pp. 42-48 (Residential Portfolio) and pp. 106-107 (C&I Portfolio) for more discussions regarding energy affordability for Connecticut residents and businesses. “Low income” is defined as a household whose income is at or below 60 percent State Median Income and “moderate income” is defined in Connecticut as a household whose income is at or below 80 percent of the State Median Income and above 60 percent.

²³ The Companies will update their definition of “moderate-income customers” in accordance with DEEP’s findings and recommendations in the E3 proceeding.

technologies. In 2023, the Companies will implement several activities to engage customers including offering an Add-On Measure coordinator for the HES-Income Eligible program to build out a statewide contractor network for add-on measures and support installation of energy efficiency and active demand response measures. Additional information regarding these activities are detailed in Section Two.

These activities will be combined with increased promotion of the Residential Portfolio's financial offerings and coordination with the Connecticut Green Bank. The Companies will look to offer increased C&I financing options in 2023; thus, allowing business customers to make long-term energy efficiency investments providing immediate benefits with little to no upfront capital costs. The Companies will also continue to offer increased financial assistance to customers to incentivize them to make long-term, strategic energy efficiency choices.

The Companies will look to increase energy affordability for C&I customers, particularly small businesses and microbusinesses by conducting more education and outreach to businesses to increase participation in energy efficiency and active demand response programs across market segments and customer classes. In addition, the Companies will continue to conduct the Microbusiness Initiative to make it easier for small business customers to participate in energy efficiency and adopt comprehensive measures.

1.4 Funding Sources

For the 2022-2024 term, the primary funding sources for Connecticut's energy efficiency programs will be: (1) a six-mill Conservation Adjustment Mechanism (CAM) on customer electric bills²⁴ and (2) contributions from natural gas customers (on firm rates) through the natural gas CAM. Additional funding sources for the 2022-2024 term will include the Regional Greenhouse Gas Initiative (RGGI), a Northeast carbon trade system and the Independent System Operator-New England's (ISO-NE) Forward Capacity Market (FCM). The figures below summarize the statewide funding for the 2022-2024 Plan's electric and natural gas energy efficiency programs.

In addition to the above-referenced funding sources, the Companies, the EEB, EEB Technical Consultants, and DEEP are working on an action plan to secure additional funding sources and tax credits that are expected to be available on January 1, 2023. These will be federally funded through the *American Resource Plan Act of 2021* (ARPA),²⁵

²⁴ Similar to a millage rate tax structure on property, the CAM charge is a 0.6 cent per kilowatt-hour charge to support energy efficiency programs.

²⁵ "Text - H.R.1319 - 117th Congress (2021-2022): American Rescue Plan Act of 2021." *Congress.gov*, Library of Congress, March 11, 2021, <http://www.congress.gov/>.

Infrastructure Investment and Jobs Act,²⁶ and the *Inflation Reduction Act of 2022*²⁷ and dispersed to the states. This braiding of other energy efficiency measure funding sources will help the Companies reach their legislative MMBtu goals in the 2022-2024 term. This includes leveraging funding from private and public entities, including WAP. Based on the current average MMBtu's savings per dollar funding, the Companies estimate an additional \$50M to \$70M in annually funding would be needed to achieve the 1.6M annual MMBtu savings goal.

Electric Program Funding Sources

	2022 Eversource Electric Revenues	2022 UI Revenues	2022 Combined Total	2023 Eversource Electric Revenues	2023 UI Revenues	2023 Combined Total	2024 Eversource Electric Revenues	2024 UI Revenues	2024 Combined Total
ISO-NE FCM	\$24.6	\$4.9	\$29.6	\$16.0	\$3.2	\$19.1	\$12.8	\$2.7	\$15.4
RGGI	\$16.6	\$4.2	\$20.8	\$19.8	\$4.9	\$24.7	\$20.2	\$5.0	\$25.2
CAM (Net of Gross Receipts Tax)**	\$123.7	\$25.8	\$149.5	\$109.0	\$26.2	\$135.2	\$113.6	\$25.9	\$139.5
TOTAL (Energy Efficiency Revenues)	\$164.9	\$34.9	\$199.8	144.7	\$34.2	\$179.0	\$146.5	\$33.6	\$180.1

*In millions. Totals may vary due to rounding.

** 2022 CAM includes carryover/carry-under.

Natural Gas Program Funding Sources

Natural Gas Energy Efficiency Revenues	2022 Conservation Adjustment Mechanism	2023 Conservation Adjustment Mechanism	2024 Conservation Adjustment Mechanism
Eversource Natural Gas Revenues	\$17.9	\$23.6	\$23.9
CNG Revenues	\$14.8	\$16.4	\$16.4
SCG Revenues	\$12.2	\$14.7	\$14.8
TOTAL (Energy Efficiency Revenues)	\$44.9	\$54.6	\$55.2

*In millions. Totals may vary due to rounding.

²⁶ "Text - H.R.3684 - 117th Congress (2021-2022): Infrastructure Investment and Jobs Act." *Congress.gov*, Library of Congress, November 15, 2021, <http://www.congress.gov/>.

²⁷ "Text - H.R.5376 - 117th Congress (2021-2022): Inflation Reduction Act of 2022." *Congress.gov*, Library of Congress, August 16, 2022, <http://www.congress.gov/>.

1.5 Performance Management Incentives

The Companies earn an annual pay-for-performance management incentive for managing Connecticut’s energy efficiency and demand management programs and budgets. A performance management incentive is tied to program specific-oriented metrics, including, but not limited to energy savings and net economic benefits. Per the Final DEEP Determination, the Companies will earn performance management incentive earnings using a sliding scale based on a percentage of Company spending (2.5 percent to 7 percent) corresponding with the level of performance (75 percent to 135 percent) dependent on if goals and/or targets are met or exceeded. Currently, the Companies are working with the DEI consultant to develop new equity metrics for the 2023 program year.

SECTION TWO: PORTFOLIO CHANGES

The Companies developed the 2023 Plan Update’s program modifications and enhancements in collaboration with the EEB, the EEB Technical Consultants, and DEEP. The 2023 Plan Update covers year two of the 2022-2024 Plan. These energy efficiency and demand management programs and initiatives are designed to help residential and C&I customers reduce their energy costs, save energy, and decrease greenhouse gas emissions, as well as support the three key priorities for the upcoming term—equity, decarbonization, and energy affordability. The structure for the 2023 Plan Update is detailed below:

- **Section Two.** Describes the program modifications and enhancements for the Companies’ 2023 Residential, C&I, and Education, Workforce Development & Outreach Portfolios.
- **Section Three.** Details the Companies’ benefit-cost screening tests and any changes/modifications made.
- **Section Four.** Describes the third-party evaluation recommendations issued in 2021 and through June 30, 2022 and how the Companies plan to integrate the recommendations in the 2023 Plan Update’s program offerings.
- **Appendices A, B, and C.** Appendix A provides a summary of the 2023 Statewide Marketing Plan. Appendix B provides the Public Input Comments regarding the 2023 Plan Update and includes responses from the Companies and the EEB. Appendix C is a summary of DEEP’s Condition of Approval orders for the 2022-2024 Plan.
- **Appendix D.** Provides Budgets and Savings Summaries for the 2023, 2024, and 2024 program years based on the latest revenue forecasts and program modifications described in this 2023 Plan Update.

The Companies request approval from DEEP to implement the changes referenced in Sections Two, Three, and Four for the 2023 program year, as well as the budgets and savings tables detailed in Appendix D, with the understanding that the final budgets and savings reflecting year-end 2022 actual results will be filed on March 1, 2023 (the 2022 budget reconciliation filing).

2.1 Cross Sector Changes

2.1.A Advancing Decarbonization

DEEP's [Condition of Approval No. 11](#) requires the Companies to research and look for additional opportunities to advance decarbonization efforts in the Residential and C&I Portfolios. In 2022, the Companies submitted a proposal to DEEP outlining changes to incentives to promote low-carbon, high-efficiency heating, ventilation, and air conditioning (HVAC) and water heating equipment and systems. These proposed changes have been incorporated into the budget and savings tables in this 2023 Plan Update. The proposal was developed to ensure that the 2022-2024 Plan will be in alignment with DEEP's 2022 Comprehensive Energy Strategy (2022 CES) which is still being drafted. Once the 2022 CES is finalized, the Companies will make all efforts to:

- 1. Provide clear and unambiguous support for decarbonization and fuel neutrality.**

The Companies must use consistent baselines across all fuel types to determine incentives to meet this goal. Currently, the Companies' baselines change depending on the type of HVAC system a customer is planning to install. This results in inconsistent customer incentives and may not accurately reflect the savings associated with their adoption of low-carbon HVAC and water heating equipment. These instances occur because electrically heated projects use electric baselines while natural gas heated projects use fossil fuel baselines (e.g., Path 2: Lower Energy Use Intensity of the Energy Conscious Blueprint program). Establishing a consistent and fair baseline for all fuels will better reflect the savings impact the programs have on decarbonization and make decarbonization projects more financially viable for customers, especially those who heat with fossil fuels. This move to fuel neutrality will also allow the Companies to claim and report greenhouse gas emission reductions more accurately, reflecting what is occurring in the marketplace.

- 2. Support decarbonization and fuel neutrality to allow the Companies to engage with HVAC system selections.**

Currently, when the Companies offer a comparison of their support for a project with one system type versus another it is very difficult due to inconsistent baselines. Promoting fuel neutrality will help customers to better understand the true picture of cost and savings for their replacement of new HVAC and water heating equipment.

3. Claim savings and support decarbonization efforts to partially offset declining new construction savings due to code change and new standard practice baselines.

This change would help maintain the viability of the Companies' new construction programs. In addition, the change would help pivot the programs to a greater focus on decarbonization and fuel neutrality. Two third-party evaluations²⁸ are forthcoming that will examine the Companies' standard practice baselines and also explore what projects and measures customers would implement with support from the Companies' programs.

2.1.B Heat Pumps

On August 1, 2022, the Companies transitioned the Heat Pump pilot to a full-fledged program for the Residential Portfolio. The pilot was for oil and propane customers but has transitioned to an open market program, through a downstream rebate process incorporating conversions of electric resistance heating. In 2023, the Companies will increase their efforts for building out the Heat Pump Contractor Network and to provide customer support services. For C&I customers, the Companies will work with their Massachusetts counterparts to develop and/or modify a tool which will allow contractors to estimate savings and costs. The Companies will offer additional training for contractors to sell and install heat pumps and controls and for architects/engineers to design and specify heat pump applications. The Companies are realigning the costs and incentives for heat pumps for the 2023 Plan Update, as well as for other programs and measures.

The Companies recognize that many customers need more information, guidance, or resources to help them identify the next steps and to better understand the importance of making these improvements and learning new technologies. In late 2022 and in 2023, per DEEP's [Condition of Approval No. 2](#), the Companies will implement several activities to engage residential customers and drive higher participation in deeper energy efficiency measures, especially decarbonization measures. These activities will involve major shifts in the Companies' go-to-market strategies for residential and C&I customers. The Companies will:

1. Provide virtual no-cost heat pump consultations.

The Companies have contracted with a third-party resource to provide heat pump consultations. These consultations will help customers understand how heat pumps work, what rebates/incentives are offered, guidance on the best solution for the customer, how to work with contractors, and how to review/compare quotes.

²⁸ See R1968 RNC baseline study for the Residential Portfolio and C1902 ECB baseline study for the C&I Portfolio.

2. Develop and manage a Heat Pump Installer Network and provide contractor heat pump trainings.

The Companies have developed a Heat Pump Installer Network. Through this network, participating heat pump installers have access to sales tools including customer brochures, continued learning and training resources (including the eLearning Center), and rebates and financing information.

3. Engage with customers who have completed their initial visit (HES or HES-Income Eligible program).

This digital concierge service will include email direct outreach and videos designed to help customers navigate their next steps to implement deeper energy efficiency measures. Those customers who received an insulation recommendation will receive an additional email with an insulation-focused video to help them through the rebate process.

4. Develop and manage an insulation contractor network.

In 2022, the Companies issued a Request for Proposal for an implementer to train contractors regarding insulation best practices and to manage a Qualified Insulation Contractor Network. Customers will need to use an insulation contractor who has gone through the training and is part of the Qualified Insulation Contractor Network to receive a rebate for their insulation work. Training of current insulation contractor field staff will primarily be conducted in 2023.

5. Redesign the HES-Income Eligible program's add-on projects to improve the customer experience and increase the number of comprehensive projects completed.

In 2022, the Companies initiated a collaborative process to gather information from program staff, EEB Technical Consultants, and HES-Income Eligible Contractors to inform decisions and program design. On July 12, 2022, the Companies hosted an HES-Income Eligible Contractor Roundtable discussion to gather information for future design aspects of hiring an Add-On Coordinator (Coordinator).

The Companies are actively gathering data and fielding thoughts around contracting with a Coordinator who would develop a statewide contractor network for add-ons, perform quality control tasks for add-on proposals, and potentially manage HES-Income Eligible add-on projects after the initial visit. This Coordinator would interface with HES-Income Eligible customers and add-on measure contractors. In addition, the Coordinator could provide a review of the customer's recommendations, and braid funding sources for health and safety barrier remediation, federal WAP cost sharing, and other energy efficiency measure funding sources into the project.

The Companies plan to bring these efforts to market at scale to ensure that these additional services will be beneficial to customers' experiences and will help deliver on the Companies' 2022-2024 Plan commitments.

2.1.C HVAC and Water Heating Equipment

In DEEP’s [Condition of Approval No. 3](#) of the 2022-2024 Plan, the agency required the Companies to work with the EEB’s Evaluation Administrator (EA) to investigate the phase-out of incentives for replacing condensing natural gas equipment (e.g., boilers) during the 2022-2024 term in both the Residential and C&I Portfolios. In the 2023 program year, the Companies will begin to make rebate eligibility for residential natural gas HVAC systems more stringent and shift natural gas program budgets toward in-home services offerings—the HES program, HES-Income Eligible program, and the Multifamily Initiative.

The Companies expect to see a decline in natural gas HVAC activity beginning in Q2 2023. Eversource has decreased its natural gas HVAC budget for the 2023 and 2024 program years by \$1.6 million to reflect this shift. Based on the latest evaluation report, the Companies are considering decreasing the funding for condensing natural gas equipment (e.g., boilers and furnaces) in the C&I Portfolio by reducing or eliminating incentives.

In 2023, the Companies will eliminate central air conditioning equipment rebates.

2.1.D New Technology Review Process

In 2023, the Companies, EEB, and the EEB Technical Consultants will work on modifying the process for considering new products and equipment for the programs.

2.2 Residential Portfolio Changes

For the 2022-2024 term, the Companies will deliver a comprehensive Residential Portfolio to all residential market segments, including the new construction, single-family, multifamily, market-rate, and income-eligible markets. These energy efficiency and demand management programs and initiatives are designed to help residential customers reduce their energy costs, save energy, and decrease greenhouse gas emissions, as well as support the three key priorities for the upcoming term—equity, decarbonization, and energy affordability.

2022-2024 Residential Portfolio



2.2.A Residential New Construction

Transition to All-Electric Program

As a result of DEEP's [Condition of Approval No. 13](#), the Companies will transition the Residential New Construction program to an all-electric offering during the 2023 and 2024 program years.²⁹ For new construction program applications starting July 1, 2023, the Companies will not offer natural gas incentives or claim savings for envelope improvements in homes that heat with natural gas equipment; however, customer commitments from prior years (new construction projects started in previous years) may still need to be paid in the 2023, 2024, and 2025 program years.

The Companies note that transitioning to an all-electric offering will significantly affect participation in the Residential New Construction program. Approximately 80 percent of the current single-family homes enrolled in the offering would no longer be eligible and multifamily (5+ or more units) participation would also be drastically reduced. An all-electric offering will also impact the ability of the Companies to meet their equity goals as the elimination of natural gas incentives would impact urban areas and low-income communities greater than others.

While this would help transition new home building stock to decarbonization (2022-2024 Plan priority), this may also affect the number of participating new construction home building projects, particularly affordable and low-income housing units. The Companies are concerned that winter heating costs for low-income housing residents could also increase compared to heating with natural gas. This would have a direct effect on the Companies helping customers decrease their energy burdens and meeting their third 2022-2024 Plan priority—energy affordability.

In 2023, the Companies are exploring the inclusion of a specific heat pump incentive (e.g., dollar per ton or home for air source heat pumps, variable refrigerant flow, and ground source) for Residential New Construction projects to unambiguously support electrified heating. This will help the program support decarbonization and move toward an all-electric new construction package.

Home Energy Rating System Pathway

The Residential New Construction program operates under a performance-based incentive structure based on the Home Energy Rating System (HERS) Index where a HERS rating assigns a numerical rating to a newly constructed home's energy efficiency performance.³⁰ Qualified HERS Raters perform on-site inspections and use Ekotrope

²⁹ DEEP Condition of Approval No. 13, DEEP Determination, [Attachment A: Schedule of Conditions of Approval](#), Jun. 1, 2022.

³⁰ In the United States, the Residential Energy Services Network (RESNET) is responsible for the creation and maintenance of the RESNET Mortgage Industry National Home Energy Rating Standards, as well as certification and quality assurance on RESNET Provider organizations.

software to determine a home's HERS rating. This software uses a code home, or "Reference Home" as the baseline HERS index (usually has a score of 100) and compares it to the participating home to determine its score. The lower a HERS rating, the more efficient a home (e.g., a zero net energy would have a HERS Index of 0).

As a result of an ongoing evaluation (R1968 RNC Baseline Study) and the adoption of the new state building code on October 1, 2022, the Residential New Construction program's baseline HERS index and the Reference Home will be impacted. The HERS Index serves as the foundation of all single-family and multifamily building projects and helps the Companies determine program savings and incentives.

Building Code

In 2021, the State Building Inspector, State Fire Marshal, and the Codes and Standards Committee announced their intent to adopt the 2022 State Building and Fire Safety codes based on the 2021 editions of the International Code Council. The 2022 State Building Code incorporates the 2021 International Energy Conservation Code (IECC). In April 2021, the Committee's Code Adoption Subcommittee conducted a technical review of these codes along with Connecticut Department of Administrative staff. The review was completed in October 2021. The state essentially "skipped" the 2018 IECC as the energy code baseline and moved straight to the more stringent 2021 IECC. In 2022, the Companies worked with a third party to develop a code training schedule for external stakeholders and launched a series of code trainings in Q4 2022. The Companies will hold additional sessions following the 2021 IECC adoption period.

2.2.B Residential Rebates

In 2023, the Companies will offer a new downstream rebate for pool pumps—introduced in 2022. The Companies are also exploring offering incentives for heat recovery ventilation (HRV) and energy recovery ventilation (ERV).

If a home has a ducted central heating or cooling system, duct leakage testing can measure the air leakage throughout a home's ductwork system. If the duct leakage test indicates air leakage, then the HES or HES-Income Eligible vendor will seal the visible ductwork leaks on-site. In 2022, the Companies created a standalone Advanced Duct Sealing rebate for customers with existing ductwork or if it is installed with an updated heated system (participation in the HES or HES-Income Eligible is not required). Customers who are serviced through the HES and HES-Income Eligible programs will still be able to have Advanced Duct Sealing services completed at no cost.

2.2.C Home Energy Solutions and HES-Income Eligible Programs

Pay-for-Performance Pilot

Since the Companies provided their Pay for Performance (P4P) straw proposal as part of the 2021 DEEP Condition of Approval No. 3, there has been additional experience gained in the energy-efficiency residential sector. Thus, the Companies have updated their market research to further understand the opportunities and efficacy of P4P in the residential energy efficiency sector. The Companies have met with the EEB Technical Consultants and the EA to share research information and current residential program priorities. Additionally, the 2022 residential sector has seen high demand in the Companies' premier program offerings (HES and HES-Income Eligible) which have put budgetary pressures in their ability to further develop and offer a statewide P4P pilot. Additional considerations from all parties include concerns about the ability to drive meaningful energy savings results utilizing a P4P model that would not be disruptive to the current market. The Companies researched three P4P pilot programs across the nation to determine lessons learned and opportunities to integrate best practices into their potential pilot. The review revealed pilot efforts with high complexity and varying, but generally low, results of success.

With this updated research, feedback, and the current budgetary constraints in 2022 and the forecasted budget reductions projected for 2023, the Companies are reluctant to pursue moving forward with a P4P pilot program at this time, and respectfully request that this P4P pilot concept be reconsidered at the end of 2023.

Establish Qualified Installer Network for Insulation

The Companies are currently working to transition the current open market insulation rebate to a Qualified Insulation Installer Network by establishing best practices for insulation installation training that will be provided to contractors who want to use the insulation rebate with their customers. The Companies are in the developmental stages of an "Insulation Training Boot Camp" for contractors consisting of both online and in-person training. Trainings will focus on identifying and evaluating opportunities for insulation, installing identified opportunities for insulation, and identifying and installing insulation using program values of proper workmanship.

The Insulation Training Boot Camp will have two tiers of training:

- General training for HES and HES-Income Eligible field technicians, and
- Best practices training for insulation installers which will be held on a periodic basis. This training will also be available to HES and HES-Income Eligible insulation installers.

Department of Energy Home Energy Score

As part of their education and outreach efforts to customers, the Companies also included the DOE Home Energy Score™ (Initial Score) as an optional service to HES participants. As part of the approved 2022-2024 Plan, the Companies detailed how they would deploy a new “Final Score” process to customers who opted in to an Initial Score and completed at least one of their recommended energy efficiency upgrades. Customers will be able to request this free Final Score after installation of the energy efficiency upgrade if it is within 24 months of their original HES assessment. The Final Score can be provided either as a virtual Final Score conducted by their original HES vendor or as an in-person Final Score which will be completed with a post-inspection.

In 2022, Eversource deployed the Final Score to HES participants in its electric and natural gas service territories. To promote this new effort, Eversource mailed postcards to customers who participated in HES in Q1 and Q2 2022. In late 2022 or early 2023, United Illuminating, SCG, and CNG will also roll out the Final Score in conjunction with their new tracking system. The Final Score will be promoted electronically through email as well as through postcards. The Companies intend to roll out the Initial Score to HES-Income Eligible participants in Q1 2023 to coincide with the deployment of a new HES and HES-Income Eligible data collection mobile tool.

Targeting to Customers with Arrearages and Frequent Shutoffs

Per DEEP’s [Condition of Approval No. 24](#), the Companies must prioritize the targeting of HES and HES-Income Eligible programs to those with the largest arrearages and the most frequent shutoffs. This goal is tied to the Companies’ equity secondary metric. On March 30, 2021, the Companies provided DEEP with their targeted marketing plan for residential low-income and non-low-income customers in arrears. To best reach this defined group, direct response (mail and email) is the preferred approach. The Companies encourage all customers in arrears to participate in the energy efficiency program for which they qualify—HES or HES-Income Eligible.

Weatherization Barrier Remediation Program

DEEP has hired a Program Operator for its Weatherization Barrier Remediation program. In late 2022 and 2023, the Companies will be working closely with the Program Operator to establish data sharing protocols and to develop new processes to streamline the customer experience through their remediation service and subsequent and requirements for HES-Income Eligible services.

Weatherization Assistance Program—Collaboration with Community Action Agencies

The DOE's WAP reduces energy costs for low-income households by increasing the energy efficiency of their homes, while ensuring health and safety.³¹ For the 2022-2024 term, the Companies will continue their long-term partnership with the state's Community Action Agencies to assist in cost sharing energy efficiency measures for WAP projects including direct-install measures, ductless heat pumps, water heating equipment, heating system replacements, insulation, and windows.

The state of Connecticut will receive approximately \$46 million in federal WAP funding through 2027. The Companies will promote the HES-Income Eligible program as a key channel for delivering valuable weatherization services to low-income households. Per [Condition of Approval Item No. 15](#), the Companies were directed to coordinate with DEEP and other relevant stakeholders to develop approaches to braid funding between the Conservation & Load Management programs and WAP, in order to leverage increased federal funding available through the *Infrastructure Investment and Jobs Act* and other public and private funding sources.³² DEEP will lead these coordination efforts, which may include meetings, data requests, and the co-development of strategies with stakeholders, including the Companies.

2.2.D Residential Active Demand Response Programs

In 2023, the Companies will continue to promote enrollment in ADR programs and expand the offerings to include new equipment for control, such as window air conditioning units and pool pumps.

CNG and SCG Residential Direct Load Control Pilot (Natural Gas)

The Residential Direct Load Control pilot is a similar natural gas demand response strategy to United Illuminating's existing bring-your-own device (BYOD) Thermostat program. The 2022-2023 pilot will target all SCG and CNG residential customers on Rate RSH (residential heating). The Residential Direct Load Control pilot is an opt-in offering that targets residential natural gas customers with smart thermostats (open to Nest, Honeywell, and Ecobee).

There is a \$75 enrollment incentive plus a \$25 end-of-winter season incentive. The average duration of each event is four hours and there may be up to six events per season. Customers are given a 24-hour notice of all natural gas demand response events where the smart thermostat will be setback by three degrees with a preheat of two degrees for one hour. The temperature set point will not go below a minimum of 60°F. Customers have the ability to opt-out

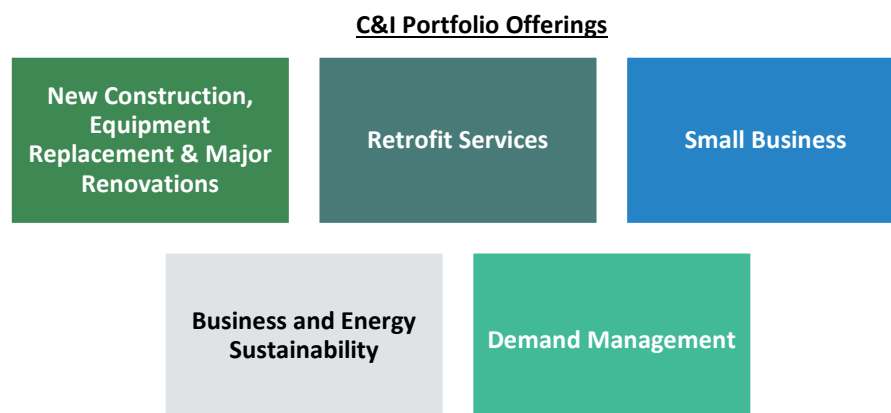
³¹ WAP is part of the Weatherization and Intergovernmental Programs Office and supports DOE's objective to lower energy bills while expanding cost-effective energy choices for all American communities.

³² "Text - H.R.3684 - 117th Congress (2021-2022): Infrastructure Investment and Jobs Act." *Congress.gov*, Library of Congress, November 15, 2021, <http://www.congress.gov/>.

of demand response events. Results from this pilot will be used to determine a much larger strategy that could potentially stagger customer events over a full 24 hours. Pilot participants are also able to participate in one voluntary 24-hour event per season and receive an additional \$100 incentive if they do not opt out.

2.3 Commercial & Industrial Portfolio

For the 2022-2024 term, the Companies will continue to deliver a comprehensive C&I Portfolio to commercial, industrial, and municipal market segments, including new construction, retrofit and renovation, small and medium commercial enterprises, microbusinesses, municipalities, and manufacturers. The Companies have designed their programs to be versatile and address C&I customers' energy needs comprehensively. The 2022-2024 C&I Portfolio programs and initiatives are:



2.3.A Recycling Commercial Kitchen Equipment

Currently, the Companies' Residential Portfolio has an Early Retirement offering that is designed to encourage and incent residential customers to retire old, inefficient refrigerators and freezers and replace them with high-efficiency units. Customers work with a third-party contractor to verify their eligibility for the initiative, arrange a convenient pick-up time for the removal of their inefficient appliance(s) from their home, and then these units are removed and recycled in an environmentally friendly manner instead of being placed in a landfill where contamination could occur. In 2023, the Companies will expand this offering to the C&I Portfolio to include equipment recycling for commercial kitchen equipment and the Companies will primarily target efforts to the restaurant and grocery sectors.

2.3.B C&I Project Verification

Per DEEP's [Condition of Approval No. 8](#), the Companies led a collaborative process in early 2022, working with C&I customers (including Connecticut Industrial Energy Consumers), EEB Technical Consultants, and the EA to develop a proposal for an alternative verification pathway in instances where the customer is able to provide reliable calculated

savings. In July 2022, the Companies submitted this proposal to DEEP. This proposal has been included in the 2023 Plan Update and the Companies plan to launch a limited pilot (up to three projects) to C&I customers with annual usage greater than 30 million kWh or 1.5 million ccf. If the pilot is judged to be successful, the Companies will adjust and expand the pilot to accept more customers or perhaps transform it to a fully-fledged alternative verification pathway.

2.3.C Decrease Lighting Incentives

In 2023, the Companies will investigate reducing or eliminating incentives for tubular light-emitting diodes (TLEDs) without the ability to be controlled, except for disadvantaged businesses. Should this investigation prove favorable, this will transition the majority of the market to more high-efficiency lighting with controls while ensuring incentives are available for businesses located in distressed municipalities and environmental justice communities. In addition, screw-in LED bulb sales (online marketplace, upstream, midstream, and hard-to-reach retail) will end on June 30, 2023 and incentives for screw-in LED bulbs through the HES-Income Eligible, Small Business Energy Advantage, and Energy Opportunities programs may continue to December 31, 2023 and will be reviewed for discontinuation.

2.3.D Business Online Marketplace

Online Marketplace

Currently, the Companies offer an Online Marketplace through the Residential Retail Products program. By the end of the 2023 program year, the Companies plan to provide a similar offering for C&I customers. The Business Online Marketplace will allow Connecticut small businesses to compare products and prices of energy-efficient measures to help them with their purchasing decisions, as well as make purchases where incentives are applied instantly to qualifying products at the time of checkout.

Customers will be able to purchase ENERGY STAR certified equipment, such as smart thermostats, dehumidifiers, room air conditioners/cleaners, window air conditioners, sound bars, and advanced power strips. Similar to the Residential Portfolio's platform, the Business Online Marketplace will provide validation services to verify that consumers purchasing the incentivized equipment are Connecticut businesses and qualify for the incentive(s). This streamlines the incentive process for customers and subsequently, the resulting energy savings.

2.3.E Small Business Energy Advantage Program

Redefining Comprehensiveness in the Program

The energy industry is changing and the Companies need to re-evaluate how they define comprehensiveness. Non-lighting measures are critical to the Companies meeting their Small Business Energy Advantage (SBEA) program goals.

In 2023, the Companies will identify barriers to engage specialty subcontractors (e.g., weatherization, PRIME, and process) in the C&I Portfolio. The Companies have looked at other states to evaluate their definition of comprehensiveness.

To motivate vendors to promote specialty measures, the Companies will increase opportunities for qualified vendors to network with specialty subcontractors by developing alternative incentive payment processes and mitigating risk of vendors acting as the general manager when engaging subcontractors. This will include insulation, air sealing, weatherstripping, duct sealing, windows, and a vendor network for weatherization for them to team with SBEA contractors. The Companies will increase training opportunities to identify submission requirements and incentive potential of non-lighting measures.

2.3.F Business and Energy Sustainability

Strategic Energy Management

In addition to establishing energy savings targets and improving program processes, the Companies have established key performance indicators for their Strategic Energy Management (SEM) Providers to increase engagement and participation.

- **Targeting outreach.** The SEM Provider will work with the respective Company to review potential high-valued candidates for the SEM program on a quarterly basis and to develop an outreach plan for each target and provide sales and marketing support with activities (e.g., webinars and virtual customer meetings). The SEM Provider will also be expected to confirm a minimum quantity of targets per quarter to approach for SEM services. The outreach effort requires support from company customer facing staff to arrange introductory meetings.
- **Project cycle time.** The SEM Provider will ensure that participants are advancing through the SEM process at a sustained rate. Once a participant has committed to participation in SEM, it is expected that an initial treasure hunt and baseline regression model is completed after the participant kick-off meeting.
- **Periodic participant check-in meetings.** Once a customer has agreed to participate, at a minimum, the SEM Provider must host a recurring check-in meeting (typically bi-weekly or monthly based on customer requirements) with the customer for the duration of the SEM process.
- **Annual participant meeting.** The SEM Provider will schedule annual meetings with each participant and provide an annual report on their SEM performance. These meetings are in addition to regularly scheduled check-in meetings and focused on reviewing progress and highlights over the program year. The details of the report will be developed in collaboration with the respective Company.

PRIME and Energy Utilization Assessments

Currently, the Companies are reviewing two of their offerings—Process Re-engineering for Increased Manufacturing Efficiency (PRIME) program and Energy Utilization Assessments (EUAs)—to understand barriers to C&I customer participation in these offerings or if customers need an alternative service or program offering. The Companies have established key performance indicators to increase engagement and participation for PRIME and EUA vendors.

For the PRIME program, the Companies have implemented the following to increase customer engagement:

- **Performance goals.** The Companies have established new performance goals for PRIME vendors in the new contract period encouraging them to engage with more customers and bring in more projects.
- **Small Manufacturer pilot.** The Companies are piloting a Small Manufacturer pilot that includes smaller manufacturing customers under 150 kW peak demand. By decreasing the peak demand threshold for customer eligibility, the Companies have expanded the target market and expect to increase program activity.
- **Engage in stakeholder events.** The Companies will conduct PRIME presentations at manufacturing stakeholder events to help drive customer participation (e.g., Connecticut Center for Advanced Technology, ACM Progressive Manufacturing Conference, etc.).

For the EUA program, the Companies have implemented the following to increase customer engagement:

- **Performance goals.** The Companies have established new performance goals for EUA vendors in the new contract period encouraging them to engage with more customers and bring in more studies.
- **Statement of Work update.** Vendors will focus on *customer needs* and narrow the study's scope and/or cost when necessary. The Companies will require EUA vendors to play a larger role in finding implementation vendors for customers after the study has taken place.
- **Prioritize customer targets.** The Companies' staff will leverage existing customer relationships to identify high value EUA targets for potential studies.

Industry 4.0: Industrial Internet of Things

Manufacturers are beginning to integrate new technologies, including Industrial Internet of Things (IIoT), analytics, artificial intelligence (AI), and machine learning into their production facilities and throughout their operations.

Industry 4.0 for manufacturing is critical for the competitiveness of Connecticut manufacturers and the Companies are reviewing Industry 4.0 technologies that can increase production efficiency and reduce energy consumption.

In addition to reviewing the inclusion of Industry 4.0 measures into the programs, the Companies will also educate manufacturers on Industry 4.0 and energy efficiency nexus. In addition, the Companies will engage Industry 4.0 support networks, such as the Connecticut Center for Advanced Technology (CCAT) and also evaluate ongoing pilot and testing efforts (CCAT currently has a pilot). The Companies are also developing an Industry 4.0 Technology Targeted Demonstration program (similar to a Request for Proposal program) that would expand energy efficiency opportunities for manufacturers.

2.3.G Energy Conscious Blueprint Program

The Energy Conscious Blueprint program is a transformative four-pathway offering to drive the new construction marketplace toward zero-energy buildings with low energy-use intensity (EUI) ratings. In 2023, the Companies will continue to provide four pathways to cost effectively exceed energy code requirements during design and construction and to achieve zero net energy. The four-pathway offerings include:

- Path 1: Net Zero Energy/Deep Energy Savings,
- Path 2: Whole Building with Energy Use Index Reductions,
- Path 3: Whole Buildings Streamlined, and
- Path 4: Systems and Measures.

In 2023, the Companies will include a specific heat pump incentive (e.g., dollar per ton for air source heat pumps, variable refrigerant flow, and ground source) for Paths 1 and 2 projects to unambiguously support electrified heating. This will help the program support decarbonization and move toward an all-electric C&I new construction package.

State Building Code

The state is transitioning from IECC 2015 to IECC 2021 which will result in significant changes to the program's baseline as a result. In addition, the C1902 baseline study for new buildings will result in new Industry Standard Practice (ISP) baselines for boilers and furnaces that go beyond code. Therefore, the Energy Conscious Blueprint program's baseline will either be ISP or code, whichever is more stringent. LED lighting will become standard practice for Connecticut new construction. The draft C1902 baseline study notes that ISP lighting power densities are 40 percent below code. This means lighting will be essentially eliminated from the Energy Conscious Blueprint program except in custom situations where customers can actually get below that baseline.

2.3.H Energy Opportunities Program

The Companies plan to increase funding for Early Retirement in the 2023 and 2024 program years to accommodate additional retirement activity. In addition, the Companies will implement training for contractors in how to properly determine and document baselines.

2.4 Education, Workforce, Community Outreach & Technical Engagement

2.4.A Workforce Development Strategy

The Companies support the development and expansion of Connecticut's energy efficiency workforce and continue to explore opportunities to enhance their workforce development and education offerings.³³ The Companies are actively reviewing the recommendations of the ILLUME evaluation study and where possible including the recommendations in their formulation of a strategic workforce development plan. Additionally, the Companies are currently reviewing the draft results of two independent workforce studies and evaluations.

For one of these independent studies, the Companies commissioned BW Research Partnership to conduct research into Connecticut's energy efficiency sector, with a specific focus on the labor force and workforce development. The study's purpose was to gain a deeper understanding of the current landscape of energy efficiency workforce development in Connecticut and to identify key players in the training and education ecosystem, such as community colleges, workforce boards, vocational schools, businesses, nonprofits, utilities, and others. The firm conducted primary research with the energy efficiency business community, identifying hiring needs, as well as the pool of potential energy efficiency employees, which surfaced insights into the perceptions, awareness, priorities, and preferences of Connecticut's working-age population.³⁴ Some key draft findings from the BW Research Partnership study include but are not limited to:

- Firms are projecting higher demand for electricians and heat pump installers over the next year, though they also expect some hiring activity for carpenters as well as insulation, weatherization, and HVAC workers.
- Education and credentials are important, but work experience is highly valuable for energy efficiency careers.
- Employers rely on a limited pool of hiring resources, but firms did report interest in potential workforce funding and training programs.

³³ See Condition of Approval No. 10, DEEP Determination, [Attachment A: Schedule of Conditions of Approval](#), June 1, 2022.

³⁴ This survey was specific to workers who are *not* currently working in the energy efficiency industry, in order to get a sense of the general population's awareness of and interest in energy efficiency careers.

- Employers expressed difficulty in hiring across all occupations, though hiring difficulty has been especially high for carpenters and electricians.
- There are many key players and networks actively engaged and focused on energy efficiency workforce development in Connecticut, and the Office of Workforce Strategy could support the alignment of these actors.
- Lack of experience and industry-specific knowledge tops the list of reasons for hiring difficulty.
- Most key workforce stakeholders in the state—government agencies, public/private initiatives, workforce boards, colleges, high schools, and advocates—are just now turning to energy efficiency workforce issues, having been focused elsewhere.

The BW Research Partnership study also presented several recommendations that will support the Companies' efforts as they develop a strategic workforce development plan as part of the 2022-2024 Plan. Some key recommendations include:

- Raising awareness of job types and opportunities will be very important, particularly amongst early education in middle and high school.
- Marketing of these job types to high schoolers and young adults is equally important, by highlighting where energy efficiency jobs align with what workers value in a career—environmental sustainability, flexibility, benefits, and advancement opportunities.
- Increasing on-the-job training and experiential hands-on opportunities is key, especially in early education settings, to sufficiently prepare workers for the types of skills required for energy efficiency jobs.
- Expanding access to energy efficiency job opportunities for all Connecticut residents.
- Engaging employers and contractors in the expansion of on-the-job training initiatives, such as internships and apprenticeships.
- Fostering partnerships to streamline the numerous efforts and agencies that are currently engaged in energy efficiency workforce development initiatives.

In 2023, the Companies will continue to make progress on their workforce deliverables outlined in the 2022-2024 Plan.³⁵ In 2023, the Companies plan on partnering with a local supplier diversity organization to reach more diverse

³⁵ 2022-2024 Plan, pp. 146-149.

suppliers and new entrants.³⁶ In 2022, the Companies began implementing multiple heat pump trainings to support the 2022-2024 Plan's decarbonization and fuel neutrality goals. Over the next few months, the Companies will begin rolling out continued training for their contractor network and partnering with local workforce development training partners to increase the number of weatherization specialists in the Connecticut workforce (see *Technical Training* section below).

In 2023, the Companies will look to expand access into their contractor workforce through the creation of an online platform for new recruits to apply for employment opportunities in energy efficiency.

Technical Training

Starting in 2022, the Companies are working to foster partnerships to streamline the multiple efforts and agencies currently engaged in energy efficiency workforce development initiatives. The Companies have entered into a partnership with Efficiency for All (EFA) to support technical training for HES and HES-Income Eligible contractors. The funding will cover the costs of the technical training for four cohorts over two years. This will leverage funding from the Office of Workforce Strategy, a division of the Connecticut Department of Economic and Community Development, to use EFA's framework for training and wrap around services.

2.4.B Education and Green STEP (Sustainable Technical Education Program)

The K-12 Education initiative, which includes eesmarts and Green STEP, continues to grow and expand to meet the needs of schools, educators, and students across the state of Connecticut. The Companies are currently working with outside stakeholders to strengthen and build their relationships with school districts to ensure all districts are aware of the Energize CT education offerings, including eesmarts and Green STEP. The following metrics, goals, and plan will assist the Companies in meeting the objectives and outcomes of these robust initiatives. Please note that goals are aligned with the school year (September – June).

³⁶ Kelley, Liz and Dunn, A. of Illume on behalf of Energize Connecticut, *Evaluation of Educate the Workforce, Educate the Students, Educate the Public, and Customer Engagement Initiatives*, Sep. 29, 2022, p. 14. The Illume study noted that the Companies' workforce development efforts are well designed to meet the needs of existing Residential and C&I Portfolio vendors and are well attended. However, the study noted that the Companies' trainings tend to target existing known contractors and that the Companies should focus on new entrants to expand the workforce.

K-12 Education Goals and Metrics

eesmarts	2021-2022 Goal	2022-2023 Goal	2023-2024 Goal
In-Class Events			
No. of Schools Participated (Events)	50	55	60
% Participants of In-school Events in Environmental Justice Communities	30%	40%	40%
In-school Events Performance Satisfaction	100%	100%	100%
Number of Student/Family Pledges Returned	N/A	150	200
Professional Development			
No. of Educators Participated in Professional Development	175	200	225
No. of Schools Participated in Professional Development	15	20	25
% of Schools in Environmental Justice Communities	30%	40%	40%
Workshop Satisfaction	100%	100%	100%
Curriculum Improvements	3	3	3
No. of School Districts Participated in Train the Trainers	1	5	7
Student Contest			
No. of Schools Participated	45	50	55

Green STEP Goals and Metrics

Green STEP	2021-2022 Goal	2022-2023 Goal	2023-2024 Goal
Classes and Certification Courses			
No. of Students Participated in Green STEP	1,200	1,275	1,350
No. of Workshops and Training Courses	125	135	140
No. of Certification Courses	2	10	12
No. of Students Participated in After School Certificate Program	N/A	25	30
No. of Students Participated in Summer Certificate Program	N/A	50	60
No. of Students Received Certificates	N/A	80%	80%
Workshop Satisfaction	100%	100%	100%
Career Fairs			
No. of Career Fairs	2	2	2
No. of Students Received Internship	4	6	8
No. of Students Received Employment	6	8	10
Connecticut Science & Engineering Fair			
No. of Schools Entered in Fair	5	8	10
No. of Projects Entered in Fair	7	10	14
Follow-Up with Students			
No. of Students Who Supplied Contact Information After Graduation	25%	40%	50%

The eesmarts Plan

- Currently, the Companies are working to serve environmental justice communities with eesmarts offerings and will strive to increase and overachieve the number of environmental justice communities served over the 2022-2023 and 2023-2024 school years. The initiative will proactively reach out to any non-participating communities to encourage participation.
- Institute a Student/Family pledge component to track the energy behavior changes and program participation from the eesmarts initiative. After participating in an eesmarts in-class lesson, students will take what they have learned home and ask their family to pledge a behavioral change or participation in an Energize CT energy efficiency program. The initiative will encourage families to return the postcard with their family's selected energy efficiency behavior change they will implement or program they intend to participate. The Companies will offer an incentive to encourage a high rate of postcards returned.

The Green STEP Plan

Green STEP is expanding its reach this coming school year. The Companies will continue to offer all aspects of the current program to technical high school educators and students to include in their classroom/curriculum. In addition, the program will expand by offering an After School and Summer Certification pathway to students in technical high schools and other public high schools, as well as recent graduates of both technical and public high schools in Connecticut. The After School component will be offered virtually, and the Summer program will be offered in-person. Students will be incentivized for their participation and successful completion of the program and certification exam.

- These certifications will help better prepare students for jobs after graduation or to give them more understanding of a particular subject in their specific trade or other trades.
- The After School and Summer Certification pathway will begin in fall 2022 at the state's technical high schools. This gives the Companies the opportunity to make program modifications before rolling it out to all public high schools in Connecticut in spring 2023.
- By offering incentives, this allows students who would otherwise have to work after school or in the summer to take advantage of Green STEP since they will receive monetary incentives for successful completion of the offering.
- By offering different options for participation, this allows the Companies to broaden their reach to include all high school students and recent graduates across Connecticut, while increasing participation. This will also provide the opportunity for interested students, to participate on their own, without requiring the school's or

educator's participation. This also allows students to take a training outside of their trade to broaden their knowledge.

Plan to promote this new avenue of the program to teachers and students in technical schools:

- Educator video that will be presented by the technical schools' consultants as part of the back to school teacher orientation.
- Student video that will be shown by teachers in the fall and spring to encourage participation in the program.
- Posters will be displayed in all schools to promote Green STEP and the trainings being offered and will include information on how to sign up.
- Recent graduates of the technical schools will be notified of the training opportunities available if they have provided their email to the Companies (emails are also available through the technical high school alumni community).
- Social media will be used to promote the trainings.

Plan to introduce Green STEP to all public high schools in Connecticut:

- The Companies are currently in the process of meeting with school districts and the Connecticut Department of Education to introduce Green STEP and the benefits of participating in the program. The Companies will also seek to acquire assistance from the districts to inform students of the value of the program.
- Posters will be placed at high schools to promote Green STEP and upcoming training courses.
- A video regarding Green STEP will be presented to all educators to introduce them to the program.
- Green STEP staff will present the program to educators at school meetings when this opportunity is available.
- A student video will be emailed to educators to promote the program. Educators will use the video and poster to emphasize the benefits and opportunities of the program to the students and encourage them to participate.
- Information sessions will be offered at high schools to recruit students.
- Program information will be distributed through the Parent Teacher Association or Parent Teacher Organization at schools.

To increase participation in Green STEP, the Companies will also begin to recognize technical high school teachers and/or trade shops who have actively participated in program. Awards will be presented in the fall and will include needed classroom equipment and/or field trips. At the Career Fair and throughout the year, the Companies will

request high school seniors to give them their personal email address so Green STEP can track the students' post-high school career and/or school progress. This will allow the Companies to notify graduating students of upcoming certifications or job openings that may be of interest to them. The Companies have created and will provide a *Careers in Energy Efficiency and Green Jobs* booklet to guidance counselors to introduce clean energy careers to students.

The eesmarks and Green STEP initiatives will continually strive to increase participation by adding new trainings and events to help fill some gaps in the workforce. Special consideration will be made to environmental justice communities to ensure all students have equal access to the program.

2.4.C Community Outreach

Community Partnership Initiative

Staff from the Companies met with the EEB's DEI consultant (Illume) on Friday, July 22 to hold an initial discussion regarding diversity, equity, and inclusion recommendations for the Community Partnership Initiative (Partnership). The discussion centered around Partnership strengths, weaknesses, opportunities, and how Illume staff can best support the growth of a more inclusive Partnership with goals that support the 2022-2024 Plan's three priorities: equity, decarbonization, and energy affordability including:

- Increase the adoption of heat pumps among low-income customers.
- Conduct specific targeting of small and microbusinesses in low-income and environmental justice areas.
- Establish outreach goals aimed at increasing deployment of programs to rental properties and multi-unit dwellings.
- Establish outreach goals aimed at increasing uptake of demand response and deep energy saving measures.

Following this discussion, staff from the Companies and Illume will be collaborating to integrate in-development recommendations into Round 2 of the Partnership. The Companies will also consult with the EEB's DEI Consultant on subsequent rounds of the Partnership, as outlined in the EEB's Request for Proposals.

2.4.D Technical Engagement

Support for ENERGY STAR Building Verification

The ENERGY STAR program requires third-party verification by a professional engineer or registered architect prior to awarding ENERGY STAR building certification. During previous Plan terms, this verification requirement has served as a barrier for Connecticut municipalities looking to achieve ENERGY STAR status for their buildings and facilities. To

overcome this barrier in the 2022-2024 term, the Companies are working with the Institute of Sustainable Energy to support towns to maintain their ENERGY STAR certification. The Companies will also provide professional engineering services to help municipalities verify ENERGY STAR applications.

2.4.E Budgets for Education, Workforce, Community Outreach and Technical Engagement

Throughout the 2022-2024 term, the Companies will continue to deliver an Education, Workforce, Community Outreach, and Technical Engagement Portfolio that delivers innovative solutions, customer outreach, comprehensive education, and valuable workforce development opportunities across the state.

2023 Budget for Education, Workforce, Community Outreach & Technical Engagement

PROGRAM NAME	Eversource Electric	United Illuminating Electric	Eversource Gas	CNG	SCG	Total
Energy Education						
K-12 Professional Development and Outreach	\$352,000	\$88,000	\$36,667	\$36,667	\$36,667	\$550,000
Green STEP	\$320,000	\$80,000	\$33,333	\$33,333	\$33,333	\$500,000
Student Contest	\$64,000	\$16,000	\$6,667	\$6,667	\$6,667	\$100,000
Total: Energy Education	\$736,000	\$184,000	\$76,667	\$76,667	\$76,667	\$1,150,000
Workforce Development						
Training	\$396,800	\$99,200	\$41,333	\$41,333	\$41,333	\$620,000
Learning Laboratories	\$320,000	\$80,000	\$33,333	\$33,333	\$33,333	\$500,000
Industrial Assessment Center	\$76,800	\$19,200	\$8,000	\$8,000	\$8,000	\$120,000
Total: Workforce Development	\$793,600	\$198,400	\$82,667	\$82,667	\$82,667	\$1,240,000
Community Outreach						
Community Engagement	\$320,000	\$80,000	\$33,333	\$33,333	\$33,333	\$500,000
Educational Exhibits	\$448,000	\$112,000	\$46,667	\$46,667	\$46,667	\$700,000
Total: Community Outreach	\$768,000	\$192,000	\$80,000	\$80,000	\$80,000	\$1,200,000
Customer Engagement Initiative						
Customer Engagement Tools	\$320,000	\$ -	\$50,000	\$ -	\$ -	\$370,000
Portfolio Manager	\$80,000	\$80,000	\$20,000	\$50,000	\$50,000	\$280,000
Total: Customer Engagement Initiative	\$400,000	\$80,000	\$70,000	\$50,000	\$50,000	\$650,000
TOTAL	\$2,697,600	\$654,400	\$309,333	\$289,333	\$289,333	\$4,240,000

SECTION THREE: BENEFIT-COST SCREENING

3.1 Overview

For the 2023 Plan Update, the Companies used identical benefit-cost (B/C) methodologies for program and measure screening. The B/C screening tools contain consistent methodologies and the same sources for program-induced avoided costs and benefits. The electric and fossil fuel avoided costs are based on a regional avoided energy supply cost study completed in 2021 for New England³⁷ (2021 AESC). The transmission and distribution (electric) avoided costs are based on studies conducted by the Companies in 2017.³⁸

The 2023 Plan Update was screened on an annual basis by each Company for the 2022, 2023, and 2024 program years (5 sets of Company B/C tables x 3 years). In addition, a combined statewide B/C table is provided for each program year. These statewide combined B/C tables include all benefits and costs from the electric and natural gas programs rolled up into three annual portfolio tables. The Companies use the Connecticut Program Savings Document (PSD) to verify savings assumptions, including the results of program evaluations.³⁹ The PSD provides engineering estimates, savings algorithms, and measure life estimates used by the Companies within their programs. The PSD also reflects the results of evaluations by providing realization rates to “true-up” savings based on third-party independent evaluations.

All electric and natural gas conservation measures in the 2023 Plan Update are evaluated within an integrated supply-and-demand planning framework to ensure that the programs are cost-effective and yield positive net benefits to customers. Use of common cost-effectiveness testing methodologies and savings assumptions allows DEEP, the Connecticut Public Utilities Regulatory Authority (PURA), the EEB, and others to compare the benefits, costs, and B/C ratios on a program and measure basis. This chapter provides details on the B/C tests utilized in the 2019-2021 Plan and this 2022-2024 Plan, include: (1) use of avoided costs from the 2021 AESC, (2) types of B/C tests to be used in the 2022-2024 Plan, and (3) benefits used within each of the B/C tests and their source.

³⁷ Synapse Energy Economics, Resource Insight, Les Deman Consulting, North Side Energy, Sustainable Energy Advantage, *Avoided Energy Supply Cost Study in New England: 2018 Report*, Mar. 30, 2018.

³⁸ Eversource values are based on: ICF International, *Assessment of Avoided Cost of Transmission and Distribution*, Jul. 17, 2017. United Illuminating values are based on: Harbourfront Group, Inc., *Avoided Transmission & Distribution Cost Study Report, 2000-2026*, Aug. 1, 2017.

³⁹ The Companies’ PSD is filed annually as part of the Electric and Natural Gas Companies’ C&LM Plan or Plan Update. The PSD is a centralized reference of savings (e.g., energy, capacity, fossil fuel, and other non-electric) assumptions used by the Companies within the energy efficiency programs.

3.2 Development of a New Connecticut Cost Test

DEEP's Final Determination made several recommendations to align Connecticut's energy efficiency cost-effectiveness tests with the state's energy policy goals and priorities. Cost-effectiveness testing plays a major role in the energy efficiency programs, allowing the Companies and policymakers to compare program benefits to the costs associated with implementation.

- **Recommendation 1.** Create a new Connecticut Efficiency Test (CTET) that applies the principles of the Modified Utility Cost Test (MUCT) to all programs and continues the supplemental use of the Total Resource Cost (TRC) test for income-eligible programs. The current MUCT will be replaced by the CTET.
- **Recommendation 2.** Modify the primary CTET to capture avoided greenhouse gas emissions.
- **Recommendation 3.** Modify the CTET to capture the utility system benefit of reduced arrearages, collection costs, debt write-offs, and/or administrative costs.

The new CTET will help increase the programs' benefits and therefore the B/C ratio for energy efficiency programs.

3.3 Avoided Energy Supply Cost Study

Most of the avoided costs used in the Companies' B/C testing were updated for the 2023 Plan Update based on the completed 2021 AESC study.⁴⁰ Avoided costs were estimated using the provided "User Interface" as part of the 2021 AESC study that allowed for the creation of avoided cost tables for specific states and scenarios. The New England energy efficiency program administrators sponsored the 2021 AESC. In addition, other non-utility parties (e.g., regulators and consultants) formed the Avoided Cost Study Group to oversee the development of the 2021 AESC. Previous iterations of an avoided cost study were conducted on a biennial basis. However, beginning in 2015, the AESC moved to a three-year cycle which coincides with the current three-year planning cycle in Connecticut. The 2022-2024 Plan coincided with the release of the 2021 AESC.

3.4 Benefit-Cost Tests

Connecticut's B/C tests compare the net present value of program induced avoided costs with the cost to achieve the benefits. These tests are summarized below, and additional details are provided in the figure below.

- The **Utility Cost Test (UCT)** includes the value of utility-specific benefits and program costs associated with those benefits. For example, the UCT includes energy avoided costs from electric and natural gas conservation measures/programs and all program costs associated with acquiring those benefits. The UCT

⁴⁰ Synapse Energy Economics, Inc., *Avoided Energy Supply Component in New England: 2021 Report*, March 15, 2021.

does not include customer out-of-pocket costs, or costs or benefits associated with oil or propane savings. Nor does the UCT include NEIs or the non-embedded value of greenhouse gas emissions reductions.

- The **CTET** includes benefits of the avoided costs of electricity, natural gas, oil, propane, and non-embedded gas emissions as well as low-income non energy impact (NEI) costs associated with “arrearages, debt write-off costs, or administrative costs” and all program costs associated with acquiring those benefits. The CTET does not include customer out-of-pocket costs.
- The **TRC** includes all energy and non-energy benefits, such as water savings, non-embedded emissions, environmental attributes, and non-energy impacts. On February 19, 2020, DEEP issued their Approval with Conditions for the 2020 Plan Update, including Compliance Order No. 2 directing the Companies to include NEIs into the HES-Income Eligible program.⁴¹ In addition, the TRC includes all costs associated with acquiring these savings. This includes program costs and customer out-of-pocket costs.

The figure below provides the benefits (numerator) and costs (denominator) that are used within the two B/C tests, as well as their value and source.

⁴¹ NEIs are based on Table A6-1 in the 2021 PSD manual per [DEEP’s Approval with Conditions of the 2020 Plan Update](#), Conditional Item No. 2.

Benefit/Cost Testing Summary (including the source of the avoided costs/benefits)

Benefit Type (numerator)	Units	15 Year-Value Levelized Cost (\$ 2021)	Connecticut Efficiency Test (CTET)	Total Resource Cost Test (TRC)	Source
Energy	\$/kWh	\$0.038	X	X	2021 AESC
Capacity	\$/kW	\$48.00	X	X	2021 AESC
Transmission	\$/kW	\$0.86	X	X	EDCs (Note 1)
Distribution	\$/kW	\$30.89	X	X	EDCs (Note 1)
Pooled Transmission Facilities (Note 2)	\$/kW	\$84.00	X	X	2021 AESC
Reliability (Note 2)	\$/kW	\$0.50	X	X	2021 AESC
Energy DRIPE (Note 3)	\$/kWh	\$0.025	X	X	2021 AESC
Capacity DRIPE (Note 4)	\$/kW	\$76.60	X	X	2021 AESC
Natural Gas (Note 5)	\$/MMBtu	\$6.48	X	X	2021 AESC
DRIPE (Note 6)	\$/MMBtu	\$1.17	X	X	2021 AESC
Oil	\$/MMBtu	\$14.04	X	X	2021 AESC
Oil DRIPE	\$/MMBtu	\$0.11	X	X	2021 AESC
Propane	\$/MMBtu	\$38.79	X	X	2021 AESC
Water	\$/Gallons	\$0.014		X	CT rates (Note 7)
Non-Energy Impacts	\$ (varies)	N/A		X	Various
Non-Embedded Emissions(Electric)(Note8)	\$/kWh	\$0.0482	X	X	2021 AESC
Fossil Emissions(Gas, Oil, Propane) (Note 8)	\$/ton	\$125/ton CO ₂ \$14,700/ton NO _x	X	X	2021 AESC
Cost (denominator)			Program Cost (including oil, propane)	Total Cost (program + customer)	

Note 1: Transmission and Distribution benefits are based on Electric Distribution Companies' (EDC) studies conducted in 2017. The Companies use weighted average values for T (\$0.84/kW) and D (\$30.29/kW) from those studies.

Note 2: Connecticut counterfactual 1 using a 15-year levelized basis; all values are in 2021 dollars.

Note 3: Includes all DRIPE identified in 2021 AESC, including own-fuel DRIPE and cross-fuel DRIPE (Connecticut DRIPE and rest-of-pool). CT counterfactual 1, summer on-peak, on a 15-year levelized basis; all values are in 2021 dollars.

Note 4: Capacity DRIPE includes Connecticut and rest-of-pool components, counterfactual 1, cleared capacity values, on a 15-year levelized basis; in 2021 dollars.

Note 5: Values are for the Southern New England Region, all retail end-uses, on a 15-year levelized basis; in 2021 dollars.

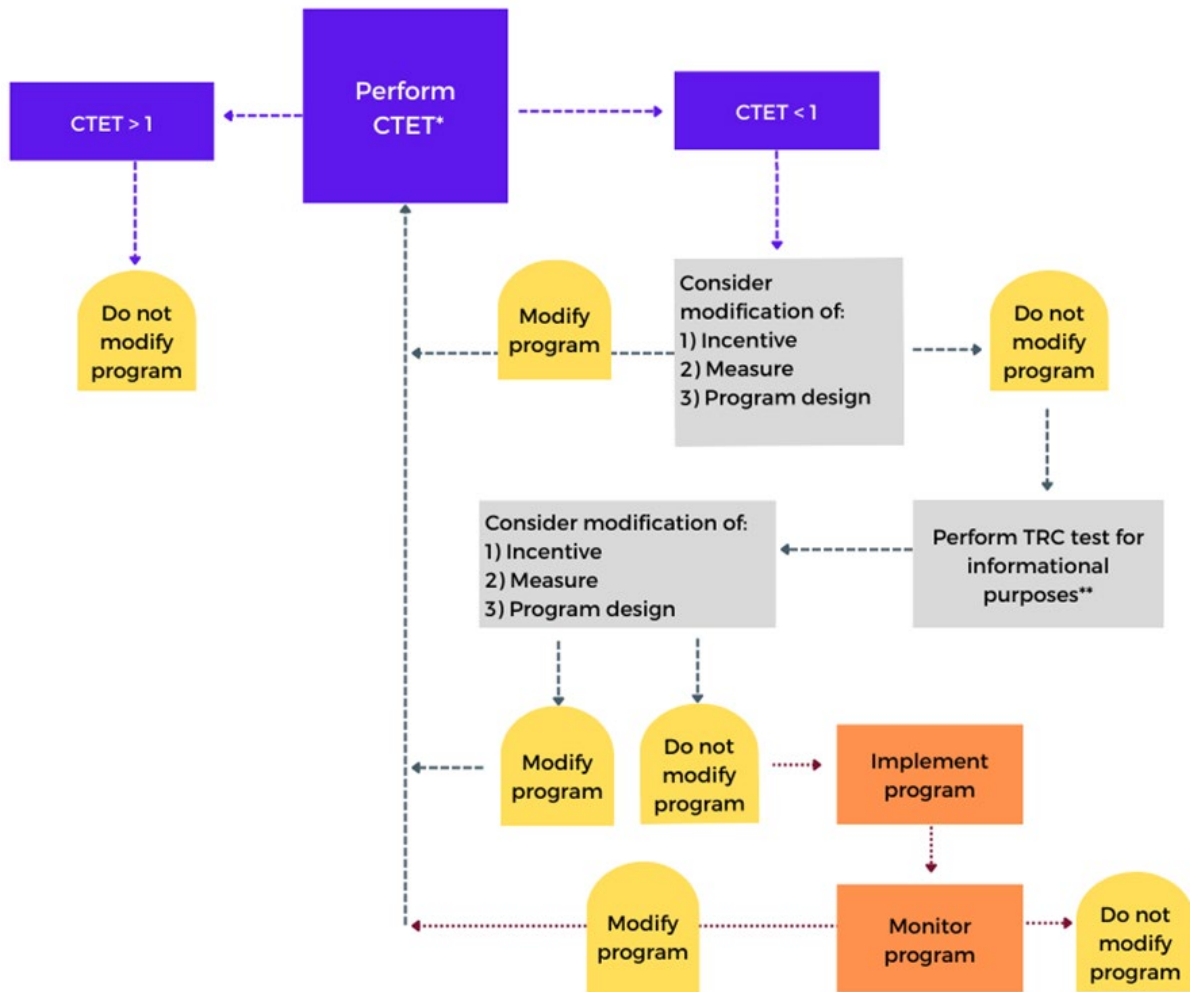
Note 6: Includes all DRIPE identified in 2021 AESC including own-fuel DRIPE and cross-fuel DRIPE (Connecticut DRIPE and rest-of-pool). Values based on all retail end-uses and in 2021 dollars.

Note 7: Water-avoided costs based on 2016 Tighe and Bond water and sewer data for Connecticut. <http://rates.tighebond.com/index.aspx>.

Note 8: CO₂ avoided cost value uses the "New England-based marginal abatement cost, derived from the electric sector."

In Connecticut, the CTET is the primary test. The TRC is used as a secondary test to provide a broader perspective of program performance, including the incorporation of NEIs, particularly for low-income programs. The flow chart below illustrates the use of two B/C tests and the iterations that may be used to refine program performance and optimize the energy efficiency portfolio.

Connecticut B/C Testing Process⁴²



*Multiple rounds of CTET testing may be employed to refine a program.

**TRC test is not used as a pass/fail test. Judgement about whether a program passes muster is based on the CTET. For the HES-Income Eligible program, the TRC test is used as the primary B/C metric. The TRC test merely provides an indication of whether participant contribution and program incentives are appropriate without further modification.

⁴² The Connecticut B/C flowchart was developed through a collaborative effort between DEEP staff and the Companies.

In addition to the continuation of the two B/C tests, the Companies will maintain the basic framework of the B/C tests to remain consistent with prior DEEP feedback.⁴³ This includes the following: (1) the use of nominal avoided costs, and (2) a nominal discount rate of 3 percent⁴⁴ for all B/C testing. The discount rate is used to calculate the net present value of the avoided costs over the life energy efficiency measures. The nominal avoided costs are calculated using a 2.0 percent inflation factor on the 2021 AESC.

SECTION FOUR: EVALUATIONS

4.1 PURPOSE OF EVALUATION

Independent evaluation, measurement, and verification (EM&V) has been an integral component of Connecticut's energy efficiency and demand management programs since their inception. EM&V has many objectives, including verifying program energy savings, estimating future energy savings, identifying ways to improve program delivery and results, and helping expand the reach of programs by identifying barriers to participation. In addition, evaluations are used to verify efficiency programs' demand savings for resources participating in ISO-NE's FCM.

A critical aspect of the Companies' commitment to continued improvement is Connecticut's independent third-party evaluation process which is managed by the EEB.⁴⁵ Evaluations are selected and prioritized based on criteria such as the length of time since the most recent evaluation of a program, the relative contribution of program savings to the portfolio, and the level of spending on the program. Independent evaluators working on behalf of the EEB have conducted more than 100 studies of the evolving suite of energy efficiency programs since 2005.⁴⁶ These studies have included: (1) impact evaluations, which measure the savings resulting from efficiency measures and programs and detail the factors driving those savings; (2) process evaluations, which assess program design and implementation to understand and improve program performance; and (3) market studies, which assess how energy efficiency markets function and analyze market participant behaviors.

- The Evaluation Plan for the 2022-2024 term can be found at: https://energizect.com/sites/default/files/2022-07/CTEEB2022-24EvaluationPlan_FINALPassed_011222.pdf

⁴³ DEEP Resolution of Conditions, September 26, 2014.

⁴⁴ Discount rate is based on DEEP's Approval with Conditions of the *2019-2021 Plan* (dated Nov. 11, 2018), filed on December 20, 2018, Compliance Item No. 5. Please see Appendix E of the updated *2019-2021 Plan* for more details.

⁴⁵ Additional information on the [EEB evaluation process](#) can be found online.

⁴⁶ [Final and draft versions of EEB evaluation reports and studies](#), along with related documents such as project descriptions, stakeholder comments, and supplementary materials can be found online.

- Final reports of evaluations can be found at: <https://energizect.com/connecticut-energy-efficiency-board/evaluation-reports>

4.2 2022 Evaluation Recommendations

One of the outcomes of the EEB's evaluation process is a set of recommendations for the Companies regarding how to improve the evaluated programs. The Companies carefully reviewed the recommendations from evaluation studies completed in 2022. The figures below detail the 2022 Evaluation recommendations and how the Companies plan to incorporate these recommendations into the 2022-2024 Plan's program offerings.

C1901 C&I Sector-Wide Process Evaluation (non-SBEA) - Responses to Recommendations

Study Recommendations	Responses
<p>The cost and benefit of common data framework should be assessed. A common reporting framework should be developed to ensure comparable and consistent data is available to the utilities and other parties year after year. While acknowledging that the utilities will continue to have their own data systems, effort should be allocated to developing database queries which the utilities could use to extract, manipulate, and structure data in a consistent manner.</p>	<p>The Companies agree with this recommendation and recognize improvements that can come from the data-related recommendations from this study. However, some recommendations are easier to implement than others. The Companies and EA Team will work jointly to prioritize and develop a plan toward phasing in the priority recommendations within 2023. The Companies and the EA Team will report back quarterly on progress, and report at the end of 2023 on the plan for implementing (or not) the remaining recommendations.</p>
<p>There are a number of data fields that should be included in the program tracking/C&I population data that are critical to program delivery, and potentially target marketing that are either not currently being collected or being collected inconsistently. Effort should be allocated to populate as much missing information as possible. These fields include email address, industry segment, pathway or initiative (for ECB and BES), prescriptive/custom measure, comprehensive project (yes/no), project financing (yes/no, type of financing), and ownership status (tenant vs owner).</p>	<p>Some of these items have already been addressed via the rollout of Eversource's new tracking system. Email, building type, program, prescriptive/custom, and comprehensive are already part of the Eversource tracking system. Information on project financing is also available unless it is outside of Business Energy Advantage / municipal financing. While Eversource can ask about ownership status, the participants (such as contractors) may not know this information and it is not likely to be accurate.</p> <p>AVANGRID is planning on including these requirements in its new tracking system.</p>
<p>Develop and provide data dictionaries (with code lists). These should be developed in conjunction with the development of the above queries to ensure alignment.</p>	<p>Eversource agrees with this recommendation and will be collaborating with AVANGRID on development of the data dictionary. AVANGRID is currently working on developing a data dictionary per Condition of Approval No. 7.</p>

Study Recommendations	Responses
<p>Improve account tracking. The ability to compute performance metrics and profile customers requires linking consumption and program tracking data. The utilities should continue to improve their ability to identify the appropriate account numbers for tracking records. This is a particular challenge for upstream program measures.</p>	<p>The Companies agree and have begun to implement this recommendation. With the launch of new vendor in 2021, the program added a new account validation and tracking capability to help address this issue. The Companies will continue to improve tracking capabilities for this program.</p>
<p>Improve coverage of firmographic information. Improved coverage of firmographic information such as square footage, employee size, NAICS codes, building ownership, and ownership structure, though not necessary, will improve the ability to characterize customers and isolate their program needs.</p>	<p>The Companies agree with this recommendation and are assessing the use of CoStar data and other data sources to improve coverage of firmographic information. The Companies will also investigate whether requiring collection of firmographic information from participants at time of application could reduce overall participation in programs, especially midstream programs.</p>
<p>Improve tracking of micro-business consumption and savings. The smallest accounts may consist of a variety of entities who may not require much consumption on specific accounts but may indeed require consumption on some other account for the same customer. The ability for performance metrics to accurately depict the savings achieved at the account level requires assigning the savings to the appropriate account. For micro-business, incorrectly assigning savings to accounts can greatly obscure savings achieved metrics as the savings per unit of consumption accounts for a much larger share.</p>	<p>The Companies will investigate the data issue identified in the report and will implement the necessary modifications to improve tracking of micro-business consumption and savings.</p>
<p>Collect, consolidate, and report lighting measures by sector and customer type. Use the information to identify under/over served customer groups.</p>	<p>The Companies are currently collecting sector and customer type for lighting measures. Reporting by sector and customer type can be made available as needed to help identify under/over-served customer groups.</p>
<p>Upstream Lighting data needs to be tracked more consistently and if Upstream Lighting savings are to be included in the main program tracking data files, the entries need to be coded in a manner that makes them easier to find (e.g., a unique subprogram or initiative name) and the entries in the program tracking data should reconcile with any other tracking files.</p>	<p>Eversource agrees and has begun to implement this recommendation with the launch of its new tracking system as noted in the evaluation report. Eversource's new tracking system contains a unique program and measure name for all lighting and the utility will continue to improve tracking capabilities to help identify measures easier and reconcile the data with other tracking files.</p>

Study Recommendations	Responses
	AVANGRID will collaborate with Eversource and vendors during the implementation of its new tracking system for 2023.
Leverage low-cost, large-scale print and/or digital channels like email and bill inserts to increase awareness. Both are the most preferred methods of communication mentioned by customers.	The Companies have implemented this recommendation.
Entice customers to learn more about the program by honing messages and emphasizing potential energy savings and incentives to offset project costs.	The Companies have implemented this recommendation.
Continue fine-tuning the Energize CT website and use advertising to direct customers to the website.	The Companies are in the process of implementing this recommendation. A website re-vamp is currently under way, optimizing previous assets and adding new ones, such as case studies, marketing materials, etc.
Design a future evaluation study to more fully understand the customer experience to further refine processes and materials.	This recommendation requires collective work between the EA Team and the Companies.
Continue to assess the programs' abilities to achieve comprehensiveness over a longer timeframe.	The Companies have implemented this recommendation.
Continue to stimulate repeat participation over time for deeper and more comprehensive savings.	The Companies have implemented this recommendation.
Continue to implement a segmented and strategic delivery strategy but refine by adding other customer attributes.	The Companies agree and is already implementing this recommendation. For example, the Companies have targeted offerings for the microbusiness and distressed communities' segments.
Make use of other market partners besides contractors and designers; capitalize on retailers/distributors.	The Companies are already implementing this recommendation. Midstream program implementation is an example of this.
EO Program - Upstream Lighting: Focus resources on continually fine-tuning current measure mix and rebate levels.	The Companies agree with this recommendation. The Companies will continue to conduct pricing surveys, review cost effectiveness, and adjust offerings, as necessary. The Companies will also work with the EA to recommend incremental cost studies and shelf surveys.

Study Recommendations	Responses
EO Program - Upstream Lighting: With up-to-date and accurate data, implement a staged approach to adjusting or eliminating rebates for individual measures.	The Companies agree with this recommendation and have developed an approach for phasing out upstream lighting measures moving forward. The Companies' plan for eliminating incentives can be found in Section 2.3.C of the 2023 Plan Update.
EO Program - Upstream Lighting: Consider further promoting wireless non-integrated lighting controls throughout the program.	The Companies agree and have already started to add lighting non-integrated lighting controls into the express and midstream programs for 2023.
EO Program - Upstream Lighting: Develop program materials (e.g., one or two page flyers, case studies) for customers and training for contractors to educate them on the benefit of LEDs, including non-energy benefits.	The Companies agree and have already begun to implement this recommendation. Developed point-of-sale (POS) materials have been distributed to the market (e.g., hang tags, counter mats, banners, flyers, window clings). Digital copies are also available to distributors.
EO Program - Upstream Lighting: Extend the amount of time customers have to install the new lighting equipment through the Upstream Lighting program.	The Companies agree and have begun implementing this recommendation. In 2021, an exception form was in place to extend install timelines on as needed basis.
EO Program - Upstream Lighting: Collect, consolidate, and report lighting measures by sector and customer type.	The Companies are already implementing this recommendation.
EO/ECB - Existing Equipment: Leverage relatively low-cost, large-scale digital channels like email and internet marketing to inform a larger number of customers about the available incentives and programs to increase participation.	The Companies are exploring the feasibility of implementing this recommendation. The Companies' social channels achieve this to some extent; however, they are not program-specific and may not be the most effective way to reach these customers.
EO/ECB - Existing Equipment: Develop, co-brand, and share marketing, promotional, and educational materials that can be used by trade allies to promote the program to their customers.	The Companies plan to implement this recommendation by expanding from residential into small business late this year to supply contractors with co-branded templates/marketing materials.
EO/ECB - Existing Equipment: Ensure trade allies are aware of utility and CT Green Bank financing options and are promoting these options to customers.	The Companies are already implementing this recommendation. Financing options were included as a topic during contractor rollout and are on the EnergizeCT website.

Study Recommendations	Responses
<p>EO/ECB - Existing Equipment: Work to streamline the application process for EO and ECB Existing Equipment projects.</p>	<p>The Companies have already begun implementing this recommendation. The Companies have consolidated the data collection form for retrofit from multiple spreadsheets to a single document that lists all the common measures, available on the EnergizeCT website. The Companies are also working on a portal to allow customers to check the status of an application based on the project number, and on automating emails from their tracking system so applicants know the status of their project.</p>
<p>ECB New Construction and Major Renovations: Focus program messaging on how the ECB program can reduce project costs in addition to annual and life cycle energy costs.</p>	<p>Eversource is already implementing this recommendation. The marketing information the utility has on the pathways addresses the financial benefits offered. A panel discussion at the Eversource Zero Net Energy (ZNE) conference in October is devoted to funding/financing net zero and will include a speaker from the CT Green Bank. The Path 1 technical support scope of work specifically offers assistance with lifecycle cost analysis.</p>
<p>ECB New Construction and Major Renovations: Expand program marketing, education, and technical assistance efforts to promote greater program awareness and address unfamiliarity with energy efficiency opportunities.</p>	<p>The Companies are implementing this recommendation. The Companies' code trainings will include content on programs and how to participate in addition to the technical code related content. Eversource also continues to host its annual ZNE conference.</p>
<p>ECB New Construction and Major Renovations: Program should consider additional outreach specifically to architect and design professionals to locate projects in early planning and design stages and connect with project leads.</p>	<p>Eversource is already implementing this recommendation. Eversource has a subscription to the Construction Market Data (CMD) database, and the utility will review data to track down project leads of all sizes every week. Eversource continues to cultivate relationships with developers and large repeat customers, as well as architects and engineers.</p>
<p>ECB New Construction and Major Renovations: Provide educational and workforce training opportunities to increase customer and trade ally understanding of energy efficient building construction and design practices.</p>	<p>Eversource is implementing this recommendation. Eversource is addressing workforce via codes trainings. Eversource also continues to host its annual ZNE conference.</p>
<p>ECB New Construction and Major Renovations: Target financing, including C-PACE and on-bill financing, towards small and medium sized businesses.</p>	<p>The Companies are implementing this recommendation as feasible. The Companies are working with the CT Green Bank on rolling out the C-PACE offering specific to new</p>

Study Recommendations	Responses
	construction. However, on-bill financing is not available for new construction projects.
ECB New Construction and Major Renovations: Improve program evaluability.	Consistent with other recommendations, The Companies have taken steps that will inherently address program evaluability in the future. The Companies already track square footage and participation pathways for all Energy Conscious Blueprint new buildings projects. The Companies will be adding a tag for multi-end-use incentives and we will be tracking EUI data on all Path 1 and 2 projects.
ECB New Construction and Major Renovations: New construction incentive levels in CT are much higher than neighboring states. Consider undertaking a systematic review of incentive levels to ensure they are cost effectively driving participation.	The Companies plan to re-examine the Energy Conscious Blueprint New Buildings/Major Reno program incentive rates in light of code change to IECC 2021 and expected new ISPs from C1902. When reviewing incentive levels, the Companies will consider expected changes in program savings resulting from the code change and the new baselines based on the C1902 study. We will assess whether it is reasonable to maintain or make modifications in the context of incremental costs and benefits anticipated. In addition, the Companies will compare CT incentive rates to neighboring states to ensure that they are reasonable.
BES Program: Expand outreach to new customers.	The Companies agree with this recommendation. The Companies will seek to engage more customer participation in BES services beginning in 2022. Opportunities that are in progress or under consideration include expanding eligibility in PRIME and EUA programs and utilizing relationships with manufacturing organizations to participate in regularly held conferences.
BES Program: Collaborate across utilities to better understand differences between UI and Eversource implementation and make changes where feasible to make participation more consistent.	Eversource generally agrees with this recommendation. Eversource is taking steps to clearly outline differences between United Illuminating and Eversource offerings, vendor pool, and incentive structures. Eversource has recently completed a refresh training for the RCx program for Account Executives/Energy Efficiency Consultants at Eversource and also included United Illuminating staff who attended. For SEM, Eversource is collaborating in cross-utility cohort activity currently, and will work with United Illuminating to identify potential areas for more consistent delivery of SEM.

Study Recommendations	Responses
Differentiate program offerings and marketing strategies by customer size.	The Companies are already implementing this recommendation and will continue to explore opportunities to target program offerings and marketing strategies by customer size as appropriate.

R2120 Appliance Recycling Impact – Responses to Recommendations

Study Recommendations	Responses
Recommendation 1: The study recommends that the utilities adopt the Program Savings Document (PSD) updates listed in Table 7. (Refrigerators: Gross Savings = 932 kWh, Realization Rate = 0.90, NTG Ratio = 0.37; Freezers: Gross Savings = 760 kWh, Realization Rates = 0.83, NTG Ratio = 0.38)	The Companies updated the 2023 PSD to reflect the recommended updates to gross savings and realization rates listed in Table 7. For the NTG ratio recommendation, please see the Companies' response to Recommendation 3.
Recommendation 2: The program should keep the incentive at \$30 but also offer special offers at higher incentive levels.	The Companies agree with this recommendation and will continue to both offer incentives at \$30 and create special offers at higher incentives through 2022.
Recommendation 3: Should the program decide to permanently raise incentives, the NTG ratio should be raised to match those in Massachusetts and Rhode Island: 46% for refrigerators and 50% for freezers.	The Companies raised the 2023 incentives to match those in Massachusetts and Rhode Island. The Companies updated the 2023 PSD to reflect the NTG values based on this recommendation.
Recommendation 4: If and when Connecticut policy rules allow non-energy impacts in cost-effectiveness testing for this program, the study suggests that 40% of the materials reclaimed or recycled should be directly attributed to program efforts.	The Companies will keep this recommendation in mind for future use and will need assistance from the EA to provide a monetized value of the recommended NEI for recycled refrigerators and freezers. Of special interest is the reduction in greenhouse gases from reclaimed refrigerants.

X1931-5 Comm Refrigeration Efficiency Update Study - Responses to Recommendations

Study Recommendations	Responses
This study recommends the 2023 PSD commercial refrigeration ACOP values (for C&I Refrigeration LED, Evaporator Fan Controls, Evaporator Fan Motor Replacement, and Door Heater Controls) be updated to 1.88 for freezers and 3.35 for coolers.	The Companies updated the 2023 PSD with ACOP values from this study.

R1965/R2027 HP and HPWH Market Characterization and Reliability - Responses to Recommendations

Study Recommendations	Responses
Change program design to focus on both sales and usage of heat pumps	<p>The Companies are in the process of implementing this recommendation.</p> <p>In 2023, the Companies will introduce several modifications to heat pump incentive levels and delivery that will help facilitate market adoption while minimizing supply chain, contractor, and customer confusion. The Companies intend to align the Energize CT Heat Pump Qualified Product List (QPL) efficiency requirements with ENERGY STAR 6.1 cold climate certification standards. Once enough equipment has been added to the ENERGY STAR maintained QPL (likely by 2024), the Companies intend to lean exclusively on ENERGY STAR cold climate certification and no longer maintain a QPL. This alignment will simplify midstream incentive requirements and support an increased focus on downstream fuel optimization incentives. This will introduce an opportunity for increased industry alignment and the elimination of the current tiered efficiency requirements, which focus largely on increased cooling efficiency (SEER).</p> <p>The Companies are currently running a heat pump pilot program that requires use of integrated controls for participation. In 2023, program changes include an integrated control requirement for fuel optimization rebates (not required for full displacement).</p> <p>The Companies are currently developing a heat pump system checklist and other customer facing resources to help educate customers on how to use their heat pumps, including a focus on using heat pumps for heating.</p>
Include delivered fuels in baseline scenarios	<p>The Companies have recently received approval to include delivered fuels in baseline scenarios and has been taking this approach for the heat pump pilot program. The Companies are working on incorporating this approach more broadly.</p>
Increase technical and sales expertise of installers and distributors	<p>The Companies are in the process of implementing this recommendation. The Companies are currently working to develop a heat pump installer network and are developing trainings. The Companies have also developed a series of trainings on heat pump technology that will be going live soon. The Companies are currently scheduling webinars to educate installers and distributors who are recommending installation of heat pumps to customers.</p>
Increase program support and resources to participating distributors	<p>The Companies are in the process of implementing this recommendation. The Companies already provide a qualifying product</p>

	list to distributors and have an online rebate web portal. Eversource has dedicated program staff working to support the different distributors.
Work with distributors and retailers to stock HPWHs and ensure contractors have HPWHs available for same day replacement	The Companies already incentivizes distributors and retailers to keep HPWH stock available. Contractors should have same day access to HPWHs through distributors and retailers.
Improve program tracking data quality	For Eversource, account numbers do match across programs already. However, the Companies agree that there is a need to work on continuous data tracking improvements and quality control. As part of COA No. 7, Avangrid will be providing all account and premise codes in data extracts, including crosswalks.
Further investigate opportunities to refine the programs and track market progress	The Companies agree there should be future research done, both through evaluation studies and implementation market research, to further investigate the heat pump and heat pump water heater market.

C1902a Connecticut Midstream C&I HVAC & Water Heating and Foodservice Net-to-Gross Review - Responses to Recommendations

Study Recommendations	Responses
Update the Connecticut PSD with the NTG values from this study—specifically 68% for the HVAC & Water Heating program and 81% for the Foodservice & Laboratory program.	The Companies updated the 2023 PSD with the NTG values from this study - 68% for the HVAC and Water Heating Equipment program and 82% for the Foodservice & Laboratory Program (since the program will be removing spray valves).
Adjust measure offerings for spray valves and furnaces to reduce free-ridership and increase attributable program savings	The furnace recommendation has already been implemented via a recent increase to the program efficiency requirement. The Companies plan to remove spray valves from the program in 2023.
Increase oversight of the rebate passthrough requirement	As is noted in a footnote of this recommendation, the Companies have regular audits to make sure distributors are including the incentive as a line item on equipment invoices. In order to further address this issue, the Companies will remove distributors from the program if they are repeatedly found to not be including the incentive as a line item. The Companies plan to begin sending cards to end-users to thank them for their participation in the program and to encourage contractors to better inform end-users about the program.
Increase program marketing targeting end-users, including sustainability departments at large or institutional customers	As is noted in a footnote of this recommendation, the Companies are expanding marketing through the EnergizeCT website and on LinkedIn to better reach key decision makers such as business owners. The Companies also noted that midstream programs are intended to use distributors and dealers for promotion and advertisement of program discounts, and that mailers sent directly to end-users have not always been productive since those emails or mailers often end up with the wrong people in an organization. The Companies also plan to hold more

	contractor trainings to educate contractors about the programs and hold trainings at participating dealers/distributors for end users to see new equipment (e.g., induction cooktops).
Consider streamlining pre-approvals and payment processing, particularly for large projects	Eversource is aware that this process can be difficult, and we have worked to address this. Eversource has hired two contractors that check for pre-approvals and account verifications daily. Prior to hiring the contractors, Eversource staff were only able to check for pre-approvals and account verifications once or twice a week. AVANGRID will explore expanding staff or inclusion of contractors where feasible.
Consider directing certain interested customers to the downstream rebate program	When appropriate, the Companies will direct interested customers to the downstream rebate program. We agree it would be good to realize deeper energy savings by sending customers to the downstream rebate program where there is a more custom approach; however, typically customers are participating in the midstream program because they need to install equipment as soon as possible. In most cases, we cannot ask the customer to wait to consider a custom project because those typically take months to complete.

X1932 DR EM&V Study - Responses to Recommendations

Study Recommendations	Responses
<p>Eversource ConnectedSolutions Wi-Fi Air Conditioners Recommendation 1: Assess device manufacturer’s data quality prior to their inclusion in the program. The quality of telemetry data varies by manufacturer. The absence of accurate telemetry creates uncertainty regarding the program performance. If a device manufacturer is unable to provide this data, there is no assurance that demand response events are being dispatched to the customer and no way to quantify their load reductions.</p>	<p>Eversource agrees with this recommendation. Eversource will make a plan to review the data quality from device manufacturers before their inclusion in the program.</p>
<p>Eversource ConnectedSolutions Wi-Fi Air Conditioners Recommendation 2: Ensure device manufacturers provide guidance on when a unit is drawing power. Even with adequate state-change data, assumptions must still be made about the power draw of the unit. Without clarification from the manufacturers, the assumption implemented could either be over-stating or under-stating the load of these devices.</p>	<p>Eversource agrees with this recommendation and will make a plan to gather information from manufacturers to indicate when the unit is drawing power before their inclusion in the program.</p>
<p>Eversource ConnectedSolutions Wi-Fi Air Conditioners Recommendation 3: Make curtailment algorithms more aggressive. Window AC and mini splits have small peak</p>	<p>Eversource generally agrees with this recommendation. The current vendor is no longer in business to run this program and Eversource is exploring alternatives.</p>

Study Recommendations	Responses
<p>loads and on average, these devices reduce electric load for the cooling end use by 38%, as compared to the 58% reduction from the Eversource Wi-Fi thermostat program⁴. The Wi-Fi thermostat program controls central ducted systems rather than Window AC units, which may allow for more aggressive curtailment. The Connected Solutions program can't affect equipment size and reference load. If program economics are strained with average kW impacts of 0.12 kW per device, Eversource might explore with the equipment manufacturers curtailing cooling operations more aggressively to produce larger load reductions. More aggressive control can result in attrition due to participant discomfort during events so finding the right curtailment strategy is a balancing act for the utility.</p>	<p>Eversource will work with manufacturers to explore options for making curtailments more aggressive while balancing the potential impacts on customer attrition should the Window A/C demand response program continues.</p>
<p>United Illuminating Smart Savers Rewards</p> <p>Recommendation 1: Use AMI data where it is available. The quality of runtime data varies widely by device manufacturer, which creates caveats when using this data for evaluation purposes. Using data from United Illuminating's AMI network instead would allow for a more straight-forward calculation of program impacts.</p>	<p>United Illuminating generally agrees with this recommendation however, the current approach is the industry standard for BYOT and the inclusion of individual customer AMI data will add cost/resources. United Illuminating will need to investigate the potential increase in cost for this recommendation.</p>
<p>United Illuminating Smart Savers Rewards</p> <p>Recommendation 2: Revise the connected load assumption to 2.1 kW per thermostat. The current assumption used to convert AC runtime, 3.5 kW, is too high for Connecticut and leads to overstated cooling load and ultimately the DR impacts for this program. Given the limitations that are presented when discussing the connected load calculations, this connected load assumption should be further studied in the future.</p>	<p>United Illuminating will consider this recommendation and would also like to better understand any future studies that can better understand and quantify UI's average connected smart thermostat load.</p>

Study Recommendations	Responses
<p>United Illuminating Smart Savers Rewards</p> <p>Recommendation 3: Require thermostats to be assigned a child group for dispatch. When thermostats are registered to the Smart Savers program, they are placed into groups based on their characteristics. At first, all thermostats are placed into a parent group of “UI Thermostats.” Based on the customer’s classification, thermostats should then either be placed into the “Residential Central AC” or the “Small Business Central AC” child group.</p>	<p>United Illuminating will investigate this No Child group with our demand response vendor and move these thermostats into either the Residential or Small Business grouping.</p>
<p>United Illuminating Wi-Fi Enabled Heat Pump Water Heaters</p> <p>Recommendation 1: Target less efficient equipment. The high efficiency of HPWHs severely limits the DR potential of the program. Even with the expansion of more devices, this program will be limited in aggregate impacts.</p> <p>Recommendation 2: Target equipment with coincident loads. Since residential water heating load is highest in the morning and summer and winter peaks occur in the afternoon and evening, respectively, direct load control of water heaters provides less value in the in Connecticut than a system with winter peaks in the morning hours.</p> <p>Recommendation 3: Do not enroll additional devices from manufacturers who cannot supply quality telemetry. Reliable hourly or sub-hourly device-level operating data should be a pre-requisite for inclusion in any connected device demand response program.</p>	<p>The targeting of heat pump water heaters for demand response will not be happening after 2022 and UI’s contract with the demand response vendor ends. UI will continue to seek out other demand response opportunities in the water heating field with less efficient equipment, loads that are coincident to the UI or CT system peaks.</p>
<p>United Illuminating C&I Auto Demand Response</p> <p>Recommendation 1: Implement a clear settlement baseline methodology that is consistently applied. This will increase fairness and transparency, particularly for the settlement baseline methodology for sites with solar generation, which was not well-defined nor systematically replicable.</p>	<p>United Illuminating agrees. As more customers are included in the program, clear baselines will be established.</p>
<p>United Illuminating C&I Auto Demand Response</p>	<p>For all UI C&I DR Programs, customers are given a 24 hr. notice of all DR events – excluding system related emergencies. Anything less than 24 hrs. would require new</p>

Study Recommendations	Responses
<p>Recommendation 2: Use a same-day event notification that occurs after the adjustment period. Same-day notification can improve baseline adjustments by decreasing the probability of event-related load effects or gaming during the adjustment window. If participants are notified of an event prior to the interval(s) used to adjust the baseline, there is a chance of influencing loads (up or down) by knowledge of and preparation for the upcoming event. Since the demand response strategies are automated, we believe the program is well-positioned to implement this without significantly increasing participant burden, decreasing participant satisfaction, or raising customer recruitment barriers.</p>	<p>contracts with existing customers and may possibly make it harder for UI to enroll customers. In most DR programs that look to bring relief to a local distribution system, the day ahead or 24 hour notice is standard. UI will investigate the feasibility of applying this recommendation for upcoming customer contracts.</p>
<p>United Illuminating C&I Auto Demand Response</p> <p>Recommendation 3: Establish a load predictability requirement. Successful assessment of load reduction for a DR program, either for settlement or ex post evaluation, requires a balance of site-level load predictability with the expected magnitude of load reduction.</p>	<p>This is a topic that will need to be further addressed in the future in terms of calculating DR reductions as more data is available.</p>
<p>United Illuminating C&I Auto Demand Response</p> <p>Recommendation 4: Define how to handle the presence of solar, since it is a substantial issue for the measurement of DR. For sites with solar generation, the program should obtain the solar production data to reconstitute site load and then estimate customer baseline load and load reduction.</p>	<p>This is a topic that will need to be further addressed in the future in terms of calculating demand response reductions as more data is available.</p>
<p>United Illuminating C&I Auto Demand Response</p> <p>Recommendation 5: Build on the pilot’s level of customer participation and event frequency to create a grid resource that is more reliable and more evaluable than the limited 2019 pilot activity. Greater numbers of participants can be expected to provide more reliable load reduction estimates, whereas smaller population sizes, such as that seen in this study, can be prone to the nuances of one or two customers having an outsized influence on the overall result.</p>	<p>UI plans on apply this recommendation as the C&I Demand Response customer base grows, this will increase the reliability of load reduction estimates.</p>

Study Recommendations	Responses
<p>Value of DR as a Grid Resource Recommendation 1: We recommend the state encourage the possibility of utilizing a different cost-effective test, which is a state level decision. Monetizing and incorporating additional value streams including avoided environmental and compliance costs as seen in other states can boost program cost-effectiveness and help meet state policy goals like decarbonization and enhanced environmental quality. Regulators direct utilities in other states to monetize or use proxy values to account for a variety of environmental externalities. Considering additional avoided costs that reflect reduced environmental impact or increase human wellbeing—in the primary test—can bring forth identification of potentially new value streams but do require a benefit cost framework that allows them.</p>	<p>While this recommendation is directed to the state, the Companies support this recommendation and notes that DEEP has developed an updated approach to current cost effectiveness practices in Connecticut. In DEEP’s Final Determination, the agency recommended a new Connecticut Efficiency Test (CTET) that applies the principles of the Modified Utility Cost Test to all programs and captures program impacts on avoided greenhouse gas emissions and energy affordability.</p>
<p>Value of DR as a Grid Resource Recommendation 2: Consider bidding DR resources into the ISO-NE market. By not participating in the ISO-NE market, UI and Eversource forego a base payment for availability and a pay-for-performance payment when ISO-NE calls on resources to reduce load. Instead, program economics rely on the premise that peak shaving will lower their peak load forecast and future capacity obligations. If the EDCs opt to pursue wholesale recognition of their DR programs, there are ways to mitigate participation risks (e.g., using qualified Curtailment Service Providers or aggregators) to make the risk profile of participating more acceptable. Note that FERC 2222 requires ISO and distribution companies to coordinate DER participation in both markets.</p>	<p>This recommendation fails to recognize that customers, aggregators, and curtailment service providers can currently bid demand response assets that participate in Connected Solutions into ISO-NE’s FCM and earn the associated revenue directly. Without the ConnectedSolutions program, those assets would be participating in the FCM and calling those associated events. Accordingly, FCM participation is not a marginal claimable benefit the ConnectedSolutions program can provide to ratepayers. Paying incentives to those customers or aggregators would constitute free ridership.</p> <p>Instead, given the counterfactual baseline of those assets already participating in the FCM, the ConnectedSolutions program provides additional value to ratepayers and asset owners/operators by incentivizing non-market activity. This outcome is achieved by requiring ConnectedSolutions program assets to not dually report the same individual event dispatch to both ConnectedSolutions and ISO-NE.</p> <p>Further, consolidating the market and non-market revenues of those assets into a single revenue stream through the ConnectedSolutions program would make those assets dependent on ConnectedSolutions for revenue, potentially increasing the risk profiles those assets by reducing the diversity of the revenue portfolios.</p>

Study Recommendations	Responses
Study Implications for the CT PSD Recommendation 1: Standardize the reporting methods and criteria for quantifying the capability and value of demand response programs.	The Companies agree with the recommendation and will document basic definitions, methods, and assumptions for demand response programs in the PSD.

X1931-4 New Measure Advanced Lighting Controls - Responses to Recommendations

Study Recommendations	Responses
This study recommends that LLLCs (defined as network-capable fixtures with integrated occupancy sensing, daylight dimming, and high-end trim) receive the 49% savings factor prescribed in phase 1, if commissioned.	The Companies agree with this recommendation; however, note that the 49% savings factor would be applied to an LLLC that is commissioned and networked.
This study recommends the creation of the additional control category, integrated fixtures with room-based controls, and this measure will adopt a 38% savings factor, the highest value of a non-networked controls and apply to those fixtures that would otherwise be an LLLC if they were networked and commissioned.	As brought up on the 7/29/2022 presentation, having a framework or consistent structure for commissioning ALCs has been the biggest question regarding how advanced measures can be implemented, since it determines whether an LLLC gets assigned a 49% of 38% savings factor. Still, the Companies agrees with the recommendation and use customer validation to see if the system was networked and commissioned. If not validated, they will get 38%.
This study recommends that program implementers work with evaluators and the EA team in CT to define the exact parameters required for an LLLC to be considered networked and commissioned.	The Companies agree with this recommendation and look forward to working with the EA team and evaluators on these parameters. Moreover, a process involving the program implementors, EA team, and evaluators to stay abreast of how the lighting controls market evolves should be considered (e.g., technology improvements that would require updates to the definition of networking).
If a program cannot ensure that a network is commissioned, the non-commissioned, integrated fixture with room-based controls value should be used. This includes upstream/midstream programs.	The Companies are exploring how this would be implemented, as current programs are designed to ensure each LLLC installed is commissioned. Currently, each program has a different method to ensuring commissioning based on pathway (e.g., upfront customer forms for custom, post-installation audits for midstream). Yet as greater emphasis gets placed on lighting controls, lighting commissioning tactics may need to change to accommodate for increased volume through different pathways. As such, the Companies would also like to further discuss how to make sure that

	those commissioning options and strategies are consistent with the EA and the evaluator's expectations commissioning LLCs. The Companies and EA Team will find a time in the next three months to have a meeting to discuss commissioning.
Due to the small number of CT custom project data files and relative infancy of the advanced technologies, the study team recommends a future study to review installation practices for LLCs, verification of LLCs and NLCs, and metering for ALCs to accurately quantify the savings factors and coincidence factors.	The Companies agree with this recommendation.

X2001 EUL Residential Measure Lives - Responses to Recommendations

Study Recommendations	Responses
<p>Recommendation 1: Consider conducting future EUL research similar to this for measures that meet the criteria of high levels of participation, large contributions to Connecticut's energy efficiency portfolio, and are able to be easily observed and self-reported by participants. We also recommend additional future research on the measures included in this study, as new cohorts of participants can be added to this data to bolster these results.</p>	<p>While the Companies see value in this recommendation, research decisions are ultimately made by the EEB.</p>
<p>Recommendation 2: Update the EUL values in the PSD for the measure types with adequate precision levels. We recommend including an EUL value of 20 years for air source heat pumps, 17 years for ductless heat pumps, 15 years for heat pump water heaters, and 25 years for central air conditioners. We recommend continuing to use the values in the PSD for natural gas furnaces and insulation, as the estimates for these measures did not meet our threshold of 90%/40% confidence/precision.</p>	<p>The Companies agree with this recommendation and also updated the 2023 PSD accordingly.</p>
<p>Recommendation 3: Conduct additional research on natural gas furnaces and insulation to develop EUL estimates with better precision that can be used to update the PSD in the future.</p>	<p>While the Companies see value in this recommendation, research decisions are ultimately made by the EEB.</p>
<p>Recommendation 4: Although many small businesses use residential equipment, the Evaluation Team currently does not recommend using the EUL values from this study in commercial applications. Although the equipment lifespans are likely similar in residential and small commercial applications, the results from this study do not account for the removal or replacement of equipment due to business turnover.</p>	<p>The Companies agree with this recommendation and will continue to use the existing values in the PSD.</p>

<p>Recommendation 5: Where practical, programs should document the age of the replaced equipment at a site-specific level and use the RUL values in Appendix B for air source heat pumps, ductless heat pumps, heat pump water heaters, and central air conditioners when calculating retirement savings. Where the age of the existing equipment cannot be determined, programs should use the recommended values from the table below. For natural gas furnaces and other measures without an RUL specified in the PSD, we recommend continuing to use the common practice of 1/3 of the EUL.</p>	<p>The Companies agree with this recommendation and will adopt the RUL values in Appendix B where practical and continue using the 1/3 of the EUL where impractical.</p>
<p>Recommendation 6: Consider using this survey-based methodology for future EUL studies of easily identifiable measures like those selected for this study. Also consider using the combination of respondent-provided photographs and follow-up interviews for other evaluations and studies where additional verification may be desired but site visits are too costly.</p>	<p>While the Companies see value in this recommendation, research decisions are ultimately made by the EEB.</p>

X1942A Cross-cutting NEI Study – Utility NEI and Arrearage Data Analysis Results - Responses to Recommendations

Study Recommendations	Responses
<p>Add the NEIs that were monetized in this study to the PSD (Reduced Arrearage Carrying Cost and Reduced Bad Debt Write-off)</p>	<p>The Companies added the NEIs that were monetized in this study to the 2023 PSD.</p>
<p>Neither Eversource nor UI currently tracks data on customer notices, collection calls, and safety-related emergency calls in a systematic manner. Because of the absence of data on these metrics, any potential utility and participant NEIs associated with fewer notices, collection calls, and safety-related emergency calls as a result of HES-IE program participation could not be quantified in this study. The typical annual per-participant values found in the literature for weatherization programs for NEIs associated with fewer notices, collection calls, and safety-related emergency calls, are \$0.60, \$0.90, and \$3.25, respectively. The study team recommends that the utilities either use these values from the literature or start tracking these metrics so that future NEI studies could quantify the associated NEIs specific to HES-IE program participants.</p>	<p>The Companies agree with the recommendation to use the NEI values for few notices, collection calls, and safety-related emergency calls that the study identified from literature. The Companies also recognize improvements that can come from the recommendation to track these metrics. The Companies will implement this recommendation as feasible. There are concerns about the Companies' ability to track some of these metrics (such as safety related emergency calls since those would typically go through 911 rather than the Companies).</p>
<p>The customer account numbers included in the HES-IE program tracking data were different than those tracked in the customer shutoffs and arrearage data from UI, CNG, and SCG. In order to</p>	<p>AVANGRID will provide tracking data files with the appropriate customer account numbers or cross-reference files as needed for historical data. The new</p>

<p>be able to link the data for the same customer across the different datasets in the future, the study team recommends that the HES-IE program tracking database include the customer account numbers used by the billing department.</p>	<p>tracking system implementation will use the same customer account numbers defined by the billing department. Avangrid and the EA will work jointly to prioritize and develop a plan toward phasing in the priority recommendations within 2023.</p>
<p>The study found that the reduction in the number of shutoffs due to non-payment was not statistically significantly different from zero. A potential confounding factor for that analysis was a change in the enforcement of service disconnection due to non-payment policy by Eversource. The study team recommends that utility and participant NEIs related to shutoffs and reconnects be revisited in a future NEI study.</p>	<p>The Companies agree this should be revisited in the future.</p>

2014 C&I Lighting Saturation and Remaining Potential Study - Responses to Recommendations

Study Recommendations	Responses
<p>Market Insight 1: The natural adoption of standard TLEDs has reached or is close to the peak of the market, and the price of TLEDs has decreased from historical rates to a point where there is now minimal opportunity for programs to generate significant savings moving forward. However, there may still be pockets of customer segments where TLED incentives can transform the market and deliver benefits, like in EJs. Programs incentives for controllable technologies, like networked TLEDs or LED luminaires with advanced or networked controls, are still needed to push customers towards controllable technologies to mitigate the impacts of stranded savings.</p>	<p>The Companies are having an ongoing discussion regarding future support for TLEDs. While the utility agrees that the TLED market is maturing, TLEDs could become more efficient over time and therefore continue to be a cost-effective measure.</p>
<p>Market Insight 2: Since many customers are satisfied with the performance of the TLEDs and there is some uncertainty around what types of situations or conditions where it would be cost-effective to replace TLEDs with LED luminaires, the opportunity for a targeted TLED replacement program is likely minimal. However, there may be some situations where replacing a TLED with LLCs or luminaires with NLC may be cost-effective, but more work is needed to understand the benefit-cost ratio and customer willingness-to-pay for these types of projects.</p>	<p>The Companies currently allow replacement of TLEDs with LED luminaires in the custom pathway. The Companies agree that additional information would be needed to understand how such replacements could occur in other pathways.</p>
<p>Market Insight 3: it's challenging, although not impossible, to add controls after LEDs are already installed. For older TLED systems, this is especially challenging. For newer LED luminaires installed without controls, it may be easier to install controls after a project is completed, especially given</p>	<p>The Companies are currently offering incentives for controls and has the ability through the custom program to incentivize controls on previously installed LEDs and TLEDs. Yet would need to further explore how they are being applied in other pathways/programs.</p>

Study Recommendations	Responses
the technology improvements and new DLC standards for luminaires. Given these challenges, it's important to incentivize controls capabilities as part of the initial install/project.	
<p>Market Insight 4: Savings from lighting controls systems are dependent on the installation and appropriate commissioning, which is dependent both on the space type and usage patterns. Pre-commissioned fixtures will have some savings, but don't necessarily maximize the savings opportunity. Continued contractor training is an important tool for ensuring that these fixtures are commissioned accurately. Tracking the specific controls capabilities of installed fixtures, and to what extent they are being deployed correctly, can help inform future program design to maximize savings.</p>	<p>Due to how the market perceives to define commissioning, the Companies believe that it is important to potentially reclassify that process (e.g., advanced commissioning), preferably by providing more specificity that would facilitate higher incentives and achieve additional savings. In addition, because commissioning is a process, training and education must also other project stakeholders (e.g., project managers, manufacturer reps) in addition to contractors.</p>
<p>Market Insight 5: due to the limited uptake to date associated with networked lighting controls, there is likely limited opportunity to pursue a program solely targeting retro-commissioning networked lighting systems. However, ensuring that commissioning efforts aimed at Integrated fixtures with Room-Based Controls, LLCs, and NLCs will help capture the full measure potential. While the opportunity for retro-commissioning networked lighting controls is small, there is likely more opportunity associated with retro-commissioning programs that focus on non-networked LLCs and fixtures with integrated controls. As networked systems gain market share, there could be an opportunity down the road to increase savings through a targeted retro-commissioning program.</p>	<p>The Companies' current retro-commissioning efforts focus on energy management systems. While the Companies will monitor this market development, additional information will be needed to understand how to incorporate retro-commissioning of lighting into its current work portfolio (e.g., vendor network, savings potential).</p>

C1902B Energy Conscious Blueprint Baseline and Code Compliance Study - Responses to Recommendations

Study Recommendations	Responses
<p>LIGHTING. The study team recommends using an adjustment factor of 40% better than IECC 2015 and 20% better than IECC 2021 (2022 PSD) in the PSD across the board for all building types. This recommendation may be applicable to projects involving new interior lighting installations (true new construction and major renovations).</p>	<p>The Companies will apply the new baseline recommendations to Path 3 and 4 projects. We will apply these baselines with new project initiations starting January 1, 2023. New Buildings and Major Renovation projects in CT will receive the baseline that was in place when the projects were initiated. Project initiation is defined as the earliest of the following milestones that could occur, depending on the project and Energize CT Sponsor: 1) Memorandum of Understanding date; 2) Date of signed Design Agreement for studies; 3) Signed</p>

Study Recommendations	Responses
	Project Intake Form, or 4) Date Data Collection Form received.
<p>UNITARY AC SYSTEMS</p> <p>Given the large sample size for packages DX units with capacities lower than 65,000 Btu/h, the study team recommends updating the baseline efficiency to 15 SEER. Although, for DX units with sizes between 65,000 Btu/h and 135,000 Btu/h, the sample size was small, the study team recommends updating the efficiency for this size category to 12 EER. Similarly, the study team recommends updating the baseline efficiency to 14 SEER for split units with capacities lower than 65,000 Btu/h.</p>	<p>The Companies will apply the new baseline recommendations to Path 3 and 4 projects. We will apply these baselines with new project initiations starting January 1, 2023. New Buildings and Major Renovation projects in CT will receive the baseline that was in place when the projects were initiated. Project initiation is defined as the earliest of the following milestones that could occur, depending on the project and Energize CT Sponsor: 1) Memorandum of Understanding date; 2) Date of signed Design Agreement for studies; 3) Signed Project Intake Form, or 4) Date Data Collection Form received.</p>
<p>HEAT PUMP</p> <p>We recommend updating the heating and cooling baselines for these systems in the PSD to 10.2 HSPF and 17.3 SEER, respectively. The Companies are making efforts to align the heat pumps requirements in the residential and C&I programs. An evaluation, R1968, is underway that will provide new baselines for heat pumps in the residential new construction program. We recommend referencing baseline values from that evaluation for heat pumps less than 65,000 Btu/h along with the ones provided in this study.</p>	<p>The Companies will apply the new baseline recommendations to Path 3 and 4 projects. We will apply these baselines with new project initiations starting January 1, 2023. New Buildings and Major Renovation projects in CT will receive the baseline that was in place when the projects were initiated. Project initiation is defined as the earliest of the following milestones that could occur, depending on the project and Energize CT Sponsor: 1) Memorandum of Understanding date; 2) Date of signed Design Agreement for studies; 3) Signed Project Intake Form, or 4) Date Data Collection Form received.</p>
<p>VARIABLE REFRIGERANT FLOW</p> <p>Within the sample, multi-split VRF systems with heat recovery and with capacities between 135,000 Btu/h and 240,000 Btu/h and greater than 240,000 Btu/h were most prominent. The study team recommends updating the cooling baseline efficiency for these systems in the PSD to 12 EER and 10 EER, respectively. The team recommends updating the high temperature heating baseline for multi-split VRF systems with heat recovery and with capacities between 135,000 Btu/h and 240,000 Btu/h to 3.7 COP. Similarly, team recommends updating the low temperature heating baseline for multi-split VRF systems with heat recovery and with capacities between 135,000 Btu/h and 240,000 Btu/h and greater than 240,000 Btu/h to 2.9 COP and 2.2 COP, respectively.</p>	<p>The Companies will apply the new baseline recommendations to Path 3 and 4 projects. We will apply these baselines with new project initiations starting January 1, 2023. New Buildings and Major Renovation projects in CT will receive the baseline that was in place when the projects were initiated. Project initiation is defined as the earliest of the following milestones that could occur, depending on the project and Energize CT Sponsor: 1) Memorandum of Understanding date; 2) Date of signed Design Agreement for studies; 3) Signed Project Intake Form, or 4) Date Data Collection Form received.</p>

Study Recommendations	Responses
<p>DOMESTIC HOT WATER HEATERS</p> <p>Instantaneous and storage gas heaters (primarily condensing) accounted for 43% and 38% of water heaters in the sample. We recommend updating the baselines for these two measures in the PSD from 80% to 95%.</p>	<p>The Companies will apply the new baseline recommendations to Path 3 and 4 projects. We will apply these baselines with new project initiations starting January 1, 2023. New Buildings and Major Renovation projects in CT will receive the baseline that was in place when the projects were initiated. Project initiation is defined as the earliest of the following milestones that could occur, depending on the project and Energize CT Sponsor: 1) Memorandum of Understanding date; 2) Date of signed Design Agreement for studies; 3) Signed Project Intake Form, or 4) Date Data Collection Form received.</p>
<p>TRACKING DATA</p> <p>As the restructured new construction programs mature, the utilities should start to distinctly record the project path (1 through 4). This will help clear identification of project tracks to facilitate future studies.</p>	<p>The Companies do identify the project pathway for each project, through occasionally projects that go through Path 4 are left unlabeled. The Companies will work on ensuring project pathways are identifiable.</p>

R1983 HES NTG Review - Responses to Recommendations

Study Recommendations	Responses
<p>The NMR team recommends the measure-level free-ridership (FR) values and installation rates, along with a program-level participant spillover (SO) rate of 7%, as shown in Table 1.</p>	<p>The Companies updated the 2023 PSD to reflect the recommended free-ridership values, spillover rates and installation rates for measures offered through the HES single family program.</p>

R1983 HES / HES IE Gas Weatherization- Responses to Recommendations

Study Recommendations	Responses
<p>The evaluation team recommends the companies apply a placeholder gross realization rate of at least 50% (relative to the reported savings for 2019 participants) for air sealing and insulation for associated with all heating fuel types both programs pending the completion of R1983.</p>	<p>The Companies updated the 2023 PSD to reflect the recommended 50% realization for all fuel types; electric, gas and delivered fuels for both HES and HES Income Eligible single family programs.</p>

4.3 Updates to Evaluation Processes

4.3.A Evaluation Data Dictionary and Standardization

Avangrid has had multiple meetings with the EA and several evaluation companies to develop a data dictionary for their current project tracking system. This data dictionary includes the data fields determined to be the most common and most important by the EA and a panel of evaluation company representatives. The information contained in the dictionary includes clarified field descriptions and information deemed necessary by the EA and evaluation company representatives to improve future data requests. As part of the data dictionary creation process Avangrid has agreed to work more closely with the evaluation companies and the EA to develop more targeted and concise data extracts which should improve evaluation productivity. Avangrid will continue to work with the EA and evaluation company representatives as a new project tracking system is implemented to develop a data dictionary prior to system implementation and an updated data extract process to mitigate future data issues.

4.3.B Ongoing Evaluation Data Improvements

DEEP's Final Determination directed the Companies to work with the EA to improve the timeliness and quality of data provided for evaluation studies and to report bi-annually to the Evaluation Committee their progress. The Companies and the EA are working together to carefully track the status of each data requests and identify areas for improvement. At the July Monthly Meeting, the Evaluation Committee discussed the Companies' progress on delivering data requests and reviewed data management practices followed by other leading states including hiring a statewide data management vendor and performance incentive mechanism for data requests. The Companies will continue to work with the EA to address data issues and follow data request procedures based on the EEB Program Evaluation Roadmap.

APPENDIX A: 2023 STATEWIDE MARKETING PLAN

A.1. INTRODUCTION

Statewide marketing efforts will support the greater plan key themes of equity, energy affordability, and decarbonization by providing a place for all customers to easily access energy efficiency program information and resources. The 2022–2024 term will focus and build on the EnergizeCT.com redesign. A site that provides clear information that is easily located allows us to confidently expand our use of the site and drive additional traffic to non-supplier choice pages. Content creation efforts for both the site and Energize Connecticut social media channels will continue to enhance the visitor’s experience while directing visitors to information on key areas including heat pump education, a clear path to income-eligible solutions, weatherization education, and business solutions for underserved sectors.

The Energize Connecticut social media accounts will continue to reside in the Statewide Marketing Plan. Separately from the Statewide Marketing Plan, the Companies use paid social and boosted posts under their programmatic advertising plans to further promote the EnergizeCT social media audience (and grow this audience).

The estimated yearly costs for the 2022-2024 Marketing Plan are shown in Figures A-1 (2023) and A-2 (2024). The CT Green Bank will not provide financial support but will continue to dedicate in-kind resources.

Table A-1: 2023 Marketing Plan Estimated Yearly Costs

2022 Marketing Plan Task	Eversource	United Illuminating, CNG, and SCG	Total
Website maintenance, updates, and technical support			
Website design and development			
Website enhancements and upgrades			
Acquia			
Website utilities (e.g., JW Player, Ceros, GoDaddy)			
Social media (management and content)			
Paid search			
Content creation & migration			
Total			

Table A-2: 2024 Marketing Plan Estimated Yearly Costs

2023 Marketing Plan Task	Eversource	United Illuminating, CNG, and SCG	Total
Website maintenance, updates, and technical support			
Website enhancements and upgrades			
Acquia			
Website utilities (e.g., JW Player, Ceros, GoDaddy)			
Social media (management and content)			
Paid search			
Content creation			
Total			

A.2 METRICS AND GOALS

Website traffic is tracked via Google Analytics. Since 2018, the Companies’ programmatic marketing drives customers to sign-up pages and the 877-WISE-USE energy efficiency hotline to provide the quickest path to program participation. Therefore, it is difficult to draw trending conclusions from the website’s traffic (as advertising has been the primary driver of website visits historically). Paid search and paid social will allow greater measurement of traffic to the site. Program marketing continues includes secondary messaging to the site for additional information.

Social media metrics serve as a way to direct our efforts. The social media account analysis done in mid-2021 as the new social media partner came on board serves as a benchmark and goals are derived from that analysis.

A.2.1 Three-Year Strategy (2022-2024)

The 2022-2024 term will focus on completing the upgrade to the website and building upon those upgrades. This includes a) increasing traffic to the site and b) providing new and engaging content to bring visitors back. Site maintenance, security and performance are ongoing in order to keep the site functioning properly. See Website Activities below for more.

Paid search will be used as a “pull” tactic to direct customers already looking for energy efficiency-related topics to the site. This targets people within Connecticut using broad awareness terms and phrases around energy efficiency and more specific terms around the Energize Connecticut brand. Close attention will be given to ensure paid search campaigns complement any paid search campaigns associated with program marketing by the Companies.

Social media platforms will engage followers with the brand with interesting, relevant posts and topics. Many of these posts will direct customers to EnergizeCT.com to learn more about a given topic. Although current social media accounts, namely Facebook, have a respectable number of followers, we look to reengage current subscribers as well as increase the overall number of followers. Content is a key component of social media and will continue to focus on topics important to stakeholders: including energy efficiency, energy-saving tips, renewable energy, financing opportunities, and supplier of choice with additional focus on content aligning with the key themes of the plan.

The new site will be engaging and user-friendly but maintaining that requires regular content updates and additions. While updating current content take precedence, creating new content that is featured, either on the site or via social media, is necessary to maintain interest of past visitors and encourage new visitors. As such, the strategy includes new content creation that complements the layout and user experience of the new site. Content will support the key themes of the plan including, but not limited to: heat pump education, a clear path to income-eligible solutions, weatherization education, and business solutions for underserved sectors.

Planned Website Activities

- i. **Site maintenance.** Ongoing website maintenance and readiness is required to ensure that EnergizeCT.com—a well-visited, best-in-class energy efficiency and renewable energy website—is available 24-hours a day, seven days a week, and is as a trusted resource for all Connecticut consumers and businesses.
- ii. **Site security and performance.** Routine monitoring for security issues focused on the platform, server, and content will guard against threats and enable issues to be resolved quickly.
- iii. **Enhance engagement.** New key engagement features including a homepage animated key statistics section (e.g., energy saved, homes weatherized) along with the EEB’s annual Legislative Report highlights, and an improved image gallery feature (e.g., Zero Energy Challenge, E-Houses).
- iv. **Site intercept surveys.** The continued use of website intercept surveys will assist the Website Strategy in understanding user behavior unique to the EnergizeCT.com site, to inform enhancements, and to support increased consumer engagement.

Website enhancements. Focus on improving customer journey with enhancements such as Accessibility Testing, SEO program, and Analytics program. Site enhancements to support additional regulatory requirements for rate board, electric vehicles, battery storage, and clean energy facilities.

APPENDIX B: PUBLIC INPUT SESSION

B.1 July 13, 2022 Public Input Comments



2023 Plan Update – Public Input Comments

July 13, 2022

Note: All submitted written comments, and a list of stakeholders who provided written or verbal comments, may be access at Box.com: <https://app.box.com/s/5557j66de4qwpj4avjllspxiio9lexk>

1) Daniel Robertson and Randy Vagnini, Connecticut Contractors Consortium

Representing: Connecticut Contractors Consortium

Date Input Received: July 12, 2022

Input Method(s): Written and verbal comments

Requests/Comments:

- **Request to accelerate the evaluation and establishment of existing baseline or baseline/code (pro-rate) for existing HVAC equipment.** This will capture more energy/demand savings and trigger more incentives to encourage customers to move forward with energy efficiency upgrades vs. keeping antiquated equipment online well past end of life. We realize the Companies and Consultants are working on it, so we are requesting additional support/resources to prioritize this. Benefits of this approach: reduces energy, supports decarbonization, and addresses the need to upgrade existing and aging equipment.
- **Develop a survey to assess HVAC stock and estimate carbonation and demand savings potential across the state.** Collecting data on age, equipment types, and efficiencies will help in program design.
- **Incentivize new EV charging and electrification.** New EV charging and electrification will increase usage and demand, and we probably can't get renewables/battery storage online quick enough, so it's vital to get these incentives in place to reduce usage/demand. Keep in mind that if demand increases during peak periods, dirty and more expensive generation for our State will be needed. We need to take action to minimize that.

Companies' Response:

The Companies are working with the EEB Consultants to evaluate potential modifications to address the HVAC baseline concerns. The Companies previously piloted incentives that were included to consider the first five years of savings relative to existing conditions and the Companies also utilized an RFP process. Unfortunately, there are not a lot of savings to provide incentives large enough to cover a significant of the high capital costs to replace HVAC

systems. Connecticut Grid Mod dockets will provide incentives for EV charging and battery storage systems. Eversource is/has expanded the SBEA and Municipal Loan to include EV charging stations and battery storage systems.

EEB's Response:

The EEB supports the increased use of existing equipment as a baseline where appropriate through an Early Retirement approach. The EEB Technical Consultants have requested a market study be conducted by the evaluators to determine HVAC market conditions to include age and efficiency of existing equipment. The EEB also supports the incentivization of electrification, and support of EV chargers when it results in efficiency or demand reduction opportunities.

2) Leticia Colon de Mejias, Efficiency for All

Representing: Efficiency for All

Date Input Received: July 13, 2022

Input Method(s): Written and verbal comments

Requests/Comments:

Please note: Ms. Colon de Mejias's full comments can be found in the materials folder, which include links to resources and recommendations for the CES Scoping Decision.

DEEP, the State of CT, and the EEB, as well as Joint GB commission, and the GC3 must take action to diversify the parties providing information in the planning process, and must ensure that parties beyond Yale, or other academia, are party to the planning phases.

The solutions laid out in these state plans, should seek to support all residents, not just rich residents, large businesses, and financing firms. Energy is required for our daily lives, our businesses, our communities, schools, workplaces and thus these energy plans should be communicated broadly, with specific focus on ensuring the community is meaningfully engaged and informed.

There is a need to educate and reach out meaningfully to communities which have NOT been served, and who still have barriers to energy saving programs and services- see health barriers sheet link below:

<https://efficiencyforall.org/wordpress/2020/02/25/governors-council-on-climate-change-gc3-equity-lens/>

The state plan must consider basic needs related to climate change and equal access to clean energy and energy that is stable and resilient to storms, and heat waves.

The Plan must prioritize equity from planning to investment.

Equity would have us focus on necessities that include safe shelters and stable clean energy electric systems. A focus that starts with working to meet our communities basic needs and lifts the most vulnerable populations to stable living conditions BEFORE focusing on luxury items such as net zero homes, financial support for new construction which should be built to code, or to support personal EV chargers that only support one family's needs, while other families have no transportation at all.

Equity would focus on helping our community's resilience, general energy system knowledge levels, and inform their ability to adapt. Equity places those who have least at the front of the issues, while the CES plans have done the opposite, supporting the same groups - Yale- Green Bank- universities, and Qusais that do not work directly in the community and CAP agencies. Equity requires local investment in workforce opportunities, business opportunities, and community engagement for at-risk communities, local small businesses, and should prioritize CT businesses that have long been serving. Equity requires meaningful inclusion and a voice at the table. It requires representation of our work, findings, and ideas.

The Board should improve diversity, inclusion, and effectiveness by engaging contractor groups, minorities, and disadvantaged representatives at the planning level.

EFA would like to express our desire to work alongside the state of CT to address energy equity opportunities and barriers. Over the last five years we have helped identify and solve multiple statewide energy equity issues such as but not limited to workforce development inclusive but not limited to:

- LMI access
- Barrier homes and health
- Copays
- The pandemic
- Multifamily access, landlord barriers
- Equal access for meaningful engagement by communities of color.

In our efforts we have learned that our lived experience as a nonprofit run by people of color that are directly serving in our own communities we are able to tackle systemic issues and create solutions that truly increase equitable outcomes. To that effect, we desire to continue to educate and engage our communities and the state leadership on weatherization and ensure we are properly allowed to provide direct service to CT residents. To date we have not been allowed to directly participate as an experienced nonprofit organization who would like to provide energy assessments, retrofitting, and customer education as well as consultant services to help bridge the gap and fill the longstanding equity gaps in our state programs.

We are composed of ratepayers, LMI ratepayers, local minority contractors, parents and community leaders of color. In our daily work we have the unique opportunities to understand the community and barriers to expanding access to services- jobs- and meaningful engagement.

We would like to see opportunities where contractors are not placed at a disadvantage to CAP agencies which take up to 34% of the payments for work our staff install and coordinate.

Regarding HESIE and the programs in general- We need to ensure that CTAC engages and informs contractors and communities as "partners " and for equity reasons, and that what we say gets reported back to the EEB and other

critical planning partners. If the information is bottlenecked and never reaches the EEB or planners we will be unable to have a meaningful voice.

Equity experts who live in or work in disadvantaged communities; bring to light that as climate change impacts like heat indexes increase, we must focus on necessities such as ensuring safe transportation to public schools to avoid heat impacts on children; safe shelter from storms and floods, and storm resilience measures such as solar - battery backup combinations. Even simple changes in weather will impact the most vulnerable first, therefore our plans must also address these issues first. Children may not be able to be in school without the aid of air conditioning, or a bus that picks them up at their safe shelter, and many CT schools do not have AC installed leaving kids in 100-degree classrooms. CES plans should place these critical equity needs before “innovation”- or support for things outside of our state. The CES plan should also be keen to diversify the parties at the planning table to represent underserved communities.

Diversity of thought, and diversity in planning, is key to solving problems. This is because some groups may not even be aware of issues impacting low income, or working families, who do not have the benefits of being state employees (who work from home, have affordable health insurance, are well paid and have access to paid time off and flex time). For example, college educated groups may not understand the difficulty of locating employment if one is not a college graduate. Those who grew up in a stable home, may struggle to understand housing instability, and those who do not struggle to pay energy bills, may not understand the implications of increased heating or cooling or electric bills, and water bills. Thus, it is important that not all parties at the planning table be highly educated or highly successful, else you lose the lens of those who are suffering.

The GC3 building report should be reviewed and incorporated into the CES.

The report may be found here: <https://portal.ct.gov/-/media/DEEP/climatechange/GC3/GC3-working-group-reports/GC3-Progress-mitigation-strategies-REVISED-draft-report-public-comment-093020.pdf>

With respect to the building sector, we recommend that DEEP and Connecticut fully embrace the GC3 Building Working group recommendations be reviewed at the EEB to develop a strategic plan to transition from fossil fuels¹ by lowering our energy demands through proven building science methods, such as thermal boundaries as a way to increase community resilience.

We add to that recommendation points on energy efficiency and deployment of energy assessments- and advanced air -sealing, insulation, and proven energy saving measures.

We further recommend that DEEP and the EEB examine the GC3 Equity platform, and consider proper representation of small business, minorities, and workers, in the planning and appointed roles as Latinos represent 17% of the state and hold not one seat on the EEB.

The state should also protect the C & LM funds from being depleted, stolen, diverted or used for items that are not accessible to working families and LMI communities.

The state must take action to ensure the Green Bank funds are properly and fairly allocated beyond rich communities and beyond large companies, and ensure they work on equity by intentionally focusing their efforts on local small business, local economic development, and communities which have been left behind in the clean energy transition.

CT continues to act as if the issue of solar has been solved for LMI- but renters cannot access solar, and the costs of many of the needed upgrades is beyond what CT residents can afford. Yet the need to draw down demand has never been higher.

Expand demand reduction through the EnergizeCT program and protect C&LM funds.

EFA's comments are based on the work we completed in the GC3 EQUITY Working Group, and on the Governor's transition team, and OWS, and other work in this state. Expanding demand reduction was unanimously voted as a critical step, and we also voted to protect the C&LM funds, yet they are continually raided and misappropriated to non-energy demand reduction focuses. Yet the budget is in danger and programs may again be shut down.

As the top need, we must first focus on building efficiency, and, second, deploy accessible renewable energy (shared solar or roof solar) combined with heat pump technology and battery storage. This will create resilience for all of Connecticut. The state needs to educate the public on why we are taking on this transition and engage them in how we can reach the goals. The state also needs to be more transparent in how they allocate funding related to the CES work, and properly engage and fund groups that have not had support or been at the table.

We MUST ensure these efforts to create resilience and access to clean energy extend beyond rich communities to reach working families and communities of color, as well as renters. We must support working families' access to efficiency, as they pay into the funds that support the work in our state and are still not gaining equal access to the supports which would increase their home resilience and lower energy bills for everyone.

Set, and meet, an objective goal around weatherization for commercial and industrial buildings.

Energy Efficiency is central to any decarbonization goal. The state has a stated goal of "weatherizing" 80% of residential homes by 2030. The Board should set a goal for C&I. To make this program happen we need:

- A working definition of weatherization. Without that, we won't know what the goal is. This is currently on the EEB 2022 agenda but has been there before as well.
- A data-driven program to assess energy efficiency. This program should incorporate a whole state – every building -approach. The energy we save is the least expensive kilowatt we can access.
- The state funding should break barriers and silos- while leveraging all existing C&LM funds, all LIHEAP and WAP funds, federal funding; and when needed, solicit private institution funding, and/or additional state funds.
- We should work at maximum speed and not be constrained by working within the Conservation and Load Management program budget and the transition MUST take into account equity and lift communities that have not been represented in the planning or had access to the supports.
- Equal access to climate and energy education for all of CT. How can communities engage and adapt if they are left unaware? How will parents connect to jobs they don't know exist and that they are unprepared to apply for.
- Workforce training and development programs are necessary to implement this large transition project. It is well known that there is a lack of trained workers to meet the goals, and there is a lack of people of color in these roles, and a lack of minority business ownership in the clean energy sector.

- Prioritize outreach, incentives, and remediation based on age of structure and likely energy intensity (newer buildings and low-use buildings such as churches would be lower priorities).
- Work with the utilities who could provide to DEEP the electric and gas heavy users in anonymized form (no individual data) so that this group could be addressed with priority.
- Special attention should be given to Environmental Justice communities which often have the worst building efficiency.
- We recommend simple metrics which track actual activity and installation:
 - Number of homes weatherized (we need a definition).
 - Number of homes not weatherized (we need a definition).
 - Buildings insulated.
 - Buildings with barriers to efficiency.
 - Buildings with building shell impairment (these fields to be completed using output of HES studies and put into database form – privacy concerns to be addressed by controlling access to the data).

Improve the thermal envelope for homes in the community.

The key tool for this is the EnergizeCT Home Energy Solutions program and accompanying insulation, windows, and HVAC measures.

Invest in workforce training that emphasizes comprehensive, best practices around energy efficiency.

There is a lack of trained HVAC staff to quote, sell, and install these units, and it is critical that the homes be made thermally tight or we will pay more for energy, not less. Customers are also not aware of the new heat pump technology that can be used in cold climates and can pair well with solar and battery storage; once a home is properly insulated this works very well.

Based on the experience with the HeatSmart campaigns which some of our contractors have participated in, we make the following recommendation to the CES scoping discussion:

- First, heat pump adoption involves many possible choices of technology intersecting with many possible heating and cooling configurations in the home. As noted above – building efficiency is central to any decarbonization strategy and needs to progress ahead of and alongside decarbonized heating technology. The key heat pump recommendation is to focus on the easier configurations at first. Some combinations are immediately practical and others are more difficult: PLACING thermal resilience and EFFICIENCY FIRST!
- Investigate and embrace supplemental heat configurations which may be the best option for many homes. Given the need to improve building shells, the numerous difficult configurations outlined above full implementation of heat pumps is difficult in some buildings. A recent paper by Michael Waite “Electricity Load Implications of Space Heating Decarbonization Pathways”² recommends and quantifies the effect of using Dual Source Systems which retain some combustion heating capacity and use heat pumps when it is most effective.

- The installer network is key to making this transition. Currently all HVAC installers work on all heating and cooling options. Heat pumps are a newer tech and specific training is needed – we recommend that the CES follow New York’s example and set up training, incentive, and performance metrics for installers. We recommend that the CES review NYSERDA’s Air Source Heat Pump Program Manual: <https://portal.nyserderda.ny.gov/servlet/servlet.FileDownload?file=00Pt000000Dq4IbEAB>
- All HVAC installers that we’ve engaged need trained techs. There is a large work force component of this. They must be aware that a home must be properly insulated for this to work well and not cause issues for LMI and our energy costs.
- With proper incentive- proper installations- proper sizing – proper equipment - and properly trained and directed HVAC staff. We recommend a review of NYSERDA’s approach to this. NYSERDA’s Air Source Heat Pump Program Manual: <https://portal.nyserderda.ny.gov/servlet/servlet.FileDownload?file=00Pt000000Dq4IbEAB>. In terms of equity consideration – building shell improvement is often the most direct, achievable!

Deployment of Distributed Energy Resources Local Siting of Renewables Matters

The CES Scope should encompass not only what the source of clean power is – but also where it is sited. In the Integrated Resource Plan, the major focus was answering the question of whether Connecticut could procure carbon free generation at the utility scale. The CES should add additional dimensions to this previous work:

- Location matters – and solar in Vermont is of less value than solar in Connecticut when serving Connecticut loads.
- A dynamic view of the distribution system needs to be added to the IRP modeling.
- The CES should explore areas for deployment of DERs which are underrepresented.
- Multifamily buildings, Condos and HOAs have real barriers to solar adoption – given their prevalence in our state, this is a huge area for improvement.
- PACE conducted a study of the potential for solar canopies to be added into the list of DER sites. PACE estimates that 8400 parking lots could supply almost 40% of today’s electricity needs.
- We also recommend that the Commercial solar cap of 50MW be expanded.

Our view of DERs needs to be informed by modeling that reflects a granular view of our grid as well as a modern view of our future distribution system. The addition of local DER, coupled with storage, and demand response can dramatically improve the cost effectiveness of the grid overall. Based on modeling by Vibrant Clean Energy it is recommended that the scope consider the distribution grid in addition to the transmission grid. We recommend that this study be part of the CES analysis: https://www.vibrantcleanenergy.com/wp-content/uploads/2020/12/WhyDERs_ES_Final.pdf

Specifically, we want to ask for your leadership to lead the charge of NGSS climate science, environmental education, and civic engagement of CT residents in the CES and C&LM work. In our work to protect people and the places we live

and love, we know that knowledge is power. Uniformed people cannot make informed decisions. Thus, it is critical that we properly educate our youth, and by association the information provided will also trickle into the communities which have been left disengaged on resilience building and opportunities for economic development, such as green and clean energy jobs, or business ownership in the clean energy industry. Opportunity cannot knock if the community is left in the dark.

Ensure equal access to education and fiscal supports, and improve awareness around the interconnectedness of energy impacts, health, and wealth.

Connecticut has fallen behind on providing equal access to NGSS energy and climate education, has fallen behind on equal access to solar, and has yet to meet the carbon reduction goals related to home energy emissions. The general lack of public information has led to a lack of representation of Black and brown workers in clean energy careers. At the top of my personal list of equity related concerns, is the lack of access to information on the interconnectedness of energy impacts, health and wealth, which has slowed uptake of energy saving upgrades in renters, and in Black and brown communities.

Far too often, Black and Brown communities are seen as, “the last to adopt new technologies;” but in reality, home energy efficiency upgrades and solar, have remained just out of reach for renters, low-income households, and many working families. The issue is related to the lack of effort to engage minorities in the planning, and the lack of education for communities and youth alike. We can Not connect to things we have not been informed on, things we have not been engaged on, or have not been able to afford or have lacked equal access to. Saying the words equity and inclusion does not create them- that takes intentional effort, planning, funding, and implementation.

As our climate changes rapidly, many communities are completely unprepared for the changes which we are already experiencing. The impacts of increased heat, increased flooding, increased storms, and raised prices for basic necessities such as shelter, water, food, heat, and electricity will hit low income communities, and low lying communities hard. The pandemic exposed many disparities displaying the undeniable disparity gap in our state. The executive order No- 21-3 provides an opportunity to ensure that as we plan we also plan to close the longstanding disparity gaps in our state.

While our state laws clearly state that the transition to a clean energy future should be inclusive and not place burdens on one group, while supporting another; the continued lack of representation of Black and brown leaders in our state’s energy and infrastructure planning, has led to lack of information and lack of equally distributed fiscal support for efficiency, clean energy, education, training, and resilience in our communities.

Exec order 21-3 - Is a Climate Action order which is needed to help our state complete resilience planning and infrastructure upgrades. CT, however, has long been investing in the “clean energy transition and in demand reduction. Several laws on the books already funded the expansion of clean energy. Unfortunately, the state has still missed the mark on creating an equitable transition. To have an equity based transition the following efforts would be made, and the following type of metrics would be set as state goals.

An Equitable energy transition would look like this:

- Schools and communities would have equal access to information that would inform them on the causes of climate change, and information on how to lower our emissions and how to lower the harmful impacts on the places we live and the people we love.
- Working families would have equal access to the funding for resilience upgrades like insulation, solar, heat pumps, and flood protection.
- Black and Brown residents would have equal access to clean energy and efficiency job opportunities, and increased opportunities to own these types of businesses, and to procure state contracts.
- All residents would have access to housing/shelter that allows them to maintain safe living conditions in storms, sea level rise, heat waves, and cold snaps.
- We would focus on PUBLIC benefits over private benefits in our clean energy transition planning.
- Communities of color would be included in the planning (not after the plan is laid; while the plan is made).

The road to energy equity and climate resilience go hand in hand. But the transition has been far from simple and has lacked inclusion all along the way. However, if we do not act intentionally, ensuring our focus is inclusive in our planning and that we are equitable and inclusive in the funding of our climate resilience efforts, then we will quite literally be leaving people uniformed and in the dark.

The time for proper inclusive access to information and support for statewide climate and energy nexus education for the many communities that have been left behind is NOW! These communities must be engaged to ensure that they are prepared, to ensure that they are not left behind to suffer the hardest impacts of the changes. Equity includes the right to be informed and engaged as we plan our path forward.

As we increase EVs and heat pumps, the electric demand will rise and so will the cost of energy. BUT - We can avoid this suffering if we also implement solutions to DRAW DOWN ENERGY DEMANDS - through EnergizeCT programs, and increase access to solar, and home solar battery combinations.

Ensure equity in transition to electrification with education on energy technologies, energy efficiency, climate change and financial tools.

Equity in transition- It is critical that the cost of the solar battery systems will NOT exclude low income or working families from accessing the solutions. We need EV's and we need EV buses, we need heat pumps as well to get off fossil fuel, but we must ensure we do a better job of providing support and access to the people who have been left behind in the transition thus far and focus on the necessity of demand reduction.

Here is how we can meet these goals: while ensuring no one group bears the burdens, and no one group gets all benefits. We must plan intentionally to bring those who have left behind to the table as we plan. Not after we plan. People need to know- knowledge is POWER and that POWER must be shared.

One Can Not Prepare If they are Not Aware! Climate change is an emergency; posing current and future threats to every human and the places we live. Yet, little is being done to provide widespread public education about the causes of climate change, the current and pending impacts of climate change, or what we can do collectively to lower the harms to human life. How can people prepare for this emergency or take steps to mitigate the causes if they are

uninformed? Education in schools and for the public is critical to support a just transition to a clean energy future for all, and to provide equal opportunities for careers, and meaningful engagement people must be properly informed.

Target energy efficiency and retrofit efforts to combined residential, commercial, and industrial buildings.

These sites are the LARGEST emitter of greenhouse gasses in Connecticut. We need more efficient buildings, homes, and workplaces. We must put our money and our efforts into things we know work. Like proper thermal boundaries - air sealing and insulation, better windows, and more efficient heating and hot water systems. Burning less dirty fuels in buildings by saving electric energy through deep retrofits and supported upgrades, combined with smart heating solutions - such as efficient heat pumps and induction stoves - will save families and businesses money, benefit public health, stabilize and protect our grid from black outs and brownouts, and grow local economies. The legislature can help by protecting and increasing deep retrofit energy efficiency programs, establishing building emission standards, and providing proper financial support to create equal access to proven demand reduction methods such as insulation, window upgrades, and removal of barriers to efficiency, equal access for renters, and at risk communities which need to prepare for climate resilience, and by establishing a net-zero stretch code.

Provide targeted solutions and resources to environmental justice communities.

Protect Environmental Justice (EJ) Communities From More Harm - No community should be overburdened with harmful pollution. Yet, in Connecticut there is evidence to show EJ communities suffer from a disproportionate amount of pollution. Fine particulate matter air pollution is linked to cardiovascular disease and pulmonary disorders including lung cancer, asthma and decreased lung function in children. EJ communities suffer from exposure to a multitude of air pollution sources and the cumulative impacts from air pollutants such as fine particulate matter (PM) that includes diesel particulates; criteria air pollutants that include ozone, lead and fine particulate matter; and hazardous air pollutants. Improvements to Connecticut's Environmental Justice Law must be made to protect communities from the cumulative impacts of air pollution by restricting new polluting sources from locating in these already overburdened communities. Similar to NJ EJ law, Connecticut can take action to protect human life.

Increase access to solar power.

Connecticut is lagging in the deployment of solar power and our efforts to deploy solar have not been equitable to communities which rent, or have barriers to rooftop solar, or who may have poor credit due to pandemic impacts—Community Solar can be deployed quickly. Community solar systems increase our resilience to storms, rising energy costs, and result in energy independence. Our expanded solar programs should be paired with battery storage, and thermal heat pumps and AC for immediate benefits to residents and our communities As part of the state's efforts on Climate Action which outlined Equity diversity and Inclusion as clear GC3 goals, the state must set goals that include lowering energy costs, increase resilience, protecting human and environmental health, and connecting communities to shared solar, and battery back systems for elderly, disabled, schools, and at risk populations who are most at risk from heat exposure or the impacts of climate change The legislature must enact legislation that will facilitate the adoption of solar energy, community solar, and storage by residents, businesses, nonprofits and governmental entities and will prioritize providing solar power and jobs in Environmental Justice and majority black and brown and low-income communities.

Be intentional about climate adaptation projects so they can be multi-solving.

The process of implementing climate adaptation projects can be as important as the result. Climate adaptation investments, to really qualify as multi-solving, must ensure that their benefits and burdens are justly shared. This requires vigorous community participation from the beginning.

Community engagement can help tackle important questions, such as: Who does the project benefit? How does the design protect against side-effects like “climate gentrification”? (That's the emerging term for what happens when communities benefiting from adaptation investments become more attractive. Property values and rents rise, and long-standing community members can be displaced.) And who will have access to the jobs created by adaptation projects?

The climate change adaptation task ahead of us is mammoth, and time is short. No one knows exactly how to adapt; after all, we are entering unknown climatological territory. But two simple rules can help us make the best possible decisions:

1. Make every dollar count by addressing multiple problems.
2. Make every decision as wisely as possible by listening to the voices of those who have the most at stake.

If we can stick to these equity principles, the needed investments in adaptation could also contribute to a healthier and more equitable society.

Companies’ Response:

The Companies agree with many of the points made regarding equity, diversity and workforce development. The Companies will continue to work with the EEB Consultants, include its new DEI consultant. Additionally, a contract was put in place with EFA to support workforce development for HES and HES-Income Eligible field technicians.

EEB’s Response:

EFA makes some good points in these comments and continues to remind us to have an equity and diversity lens as we look at programs and plans. We will continue to consider DEI perspectives and look forward to working more closely with the DEI consultant as they review the programs over the course of the 2022-2024 term.

3) Heather Deese, Dandelion Energy

Representing: Dandelion Energy

Date Input Received: July 13, 2022

Input Method(s): Verbal comments

Requests/Comments:

Please note: Ms. Deese shared a slide deck that can be found in the materials folder.

Dandelion Energy is a geothermal heating and cooling contractor. Ms. Deese provided information on the functionality and efficiency of geothermal heating and cooling systems.

A 5- ton geothermal heating and cooling systems can reduce a home’s carbon emissions by 80% per year when switching from fuel oil and 60% per year when switching from natural gas. Dandelion Energy has seen a dramatic increase in installs and sales since 2020. Geothermal systems have low operating expenses but compared to traditional heating systems have a higher up-front cost. While there are federal tax incentives, they are uncertain and may go away completely in 2024 if not renewed. This makes C&LM incentives critical in improving the value proposition for customers. Compared to other NE states, Connecticut’s rebates for geothermal and ground source heat pumps are lowest.

Evaluate and improve incentives around geothermal heating systems/ground source heat pumps.

We encourage the Board to look at incentive structures and levels for ground source heat pumps and make changes that can improve uptake for these measures. Loan caps should be increased to enable financing for geothermal projects. When designing incentives, the Board should consider weatherization and its impact on HVAC measures. The Smart-E specials the Green Bank offers are difficult to market to customers because it’s not clear how long those offers last.

Companies’ Response:

The Companies filed their responses to DEEP’s Condition of Approval No. 11 on September 1, 2022. This filing contains updates to proposed incentives for heat pumps.

EEB’s Response:

With the recent passage of the IRA, additional ground source heat pump incentives and tax credits will be available for a number of years to come. These will be available on top of the energy efficiency incentives. DEEP, the Companies, and the EEB Technical Consultants will examine all of these incentives to ensure that the benefits of ground source heat pumps are incentivized to a level commensurate with their benefits.

4) Diane Lauricella, Conservation Law Foundation

Representing: Conservation Law Foundation

Date Input Received: July 15, 2022

Input Method(s): Written and verbal comments

Requests/Comments

Thank you for the opportunity to submit further comment. I am so very pleased that the EEB has added several dynamic, dedicated members that will help turn the EEB's mission back to its stated origins related to saving money and scaling up education and clean energy projects.

In order to accomplish its 2023 Plan and mission, I ask that the EEB take at least one million dollars out of the utilities' C&LM Marketing accounts and initiate a much more effective and strategic marketing and education program.

Unless and until the Energize CT initiative is separate from the Utilities influence, we will not achieve the mission.

Companies' Response:

The Companies' marketing efforts to date have been effective in the meeting program /plan goals (i.e., customer participation, savings goals, and other performance incentive metrics). In 2023, the Companies can redirect efforts based on guidance from DEEP, EEB, and the EEB Consultants.

EEB's Response:

As the energy efficiency and demand management programs transition from purely efficiency and energy savings to equity, decarbonization, and electrification, we will need to consider how best to utilize the marketing budgets. There may be more of a need to educate Connecticut ratepayers about this new direction and the benefits for everyone. These new initiatives should be considered as part of the marketing plans for future conservation and load management plans.

5) Vivian Perez, Stephanie Weiner, and Joseph Roy

Representing: HE-Energy Solutions, Inc., New England Smart Energy Group, CMC Energy Services, Inc.

Date Input Received: July 15, 2022

Input Method(s): Written comments

Requests/Comments

We are three Home Energy Solutions (HES and HES-Income Eligible) approved contractors, all with very different business models but similar concerns regarding the future of the program and our businesses. Stability is the key for a sustainable business. We are aware that this is a subsidized program with limited funding, however we feel that now, especially with the huge increase in costs across the board (i.e., gasoline, caulk, foam, etc.) action is needed to even out and reduce extraneous spending.

Below we will briefly outline our challenges, which are typical of most of the participating businesses delivering Home Energy Solutions and offer some possible solutions. We are more than happy to meet with any board members who would like us to discuss these issues with us in more depth.

Challenges:

Currently we are facing contradictory challenges: our budgets are decreasing; our costs are increasing while at the same time our demand is high. We are forced to turn away customers or not service them in a timely manner along

with not being able to complete all the add-on-measures due to lack of funding. While the demand is there, the budget is not.

Solutions:

- Limit the number of contractors who deliver HES. We have made a commitment to serve the ratepayers of CT through purchase orders. We invest in our employees, along with new equipment, all office related activities and vehicles. Instability along with the pie getting smaller results in an unhealthy and unstable business environment. Right now, companies are already laying off employees as the programs close early for 2022.
- More flexibility to switch funds when needed, both within each utility and intra utility. This will help stabilize the funds so that one fuel type isn't being stopped mid-year.
- Leveraging other funding – Federal, state level, municipal, etc. that is available (on going and one time funding). For example, currently, the WAP funds are generally underspent, and we are told that we can also apply for a larger percentage than we are currently getting. Right now, the WAP programs leverage the utility program funding under HESIE, the HESIE program can leverage the WAP funding. This will allow the utilities program to pay for some of their larger ticket items like the add on measures – insulation, windows, HVAC.

This is also a time to look at extraneous budget allocations for existing programs and maybe reconsider pilot programs, such as the Residential Pay for Performance Pilot. We invested in a similar program years ago with Home Performance Contracting and it was very difficult to implement, track and work in due to several factors. Now, when our budgets are dwindling, may not be a good time to start this Pilot.

Companies' Response:

The Companies agree that given budget constraints and that it may not be best time for a Pay-for-Performance pilot.

EEB's Response:

The EEB also agrees that we need to discuss the budget constraints, new opportunities for funding programs, and programs like pay for performance that may not be the best use of limited budgets. We encourage continued dialogue in CTAC meetings and welcome suggestions and ideas from all contractors and others for the most effective program designs.

6) Mark A. Mitchell, CT Coalition for Environmental Justice

Representing: CT Coalition for Environmental Justice

Date Input Received: July 12, 2022

Input Method(s): Written comments

Requests/Comments

Thank you for the opportunity to provide input on the CT Energy Efficiency C&LM Plan. I appreciate the efforts to center equity in your plans and to seek input. However, I have two concerns in this regard:

In Connecticut, we do not have the environmental justice capacity to meet all the requests for EJ input from communities as well as governmental agencies, especially on technical and bureaucratic processes. There needs to be significant investment in reaching and educating those who are most affected by the untoward effects of these policies and can most benefit from good policies targeted toward disadvantaged communities. Please provide \$75,000 to \$100,000 grants to five Black or Latino-led community-based organizations to build the capacity to engage in this effort and on related efforts to provide equitable benefits to those who have historically been marginalized.

My second concern is that the link the 2022-2024 Plan in the public input session announcement does not work. [Note, this has been corrected as of July 13, 2022].

Companies' Response:

The Companies will work with the EEB and DEI Consultants to review budget needs.

EEB's Response:

The EEB and its Technical and DEI consultants are committed to environmental justice and will work to incorporate these considerations into future program offerings.

7) Samantha Dynowski, Sierra Club of Connecticut

Representing: Sierra Club of Connecticut

Date Input Received: July 13, 2022

Input Method(s): Verbal comments

Requests/Comments

The Sierra Club supports and commends the Board on its changes to the 2022-2024 Plan, including a phase out of all residential natural gas equipment incentives, transitioning the Residential New Construction program to include all electric offerings, a fuel neutral approach, updates to the cost-effectiveness test, proposing comprehensive plan for heat pump deployment, and a re-examining of the definition of equitable distribution, acknowledging the current program falls short and more funding is needed to serve low-income residents that face burdens to weatherization and energy retrofit services.

The Sierra Club offers the following recommendations for the 2023 Plan Update:

1. **Focus on the most energy-burdened households and engage in a process that identifies these areas.**
Houses in formerly redlined areas have faced racist disinvestment and don't have the same opportunity to upgrades their homes due to the lack of access to credit. Poor weatherization causes high energy bills, higher

carbon footprints, and unsafe conditions. When you look at the data on the map, including racial demographics, you can see that the people suffering from energy burden are often the same communities who initially suffered the injury of red lining, and are disproportionately Black families. By looking at things like gas and electric, energy burden, energy intensity, poverty, the age of housing, and the percentage of minority households, and involve community stakeholders in the process of developing those high need areas.

2. **Target and achieve a minimum of 40% of state and federal energy efficiency, renovation, weatherization dollars to homes with the highest need.**
3. **Solar and battery power should be evaluated for every project to further reduce energy burden, and increase resilience, and energy and independence.**
4. **Pair EE and Clean Energy programs with the PURA low-income discount rate.** We're participating in the PURA docket to urge PURA not to cap the low-income discount rate, and instead look to energy efficiency and clean energy programs to redress this legacy of disinvestment and drive down energy consumption.
5. **Regarding heat pump deployment, include measurable and equitable targets for deployment of heat pumps and workforce development.**

Companies' Response:

The Companies will work with the EEB Consultants to review and address the points made.

EEB's Response:

The EEB will consider the suggestions made in reviewing program designs and priorities.

8) Gannon Long, Operation Fuel

Representing: Operation Fuel

Date Input Received: July 13, 2022

Input Method(s): Verbal comments

Requests/Comments

Regarding upcoming changes to the C&I Portfolio, Ms. Long shared a concern about recent Connecticut legislation that would encourage building and development of data centers in the state. Data centers are very energy intensive and there are not really good environmental protections in place. Ms. Long asked if the C&I Committee, DEEP, or the Board is following this issue and if there is any kind of coordination. Ms. Long asked if there would be constraints to minimize the impact of the expansion of this industry. Ms. Long suggested that the state address this soon and coordinate.

Companies' Response:

The Companies will work with the EEB Consultants to review and address the points made.

EEB's Response:

While the legislation offering tax breaks for the construction of data centers may look appealing, there is a [minimum investment requirement of \\$50 million dollars](#) and the high price of electricity in Connecticut may discourage such development. Should the legislation prove to be successful, the EEB expects that the Companies will endeavor to assist the developers of data centers in Connecticut with incentives and technical support to ensure that all practical efficiency measures are adopted. There are many opportunities to optimize energy use in data centers with respect to lighting, heating, ventilation and air conditioning, as well as the use of the servers themselves.

APPENDIX C: COMPLIANCE ORDERS

C.1. DEEP Determination: 2022-2024 Conservation and Load Management Plan, Schedule of Conditions of Approval

Item No.	Program or Topic	Condition of Approval	Due Date / (Action)	Status
1	Responding to New Funding Sources	<p>The Companies are directed to identify specific Infrastructure Investment and Jobs Act (IIJA funding) opportunities that are relevant to the C&LM programs and for which they are eligible to apply. The Companies should submit a preliminary list of these opportunities to DEEP by Jun. 30, 2022. In recognition of the fact that guidance is not yet available for all IIJA funding opportunities, this list should be treated as a living document and updated at regular intervals to respond to new guidance.</p> <p>DEEP will lead coordination efforts associated with IIJA opportunities, which may include meetings, data requests, and the co-development of response strategies with stakeholders, including the Companies.</p>	<p>Jun. 30, 2022, with updates as necessary <i>(List)</i></p>	<p>Filed June 30, 2022</p>
2	Enhanced Residential Concierge Service	<p>Pursuant to Section III.i. of DEEP's Determination regarding the 2022-2024 C&LM Plan, DEEP directs the Companies to develop a Request for Information (RFI) regarding best practices for residential energy concierge services. This should be submitted to DEEP for review by July 18, 2022. Following DEEP review, the RFI should be submitted to a variety of expert parties, including those named in the Determination, no later than Aug. 8, 2022.</p> <p>To the extent necessary, the Companies are also directed to work with DEEP to explore potential funding sources for this service.</p>	<p>Jul. 18, 2022 <i>(Draft RFI)</i></p> <p>Aug. 8, 2022 <i>(Final RFI)</i></p>	<p>Filed July 18, 2022</p>
3	Condensing Gas Equipment Incentives	<p>In the proposed 2022-2024 Plan, the Companies committed to investigating the continued need to incentivize certain high-efficiency natural gas furnaces and boilers in the Residential and C&I Portfolios. The Companies will work with the Evaluation Administrator on this investigation and are specifically directed to apply findings from other jurisdictions, specifically Massachusetts, on this issue.</p> <p>As part of this investigation, the Companies should also study how the programs will determine the baselines for measures with upstream market models and the potential impact on low- to- moderate income customers if such incentives were eliminated.</p> <p>The Companies should report the findings of this investigation to</p>	<p>Jul. 13, 2022 <i>(Report)</i></p>	<p>Filed August 9, 2022 Presentation to Res. Comm June 8, 2022</p>

Item No.	Program or Topic	Condition of Approval	Due Date / (Action)	Status
		the EEB no later than their July 2022 meeting and submit to DEEP for approval shortly thereafter.		
4	Parity Analysis	The Companies are directed to perform a parity analysis, similar to those included in Appendix E.2 of the proposed 2022-2024 Plan, that further disaggregates C&I customers by size using the four quartiles that are employed for the C&I secondary equity metric. This analysis should demonstrate budgets and revenues for each C&I customer quartile. The Companies are also directed to expand the analysis for the gas sector, included as Appendix E.5 in the proposed 2022-2024 Plan. This analysis should include budgets and revenues by customer class (further disaggregated for C&I customers, as described above) over the three-year term.	Jun. 30, 2022 <i>(Report)</i>	Filed June 27, 2022
5	Equitable Distribution Reporting	Pursuant to CGS Sec. 16-245ee, each Company must annually submit to DEEP and the EEB the prior calendar year's Equitable Distribution data on a form prescribed and provided by DEEP no later than July 1, and also submit an updated method of census tract identification and economic status that determines whether the census tract is distressed. This data shall be provided on a census tract basis, or if not available by census tract, on a town-by town basis: the amount of conservation program funds assessed and the amount of incentives expended, disaggregated as small or large customers according the 100 kW peak demand threshold, and further disaggregated by customer class (i.e., Residential and C&I). The residential data component for small customers shall be disaggregated by the HES and HES-IE programs and identify the total number of projects participating in each program and disaggregate those project numbers by housing stock (i.e., single family, multifamily (2-4 units), and multifamily (>4 units)).	Annually on Jul. 1 <i>(Reporting)</i>	Filed July 1, 2022
6	Heat Pump Installer Network	To track progress of trainings offered though the new Heat Pump Installer Network (HPIN), the Companies are directed to: 1) Semi-annually (by July 1 and Dec. 31) submit a report providing an inventory of the trainings planned for the following six months related to heat pumps and how they compare to those offered by other Northeastern states. Specify what the companies are doing to ensure that building electrification training programs in Connecticut are consistent with the best practices from regional neighbors. When comparing programs, please indicate: a. Whether trainings are in-person vs. virtual;	Dec. 31, 2022, then semi-annually and quarterly <i>(Report)</i>	

Item No.	Program or Topic	Condition of Approval	Due Date / (Action)	Status
		<p>b. The hours required to complete the course;</p> <p>c. Who developed the training (e.g., manufacturer, or Company staff);</p> <p>d. The purpose of the training;</p> <p>e. The extent to which the Connecticut-based training will diverge from the best-in-class training and why; and</p> <p>f. Cost to offer the training.</p> <p>2) Submit a quarterly report to DEEP containing the following information:</p> <ul style="list-style-type: none"> • Number of contractors/installers registered on the HPIN; • Trainings completed per installer; and • Individual contractor participation in each training. 		
7	Evaluation Data Dictionary and Standardization	<p>With the understanding that UI is currently working to develop a new data management system, they are directed to take the following interim steps to improve the quality and timeliness of their evaluation data:</p> <ul style="list-style-type: none"> • Produce an accurate data dictionary for review by the Evaluation Administrator prior to the September 12, 2022 Evaluation Committee meeting. <p>Work with the Evaluation Administrator to produce standard data requests for impact and process evaluations, with accurate variable names, suitable for every major program.</p>	Sep.12, 2022 <i>(Data dictionary and standardize data requests)</i>	
8	Commercial and Industrial Project Verification	<p>The Companies shall lead a collaborative process, working with C&I customers, EEB Technical Consultants, and the Evaluation Administrator, to develop a proposal for an alternative verification pathway in instances where the customer is able to provide reliable calculated savings. This proposal should set clear parameters for projects that are eligible for the alternative pathway and ensure that there is no undue burden on the Evaluation Administrator. This proposal should be presented to the EEB C&I Committee no later than their July 2022 meeting.</p>	Jul. 12, 2022 <i>(Proposal)</i>	<p>Filed August 9, 2022</p> <p>Presented to C&I Comm July 12, 2022</p>
9	Residential Pay-for-Performance Pilot	<p>In response to Condition of Approval No. 3 of the 2021 C&LM Plan Update, the Companies submitted a straw proposal for a residential energy efficiency pay-for-performance pilot program.ⁱ DEEP approves that proposal and directs the companies to submit an implementation plan that includes a timeline and process for the proposed RFP and a pilot study plan that includes specific research questions, metrics, and a timeline for implementation as well as a regular reporting schedule by</p>	Aug. 1, 2022 <i>(Plan)</i>	<p>Filed July 27, 2022</p>

Item No.	Program or Topic	Condition of Approval	Due Date / (Action)	Status
		August 1, 2022. The Companies are encouraged to work with the EEB and Evaluation Administrator on their assessment of this pilot.		
10	Workforce Development Progress Reporting	<p>To ensure that progress is being tracked to support the development and expansion of a robust energy efficiency workforce in Connecticut, the Companies shall develop a workforce development and education strategy that includes the following:</p> <ul style="list-style-type: none"> • A list of measurable goals for the Education, Outreach and Workforce Portfolio of programs. Where possible, these goals should be informed by the recommendations of the ILLUME evaluation study. • An indication of projected rates of increase for these goals for each program year. • Metrics to track quantifiable progress towards these goals; providing specific goals and quantifiable metrics for program deployment in distressed municipalities. • Near, mid-, and long-term actions, estimated costs, and gaps that need to be filled by other stakeholders to meet these goals. • For Green STEP specifically, this report should include: <p>Programmatic or policy-based recommendations on how to increase participation in Green STEP; and an outreach plan to include students from the public school system in the after school/ summer Green STEP</p> <p>This report should be submitted to DEEP by Aug. 15, 2022. After the submission of the initial report, DEEP will work with the Companies to develop a regular reporting process to track progress towards the identified workforce development goals.</p>	Aug. 15, 2022 <i>(Report)</i>	Filed August 15, 2022
11	Updated Incentives	<p>The Companies are directed to submit a proposal outlining any changes to incentives resulting from DEEP's guidance on fuel-switching, as outlined in Section III.f. of the Determination, and changes to the cost-effectiveness test, as outlined in Section III.g. and Attachment B of the Determination. This proposal should re-evaluate and propose new levels for all incentives that will be impacted by these directives.</p> <p>Where applicable, it should also indicate if there are any new measures not currently incentivized through C&LM that may now</p>	Sep. 1, 2022 <i>(Proposal)</i>	Filed Sept. 1, 2022

Item No.	Program or Topic	Condition of Approval	Due Date / (Action)	Status
		<p>be cost-effective, given the changes made in this Determination. Specifically, the proposal should address the potential for incentivizing integrated controls and new renewable thermal measures including solar hot water.</p> <p>With respect to heat pump and heat pump water heater incentives specifically, the proposal should also explore the potential for providing enhanced incentives when these measures are paired with other measures, including weatherization, demand response, and integrated controls, as well as incentive structures that differentiate pull v. partial displacement scenarios.</p> <p>In developing this proposal, the Companies are directed to prioritize incentives that produce energy savings irrespective of fuel type, support customer choice and affordability, and align with state policy goals, including the Global Warming Solutions Act. It should also consider appropriate, fuel-neutral baselines and accounting methods to allocate costs equitably among programs, in accordance with Public Act 18-50.</p> <p>This proposal should be submitted to DEEP and the EEB for review and approval by Sep. 1, 2022, with the intention that these new incentives will be incorporated into the 2023 Plan Update.</p>		
12	Communities RFP	<p>In its review of the 2021 C&LM Plan Update, DEEP examined the Companies' new community outreach strategy. Part of this strategy would become the Community Partnership Initiative. There was a second component of this strategy that involved the issuance of an RFP for targeted community outreach, which DEEP directed the Companies to pause in its Conditional Approval.ⁱⁱ</p> <p>After completing two rounds of the CPI, the Utilities will be directed to submit to DEEP a proposal for the RFP offering that applies lessons learned from the first and second rounds of CPI and targets underserved/overburdened communities, including those identified in the Equitable Energy Efficiency Proceeding.ⁱⁱⁱ This proposal should be developed with guidance from the EEB's Diversity, Equity, and Inclusion Consultant. To ensure that the Companies have time to incorporate lessons learned from two rounds of the CPI into their proposal, DEEP will establish a deadline for the submission of this proposal in 2023.</p>	2023 <i>(Proposal)</i>	
13	All Electric Residential New	The Companies are directed to develop a proposal for transitioning the Residential New Construction program into an all-electric offering that will begin accepting projects no later	Oct. 15, 2022 <i>(Proposal)</i>	

Item No.	Program or Topic	Condition of Approval	Due Date / (Action)	Status
	Construction	<p>than July 2023. This proposal should include:</p> <ul style="list-style-type: none"> • Interim targets for increasing the proportion of all-electric projects completed through the Residential New Construction program. • Any necessary changes to incentive structures or levels <p>Any perceived barriers to an all-electric new construction offering, including workforce development, education, and customer outreach needs and proposed solutions to those barriers.</p>		
14	Community Partnership Initiative	<p>The Companies launched the first round of the Community Partnership Initiative (CPI) in August 2021 and selected applicants in early 2022.^{iv} The Companies are directed to use future rounds of the CPI to serve the C&LM Plan’s three priorities: equity, decarbonization, and affordability, and further goals that are not already being accomplished through standard program delivery. For example, the CPI should not simply seek to increase enrollment in programs that already have strong participation rates Future rounds of the CPI may include goals such as:</p> <ol style="list-style-type: none"> 1. Increase the adoption of heat pumps among low-income customers. 2. Specific targeting of small and microbusinesses in low- income and environmental justice areas. 3. Outreach goals aimed at increasing deployment of programs to rental properties and multi-unit dwellings. 4. Outreach goals aimed at increasing uptake of demand response and deep energy saving measures. <p>The Companies are also directed to consult with the EEB’s Diversity, Equity, and Inclusion Consultant on subsequent rounds of the CPI, as outlined in the EEB’s Request for Proposals.^v</p>	Regular reporting Directives incorporated in time for Round 2 <i>(Modification)</i>	
15	WAP Coordination	<p>The Companies are directed to coordinate with DEEP and other relevant stakeholders to develop approaches to braid funding between the C&LM programs and the federally funded Weatherization Assistance Program (WAP), in order to leverage increased funding available through IJA and other sources.</p> <p>DEEP will lead these coordination efforts, which may include meetings, data requests, and the co-development of strategies with stakeholders, including the Companies.</p>	Ongoing <i>(Coordination)</i>	Ongoing

Item No.	Program or Topic	Condition of Approval	Due Date / (Action)	Status
16	Technical Meeting – Heat Pump Adoption Strategic Plan	<p>Pursuant to Section III.h.ii. of DEEP’s Determination on the 2022-2024 Plan, DEEP will be convening a Technical Meeting to collect stakeholder feedback on barriers to and best practices for heat pump adoption. The Companies are directed to participate in the Technical Meeting and may be asked to present on or discuss any of the items listed in Section III.h.ii. Following that Technical Meeting, the Companies will be directed to produce a strategic plan for addressing barriers to heat pump adoption that incorporates findings from the Technical Meeting. This strategic plan should be developed as a standalone document and completed in time for it to be incorporated into the 2023 Plan Update.</p> <p>DEEP will organize the Technical Meeting and coordinate with the Companies on scheduling and presenting.</p>	TBD <i>(Technical Meeting, Strategic Plan)</i>	
17	Technical Meeting – Demand Response	<p>Pursuant to Section III.k. of DEEP’s determination on the 2022-2024 C&LM Plan, DEEP will be convening a Technical Meeting to collect stakeholder feedback on new opportunities to leverage advanced metering infrastructure (AMI) to optimize active demand response and pay-for-performance offerings in the C&LM Plan. The Companies are directed to participate in the Technical Meeting and may be asked to present. Following the Technical Meeting, the Companies are directed to incorporate any applicable findings and recommendations into the 2023 Plan Update.</p> <p>DEEP will organize the Technical Meeting and coordinate with the Companies on scheduling and presenting.</p>	TBD <i>(Technical Meeting)</i>	
18	Financial and Operational Audits	The Companies will continue the annual process for conducting Operational Audits of the Conservation and Load Management programs following the Agreed Upon Procedures that were established in response to Condition of Approval No. 3 of the 2019-2021 C&LM Plan. ^{vi}	Ongoing <i>(Reporting)</i>	
19	Data Coordination	The Companies shall continue to work collaboratively with the Department of Social Services and DEEP to coordinate data related to households served through energy assistance and energy conservation and weatherization programs to ensure the state is able to optimize program coordination and to fulfill its obligations to report detailed demographic and other information to federal agencies on grants received from the US Department of Health and Human Services through the Low-Income Home Energy Assistance Program and from the US Department of Energy Weatherization Assistance Program for	Ongoing <i>(N/A)</i>	Ongoing

Item No.	Program or Topic	Condition of Approval	Due Date / (Action)	Status
		Low-Income Households.		
20	Program Reporting	<p>The Companies are instructed to continue the schedule of regular program reporting established in their response to Condition of Approval No. 18 of DEEP’s Determination regarding the 2020 C&LM Plan Update.^{vii} The Companies should continue to follow the reporting requirements and timeline outlined in that response. In addition to the items listed in that response, DEEP may direct the Companies to include additional items in these reports as needed during the 2022-2024 Plan term.</p> <p>Starting with the 2022 Q2 report, the Companies are directed to report on the percentage of HES and HES-Income Eligible projects that accept and install each category of add-on measures under their respective programs, broken out by single-family and multifamily projects.</p>	Ongoing <i>(Reporting)</i>	Ongoing
21	Equitable Modern Grid Decisions	The Companies are instructed to propose updates to DEEP for review and approval, as needed, to align the Plan programs with the Distribution System Planning and Grid Modernization actions described in PURA dockets on those topics.	Ongoing <i>(N/A)</i>	Ongoing
22	Heat Pump Pilot	In their comments on DEEP’s Draft Determination regarding the 2022-2024 C&LM Plan, the Companies indicated that they planned to transition the Heat Pump Pilot into a standard program offering by December 31, 2022. ^{viii} Pursuant to Condition of Approval No. 17 of the 2020 C&LM Plan Update, the Companies should continue quarterly reporting to DEEP regarding the Heat Pump Pilot program for any quarters in the 2022-2024 Plan term during which the Pilot was operational. ^{ix} The Companies should provide a report of any findings resulting from the Heat Pump Pilot program to the EEB and DEEP no more than two months after the conclusion of the Pilot.	Ongoing <i>(Reporting)</i>	<p>Filed Quarterly report on August 14th.</p> <p>Final report to be filed</p>
23	Electric Resistance Conversions	Pursuant to Condition of Approval No. 9 of the 2021 C&LM Plan Update, the Companies should continue quarterly reporting regarding the conversion of electric resistance customers to heat pumps. ^x	Ongoing <i>(Reporting)</i>	Reported at Res. Committee Meetings
24	Targeted Outreach for Arrearage/ Shutoff Customers	Pursuant to Condition of Approval No. 18 of the 2021 C&LM Plan Update, the Companies are instructed to prioritize the targeting of HES and HES-Income Eligible programs to those with the largest arrearages and the most frequent shutoffs. ^{xi} The Companies shall continue quarterly reporting on these targeted outreach efforts.	Ongoing <i>(Reporting)</i>	Filed Quarterly report on August 15, 2022

Item No.	Program or Topic	Condition of Approval	Due Date / (Action)	Status
25	Ongoing Evaluation Data Improvements	The Evaluation Administrator's memo to DEEP identified specific areas of improvement that would bring Eversource and Avangrid's data into alignment with industry standards. Throughout the 2022-2024 Plan term, the Companies are directed to work with the Evaluation Administrator to address these issues, with the expectation that they will make significant progress by the end of the Plan term. The Evaluation Administrator and Companies should report bi- annually to the Evaluation Committee on their progress, beginning at their Jul. 11, 2022 meeting.	Ongoing (Reporting)	Ongoing Updates made at the July 11, 2022 meeting

ⁱ See [Companies' response](#) to Condition of Approval No. 3 of the 2021 C&LM Plan Update, Mar. 25, 2021.

ⁱⁱ See DEEP Determination: [Approval with Conditions of the 2021 Plan Update to the 2019-2021 Conservation and Load Management Plan](#), Mar. 4, 2021.

ⁱⁱⁱ See DEEP Final Determination, [Equitable Energy Efficiency Proceeding: Phase I Goals and Actions](#), Jul. 21, 2021.

^{iv} See Energize CT, Community Partnership for Energy Efficiency Engagement Initiative: [Round 1 Application for Interested Parties](#), Aug. 4, 2021.

^v See EEB [Request for Proposals: Consultant on Diversity, Equity, and Inclusion](#) to the EEB, Nov. 17, 2021.

^{vi} See DEEP Conditional Approval of the 2019-2021 C&LM Plan, [Attachment A: Schedule of Conditions of Approval](#), December 20, 2018.

^{vii} See [Companies' response](#) to Condition of Approval No. 18 of the 2020 C&LM Plan Update, Jun. 30, 2020.

^{viii} See Eversource Energy and Avangrid Networks, Inc. comments in response to DEEP's Draft Determination regarding the 2022-2024 Plan, April 27, 2022.

^{ix} See DEEP's [Conditional Approval of the 2020 C&LM Plan Update](#) (Appendix A), Feb. 11, 2020.

^x See DEEP Determination: [Approval with Conditions of the 2021 Plan Update to the 2019-2021 Plan](#), Mar. 4, 2021.

^{xi} See Id.

APPENDIX D: BUDGET & SAVINGS TABLES

D.1 BUDGET SUMMARY OF THE 2022-2024 PLAN PROGRAM YEARS

Table A – 2021 Combined Budgets (Electric and Natural Gas)

Statewide EE BUDGET	2021 Eversource CT Electric Actual Results 12/31/2021	2021 UI Proposed Budget Actual Results 12/31/2021	2021 Eversource CT Gas Actual Results 12/31/2021	2021 CNG Actual Results 12/31/2021	2021 SCG Actual Results 12/31/2021	2021 Statewide Combined Total 12/31/2021
RESIDENTIAL						
Residential Retail Products	\$8,656,062	\$1,959,310	\$ -	\$ -	\$ -	\$10,615,372
Residential New Construction	\$2,965,128	\$770,213	\$822,508	\$21,028	\$6,016	\$4,584,893
Home Energy Solutions	\$33,889,599	\$6,327,483	\$4,608,942	\$4,516,900	\$3,888,662	\$53,231,586
HVAC & Water Heating Equipment	\$12,072,073	\$2,249,235	\$4,394,965	\$3,010,011	\$3,675,770	\$25,402,054
HES Income Eligible	\$19,925,766	\$4,956,531	\$6,126,982	\$3,696,772	\$3,088,035	\$37,794,086
Residential Behavior	\$ -	\$68,544	\$ -	\$62,321	\$145,113	\$275,978
Subtotal: Residential EE Portfolio	\$77,508,628	\$16,331,317	\$15,953,396	\$11,307,032	\$10,803,596	\$131,903,969
COMMERCIAL & INDUSTRIAL						
Energy Conscious Blueprint	\$10,589,867	\$7,916,998	\$3,754,255	\$3,713,683	\$2,906,608	\$28,881,411
Energy Opportunities	\$37,034,760	\$5,801,717	\$732,274	\$925,543	\$750,905	\$45,245,199
Business & Energy Sustainability (O&M, RCx, PRIME, CSP/SEM)	\$842,631	\$433,054	\$408,183	\$308,472	\$249,022	\$2,241,362
Small Business	\$12,300,907	\$6,996,241	\$270,988	\$94,822	\$428,445	\$20,091,403
Subtotal: C&I EE Portfolio	\$60,768,165	\$21,148,011	\$5,165,700	\$5,042,520	\$4,334,980	\$96,459,376
OTHER - LOAD MANAGEMENT						
Residential Demand Response	\$2,510,467	\$610,010	\$ -	\$ -	\$ -	\$3,120,477
C&I Demand Response	\$3,375,613	\$174,610	\$ -	\$ -	\$ -	\$3,550,223
Subtotal: Load Management	\$5,886,079	\$784,620	\$ -	\$ -	\$ -	\$6,670,699
OTHER - EDUCATION & ENGAGEMENT						
Energy Education	\$287,255	\$128,511	\$31,386	\$25,240	\$22,829	\$495,221
Workforce Development	\$323,082	\$100,987	\$22,485	\$15,434	\$15,434	\$477,422
Community Outreach	\$562,598	\$107,074	\$36,300	\$17,227	\$17,227	\$740,426
Customer Engagement Initiative	\$876,301	\$ -	\$137,851	\$ -	\$ -	\$1,014,152
Subtotal: Education & Engagement	\$2,049,236	\$336,571	\$228,023	\$57,901	\$55,490	\$2,727,221
OTHER - PROGRAMS/REQUIREMENTS						
Residential Loan Program (includes ECLF and OBR)	\$899,986	\$28,752	\$77,705	\$ -	\$ -	\$1,006,443
C&I Financing Support	\$812,014	\$ -	\$2,427	\$ -	\$ -	\$814,441
Research, Development & Demonstration	\$51,833	\$7,188	\$4,795	\$11,573	\$84,073	\$159,462
Subtotal: Programs/Requirements	\$1,763,833	\$35,940	\$84,927	\$11,573	\$84,073	\$1,980,346
OTHER - ADMINISTRATIVE & PLANNING						
Administration	\$813,385	\$89,281	\$81,568	\$207,327	\$159,274	\$1,350,835
Marketing Plan	\$428,193	\$176,012	\$58,999	\$72,130	\$70,801	\$806,135
Planning	\$734,172	\$333,097	\$88,185	\$99,898	\$90,033	\$1,345,386
EM&V	\$1,920,000	\$480,000	\$200,000	\$200,000	\$200,000	\$3,000,000
Evaluation Administrator	\$256,933	\$52,635	\$28,548	\$21,931	\$21,931	\$381,978
Information Technology	\$1,606,701	\$692,058	\$178,639	\$339,848	\$328,131	\$3,145,377
Energy Efficiency Board Consultants	\$394,346	\$104,000	\$41,913	\$43,333	\$43,333	\$626,925
Audits - Financial and Operational	\$60,000	\$24,000	\$10,000	\$10,000	\$10,000	\$114,000
Performance Management Incentive	\$8,681,482	\$2,459,136	\$1,347,734	\$459,606	\$696,820	\$13,644,778
Subtotal: Admin/Planning Expenditures	\$14,895,212	\$4,410,219	\$2,035,586	\$1,454,074	\$1,620,324	\$24,415,414
TOTAL	\$162,871,152	\$43,046,678	\$23,467,632	\$17,873,100	\$16,898,463	\$264,157,025

Table A – 2022 Combined Budgets (Electric and Natural Gas)

Statewide EE BUDGET	2022 Eversource CT Electric Proposed Budget 11/01/2022	2022 UI Proposed Budget 11/01/2022	2022 Eversource CT Gas Proposed Budget 11/01/2022	2022 CNG Proposed Budget 11/01/2022	2022 SCG Proposed Budget 11/01/2022	2022 Statewide Combined Total 11/01/2022
RESIDENTIAL						
Residential Retail Products	\$4,158,000	\$757,358	\$ -	\$ -	\$ -	\$4,915,358
Residential New Construction	\$3,986,389	\$623,386	\$519,889	\$480,480	\$533,018	\$6,143,161
Home Energy Solutions	\$24,661,743	\$3,744,834	\$1,811,975	\$2,689,119	\$1,994,681	\$34,902,351
HVAC & Water Heating Equipment	\$14,463,704	\$2,228,156	\$3,752,230	\$1,356,035	\$1,412,138	\$23,212,263
HES Income Eligible	\$18,444,360	\$3,947,343	\$3,395,274	\$3,735,755	\$2,663,429	\$32,186,162
Residential Behavior	\$90,000	\$281,839	\$10,000	\$133,391	\$118,187	\$633,417
Subtotal: Residential EE Portfolio	\$65,804,196	\$11,582,916	\$9,489,368	\$8,394,780	\$6,721,453	\$101,992,713
COMMERCIAL & INDUSTRIAL						
Energy Conscious Blueprint	\$13,513,265	\$4,235,858	\$3,743,509	\$1,708,701	\$1,200,881	\$24,402,214
Energy Opportunities	\$36,833,451	\$7,856,527	\$1,497,489	\$1,011,722	\$822,946	\$48,022,134
Business & Energy Sustainability (O&M, RCx, PRIME, CSP/SEM)	\$3,175,966	\$1,154,085	\$473,952	\$536,581	\$369,558	\$5,710,142
Small Business	\$14,526,525	\$3,821,696	\$487,947	\$433,485	\$314,296	\$19,583,949
Subtotal: C&I EE Portfolio	\$68,049,207	\$17,068,167	\$6,202,896	\$3,690,489	\$2,707,681	\$97,718,440
OTHER - LOAD MANAGEMENT						
Residential Demand Response	\$3,340,000	\$565,015	\$ -	\$72,927	\$198,352	\$4,176,294
C&I Demand Response	\$4,753,000	\$359,419	\$ -	\$183,176	\$183,176	\$5,478,771
Subtotal: Load Management	\$8,093,000	\$924,434	\$ -	\$256,103	\$381,528	\$9,655,065
OTHER - EDUCATION & ENGAGEMENT						
Energy Education	\$736,000	\$184,000	\$76,667	\$76,667	\$76,667	\$1,150,001
Workforce Development	\$893,600	\$198,400	\$82,667	\$82,667	\$82,667	\$1,340,000
Community Outreach	\$768,000	\$192,000	\$80,000	\$80,000	\$80,000	\$1,200,000
Customer Engagement Initiative	\$450,000	\$80,000	\$70,000	\$50,000	\$50,000	\$700,000
Subtotal: Education & Engagement	\$2,847,600	\$654,401	\$309,333	\$289,334	\$289,334	\$4,390,001
OTHER - PROGRAMS/REQUIREMENTS						
Residential Loan Program (includes ECLF and OBR)	\$2,750,000	\$157,992	\$84,523	\$86,292	\$86,292	\$3,165,099
C&I Financing Support	\$1,750,000	\$85,000	\$93,905	\$20,000	\$75,000	\$2,023,905
Research, Development & Demonstration	\$162,227	\$151,250	\$50,000	\$50,000	\$50,000	\$463,477
Subtotal: Programs/Requirements	\$4,662,227	\$394,242	\$228,428	\$156,292	\$211,292	\$5,652,481
OTHER - ADMINISTRATIVE & PLANNING						
Administration	\$902,597	\$185,015	\$150,933	\$188,011	\$188,007	\$1,614,563
Marketing Plan	\$430,380	\$121,400	\$40,100	\$40,100	\$40,100	\$672,081
Planning	\$753,170	\$194,043	\$79,158	\$122,148	\$63,502	\$1,212,021
EM&V	\$2,880,000	\$720,000	\$300,000	\$300,000	\$300,000	\$4,500,000
Evaluation Administrator	\$284,232	\$71,057	\$29,607	\$29,607	\$29,607	\$444,110
Information Technology	\$1,839,097	\$1,194,375	\$140,726	\$584,822	\$609,473	\$4,368,493
Energy Efficiency Board Consultants	\$512,001	\$128,000	\$53,333	\$53,333	\$53,333	\$800,000
Audits - Financial and Operational	\$60,000	\$24,000	\$10,000	\$10,000	\$10,000	\$114,000
Performance Management Incentive	\$7,813,074	\$1,651,950	\$847,047	\$701,104	\$575,618	\$11,588,793
Subtotal: Admin/Planning Expenditures	\$15,474,551	\$4,289,840	\$1,650,904	\$2,029,124	\$1,869,640	\$25,314,060
TOTAL	\$164,930,780	\$34,914,000	\$17,880,931	\$14,816,121	\$12,180,928	\$244,722,760

Table A – 2023 Combined Budgets (Electric and Natural Gas)

Statewide EE BUDGET	2023 Eversource CT Electric Proposed Budget 11/01/2022	2023 UI Proposed Budget 11/01/2022	2023 Eversource CT Gas Proposed Budget 11/01/2022	2023 CNG Proposed Budget 11/01/2022	2023 SCG Proposed Budget 11/01/2022	2023 Statewide Combined Total 11/01/2022
RESIDENTIAL						
Residential Retail Products	\$3,558,000	\$1,001,887	\$ -	\$ -	\$ -	\$4,559,887
Residential New Construction	\$3,505,832	\$561,642	\$317,701	\$293,762	\$325,477	\$5,004,413
Home Energy Solutions	\$20,600,574	\$3,962,537	\$3,266,170	\$3,317,021	\$3,018,667	\$34,164,968
HVAC & Water Heating Equipment	\$13,928,670	\$2,168,934	\$3,041,653	\$1,062,339	\$1,174,703	\$21,376,299
HES Income Eligible	\$15,983,645	\$4,330,201	\$5,046,221	\$4,737,410	\$3,876,845	\$33,974,322
Residential Behavior	\$90,000	\$199,044	\$10,000	\$171,156	\$198,720	\$668,920
Subtotal: Residential EE Portfolio	\$57,666,721	\$12,224,245	\$11,681,745	\$9,581,687	\$8,594,411	\$99,748,808
COMMERCIAL & INDUSTRIAL						
Energy Conscious Blueprint	\$11,494,349	\$3,920,523	\$4,160,543	\$1,975,108	\$1,627,060	\$23,177,584
Energy Opportunities	\$32,903,888	\$7,466,578	\$3,825,065	\$1,152,718	\$1,072,738	\$46,420,987
Business & Energy Sustainability (O&M, RCx, PRIME, CSP/SEM)	\$3,001,155	\$1,105,723	\$708,372	\$608,763	\$481,971	\$5,905,983
Small Business	\$11,843,210	\$3,642,400	\$733,133	\$475,582	\$296,671	\$16,990,995
Subtotal: C&I EE Portfolio	\$59,242,602	\$16,135,225	\$9,427,112	\$4,212,170	\$3,478,441	\$92,495,549
OTHER - LOAD MANAGEMENT						
Residential Demand Response	\$3,082,000	\$687,094	\$ -	\$151,003	\$206,534	\$4,126,630
C&I Demand Response	\$4,380,590	\$424,129	\$ -	\$187,385	\$200,260	\$5,192,364
Subtotal: Load Management	\$7,462,590	\$1,111,223	\$ -	\$338,387	\$406,794	\$9,318,994
OTHER - EDUCATION & ENGAGEMENT						
Energy Education	\$736,000	\$184,000	\$76,667	\$76,667	\$76,667	\$1,150,000
Workforce Development	\$793,600	\$198,400	\$82,667	\$82,667	\$82,667	\$1,240,000
Community Outreach	\$768,000	\$192,000	\$80,000	\$80,000	\$80,000	\$1,200,000
Customer Engagement Initiative	\$400,000	\$80,000	\$70,000	\$50,000	\$50,000	\$650,000
Subtotal: Education & Engagement	\$2,697,600	\$654,401	\$309,333	\$289,334	\$289,333	\$4,240,001
OTHER - PROGRAMS/REQUIREMENTS						
Residential Loan Program (includes ECLF and OBR)	\$2,000,000	\$146,738	\$84,523	\$86,292	\$86,292	\$2,403,845
C&I Financing Support	\$1,000,000	\$85,000	\$93,905	\$20,000	\$75,000	\$1,273,905
Research, Development & Demonstration	\$162,227	\$151,250	\$50,000	\$50,000	\$50,000	\$463,477
Subtotal: Programs/Requirements	\$3,162,227	\$382,988	\$228,428	\$156,292	\$211,292	\$4,141,227
OTHER - ADMINISTRATIVE & PLANNING						
Administration	\$902,597	\$185,015	\$150,933	\$188,011	\$188,007	\$1,614,563
Marketing Plan	\$430,380	\$121,400	\$40,100	\$40,100	\$40,100	\$672,081
Planning	\$703,170	\$194,043	\$79,158	\$122,148	\$63,502	\$1,162,021
EM&V	\$2,880,000	\$720,000	\$300,000	\$300,000	\$300,000	\$4,500,000
Evaluation Administrator	\$284,232	\$71,057	\$29,607	\$29,607	\$29,607	\$444,110
Information Technology	\$1,839,097	\$725,375	\$140,726	\$284,822	\$332,473	\$3,322,493
Energy Efficiency Board Consultants	\$512,001	\$128,000	\$53,333	\$53,333	\$53,333	\$800,000
Audits - Financial and Operational	\$60,000	\$24,000	\$10,000	\$10,000	\$10,000	\$114,000
Performance Management Incentive	\$6,849,349	\$1,622,696	\$1,117,877	\$775,647	\$695,218	\$11,060,787
Subtotal: Admin/Planning Expenditures	\$14,460,826	\$3,791,586	\$1,921,734	\$1,803,668	\$1,712,240	\$23,690,054
TOTAL	\$144,692,565	\$34,299,668	\$23,568,353	\$16,381,537	\$14,692,511	\$233,634,634

Table A – 2024 Combined Budgets (Electric and Natural Gas)

Statewide EE BUDGET	2024 Eversource CT Electric Proposed Budget 11/01/2022	2024 UI Proposed Budget 11/01/2022	2024 Eversource CT Gas Proposed Budget 11/01/2022	2024 CNG Proposed Budget 11/01/2022	2024 SCG Proposed Budget 11/01/2022	2024 Statewide Combined Total 11/01/2022
RESIDENTIAL						
Residential Retail Products	\$3,300,000	\$986,338	\$ -	\$ -	\$ -	\$4,286,338
Residential New Construction	\$3,482,786	\$552,925	\$127,081	\$117,505	\$130,191	\$4,410,487
Home Energy Solutions	\$21,190,532	\$3,901,039	\$3,744,974	\$3,331,237	\$3,116,267	\$35,284,049
HVAC & Water Heating Equipment	\$13,506,628	\$2,135,273	\$3,041,653	\$1,062,339	\$1,174,703	\$20,920,596
HES Income Eligible	\$15,732,025	\$4,262,998	\$5,108,945	\$4,862,141	\$4,058,315	\$34,024,424
Residential Behavior	\$90,000	\$195,955	\$10,000	\$176,102	\$223,747	\$695,804
Subtotal: Residential EE Portfolio	\$57,301,971	\$12,034,528	\$12,032,653	\$9,549,324	\$8,703,223	\$99,621,698
COMMERCIAL & INDUSTRIAL						
Energy Conscious Blueprint	\$10,900,633	\$3,839,995	\$4,160,543	\$2,032,228	\$1,647,316	\$22,580,715
Energy Opportunities	\$32,921,033	\$7,185,372	\$3,827,266	\$1,182,949	\$1,086,025	\$46,202,644
Business & Energy Sustainability (O&M, RCx, PRIME, CSP/SEM)	\$3,352,172	\$1,072,253	\$708,372	\$624,239	\$487,917	\$6,244,953
Small Business	\$12,363,154	\$3,578,597	\$733,133	\$484,608	\$299,602	\$17,459,093
Subtotal: C&I EE Portfolio	\$59,536,993	\$15,676,217	\$9,429,313	\$4,324,023	\$3,520,860	\$92,487,406
OTHER - LOAD MANAGEMENT						
Residential Demand Response	\$3,390,200	\$833,588	\$ -	\$156,408	\$214,717	\$4,594,913
C&I Demand Response	\$4,818,649	\$492,859	\$ -	\$191,720	\$204,981	\$5,708,209
Subtotal Load Management	\$8,208,849	\$1,326,447	\$ -	\$348,128	\$419,698	\$10,303,122
OTHER - EDUCATION & ENGAGEMENT						
Energy Education	\$736,000	\$184,000	\$76,667	\$76,667	\$76,667	\$1,150,000
Workforce Development	\$793,600	\$198,400	\$82,667	\$82,667	\$82,667	\$1,240,000
Community Outreach	\$806,400	\$192,000	\$80,000	\$80,000	\$80,000	\$1,238,400
Customer Engagement Initiative	\$400,000	\$80,000	\$70,000	\$50,000	\$50,000	\$650,000
Subtotal: Education & Engagement	\$2,736,000	\$654,401	\$309,333	\$289,334	\$289,333	\$4,278,401
OTHER - PROGRAMS/REQUIREMENTS						
Residential Loan Program (includes ECLF and OBR)	\$2,500,000	\$146,738	\$84,523	\$86,292	\$86,292	\$2,903,845
C&I Financing Support	\$1,500,000	\$85,000	\$93,905	\$20,000	\$75,000	\$1,773,905
Research, Development & Demonstration	\$162,227	\$151,250	\$50,000	\$50,000	\$50,000	\$463,477
Subtotal: Programs/Requirements	\$4,162,227	\$382,988	\$228,428	\$156,292	\$211,292	\$5,141,227
OTHER - ADMINISTRATIVE & PLANNING						
Administration	\$902,597	\$185,015	\$150,933	\$188,011	\$188,007	\$1,614,563
Marketing Plan	\$430,380	\$121,400	\$40,100	\$40,100	\$40,100	\$672,081
Planning	\$703,170	\$194,043	\$79,158	\$122,148	\$63,502	\$1,162,021
EM&V	\$2,880,000	\$720,000	\$300,000	\$300,000	\$300,000	\$4,500,000
Evaluation Administrator	\$284,232	\$71,057	\$29,607	\$29,607	\$29,607	\$444,110
Information Technology	\$1,839,097	\$517,375	\$140,726	\$260,822	\$310,473	\$3,068,493
Energy Efficiency Board Consultants	\$512,001	\$128,000	\$53,333	\$53,333	\$53,333	\$800,000
Audits - Financial and Operational	\$60,000	\$24,000	\$10,000	\$10,000	\$10,000	\$114,000
Performance Management Incentive	\$6,935,064	\$1,590,621	\$1,135,532	\$778,909	\$702,324	\$11,142,451
Subtotal: Admin/Planning Expenditures	\$14,546,541	\$3,551,511	\$1,939,390	\$1,782,929	\$1,697,346	\$23,517,718
TOTAL	\$146,492,580	\$33,626,092	\$23,939,117	\$16,450,030	\$14,841,752	\$235,349,572

Table A – 2025 Combined Budgets (Electric and Natural Gas)

Statewide EE BUDGET	2025 Eversource CT Electric Proposed Budget 11/01/2022	2025 UI Proposed Budget 11/01/2022	2025 Eversource CT Gas Proposed Budget 11/01/2022	2025 CNG Proposed Budget 11/01/2022	2025 SCG Proposed Budget 11/01/2022	2025 Statewide Combined Total 11/01/2022
RESIDENTIAL						
Residential Retail Products	\$3,300,000	\$979,194	\$ -	\$ -	\$ -	\$4,279,194
Residential New Construction	\$3,450,386	\$548,920	\$63,540	\$58,752	\$65,095	\$4,186,694
Home Energy Solutions	\$20,974,532	\$3,882,341	\$3,812,981	\$3,376,762	\$3,186,708	\$35,233,324
HVAC & Water Heating Equipment	\$13,377,028	\$2,119,807	\$3,041,653	\$1,062,339	\$1,174,703	\$20,775,530
HES Income Eligible	\$15,570,025	\$4,232,121	\$5,176,952	\$4,918,338	\$4,148,700	\$34,046,136
Residential Behavior	\$90,000	\$194,536	\$10,000	\$177,200	\$223,747	\$695,482
Subtotal: Residential EE Portfolio	\$56,761,971	\$11,956,919	\$12,105,126	\$9,593,391	\$8,798,953	\$99,216,361
COMMERCIAL & INDUSTRIAL						
Energy Conscious Blueprint	\$10,783,021	\$3,812,182	\$4,160,543	\$2,042,303	\$1,667,632	\$22,465,681
Energy Opportunities	\$32,561,662	\$7,133,328	\$3,827,266	\$1,188,813	\$1,099,419	\$45,810,488
Business & Energy Sustainability (O&M, RCx, PRIME, CSP/SEM)	\$3,312,968	\$1,064,487	\$708,372	\$627,334	\$493,934	\$6,207,095
Small Business	\$12,225,939	\$3,552,678	\$733,133	\$487,010	\$303,297	\$17,302,056
Subtotal: C&I EE Portfolio	\$58,883,591	\$15,562,674	\$9,429,313	\$4,345,460	\$3,564,282	\$91,785,321
OTHER - LOAD MANAGEMENT						
Residential Demand Response	\$3,729,220	\$833,588	\$ -	\$156,408	\$214,717	\$4,933,933
C&I Demand Response	\$5,300,514	\$492,859	\$ -	\$191,720	\$204,981	\$6,190,074
Subtotal Load Management	\$9,029,734	\$1,326,447	\$ -	\$348,128	\$419,698	\$11,124,007
OTHER - EDUCATION & ENGAGEMENT						
Energy Education	\$2,500,000	\$146,738	\$84,523	\$86,292	\$86,292	\$2,903,845
Workforce Development	\$1,500,000	\$85,000	\$93,905	\$20,000	\$75,000	\$1,773,905
Community Outreach	\$162,227	\$151,250	\$50,000	\$50,000	\$50,000	\$463,477
Customer Engagement Initiative	\$4,162,227	\$382,988	\$228,428	\$156,292	\$211,292	\$5,141,227
Subtotal: Education & Engagement	\$2,500,000	\$146,738	\$84,523	\$86,292	\$86,292	\$2,903,845
OTHER - PROGRAMS/REQUIREMENTS						
Residential Loan Program (includes ECLF and OBR)	\$2,500,000	\$146,738	\$84,523	\$86,292	\$86,292	\$2,903,845
C&I Financing Support	\$1,500,000	\$85,000	\$93,905	\$20,000	\$75,000	\$1,773,905
Research, Development & Demonstration	\$162,227	\$151,250	\$50,000	\$50,000	\$50,000	\$463,477
Subtotal: Programs/Requirements	\$4,162,227	\$382,988	\$228,428	\$156,292	\$211,292	\$5,141,227
OTHER - ADMINISTRATIVE & PLANNING						
Administration	\$902,597	\$185,015	\$150,933	\$188,011	\$188,007	\$1,614,563
Marketing Plan	\$430,380	\$121,400	\$40,100	\$40,100	\$40,100	\$672,081
Planning	\$703,170	\$194,043	\$79,158	\$122,148	\$63,502	\$1,162,021
EM&V	\$2,880,000	\$720,000	\$300,000	\$300,000	\$300,000	\$4,500,000
Evaluation Administrator	\$284,232	\$71,057	\$29,607	\$29,607	\$29,607	\$444,110
Information Technology	\$1,839,097	\$517,375	\$140,726	\$260,822	\$310,473	\$3,068,493
Energy Efficiency Board Consultants	\$512,001	\$128,000	\$53,333	\$53,333	\$53,333	\$800,000
Audits - Financial and Operational	\$60,000	\$24,000	\$10,000	\$10,000	\$10,000	\$114,000
Performance Management Incentive	\$6,918,454	\$1,581,063	\$1,139,156	\$782,184	\$713,929	\$11,134,786
Subtotal: Admin/Planning Expenditures	\$14,529,931	\$3,541,954	\$1,943,014	\$1,786,204	\$1,708,951	\$23,510,054
TOTAL	\$146,143,773	\$33,425,383	\$24,015,215	\$16,518,810	\$14,992,510	\$235,095,690

- Table B – Statewide Electric and Natural Gas Costs and Benefits (2022)
- Table B – Statewide Electric and Natural Gas Costs and Benefits (2023)
- Table B – Statewide Electric and Natural Gas Costs and Benefits (2024)

D.2 Statewide Electric Tables

- Combined Electric Table A1 (2023)
- Combined Electric Table A1 (2024)
- Combined Electric Table A2 (2022-2025)
- Combined Electric Table Pie Chart (2023)
- Combined Electric Table Pie Chart (2024)

D.3 Eversource Budget and Savings Tables

- Eversource Electric Table A1 (2022-2025)
- Eversource Electric Table A Pie Chart (2023)
- Eversource Electric Table A Pie Chart (2024)
- Eversource Electric Table A Budget Allocation (2022-2024)
- Table B – Eversource Electric Costs and Benefits (2023)
- Table B – Eversource Electric Costs and Benefits (2024)
- Table C – Eversource Electric Energy Efficiency Budget Details (2023)
- Eversource Electric Table C Pie Chart (2023) ⁴⁷
- Table C – Eversource Electric Energy Efficiency Budget Details (2024)
- Eversource Electric Table C Pie Chart (2024)
- Table D – Eversource Electric Historical and Projected (\$) (2014-2025)
- Table D1 – Eversource Electric Historical and Projected (kW)(2014-2025)
- Table D2 – Eversource Electric Historical and Projected Annual kWh (000s)(2014-2025)
- Table D3 – Eversource Electric Historical and Projected Lifetime kWh (000s)(2014-2025)
- Table D4 – Eversource Electric Historical and Projected Units (2014-2025)
- Table D5- Eversource Electric Historical and Cost per Projected kW

⁴⁷ Per Compliance Order No. 4 (“Parity Analysis”) of the Final DEEP Determination, The Companies are directed to perform a parity analysis, similar to those included in Appendix E.2 of the proposed 2022-2024 Plan, that further disaggregates C&I customers by size using the four quartiles that are employed for the C&I secondary equity metric. This analysis should demonstrate budgets and revenues for each C&I customer quartile. The Companies are also directed to expand the analysis for the gas sector, included as Appendix E.5 in the proposed 2022-2024 C&LM Plan. This analysis should include budgets and revenues by customer class (further disaggregated for C&I customers, as described above) over the three-year term.

- Table D6 - Eversource Electric Historical and Cost per Projected Annual kWh (2014-2025)
- Table D7 - Eversource Electric Historical and Cost per Projected Lifetime kWh (2014-2025)
- Table D8 – Eversource Electric Historical and Projected Annual MMBtu
- Table D9 – Eversource Electric Historical and Projected Lifetime MMBtu
- Eversource Electric PMI (2023)
- Eversource Electric PMI (2024)

D.4 United Illuminating Budget and Savings Tables

- United Illuminating Electric Table A1 (2022-2025)
- United Illuminating Electric Table A Pie Chart (2023)
- United Illuminating Electric Table A Pie Chart (2024)
- United Illuminating Electric Table A Budget Allocation (2022-2024)
- Table B – United Illuminating Electric Costs and Benefits (2023)
- Table B – United Illuminating Electric Costs and Benefits (2024)
- Table C – United Illuminating Electric Energy Efficiency Budget Details (2023)
- United Illuminating Electric Table C Pie Chart (2023)
- Table C – United Illuminating Electric Energy Efficiency Budget Details (2024)
- United Illuminating Electric Table C Pie Chart (2024)
- Table D – United Illuminating Electric Historical and Projected (\$) (2014-2025)
- Table D1 – United Illuminating Electric Historical and Projected (kW)(2014-2025)
- Table D2 – United Illuminating Electric Historical and Projected Annual kWh (000s)(2014-2025)
- Table D3 – United Illuminating Electric Historical and Projected Lifetime kWh (000s)(2014-2025)
- Table D4 – United Illuminating Electric Historical and Projected Units (2014-2025)
- Table D5- United Illuminating Electric Historical and Cost per Projected kW
- Table D6 - United Illuminating Electric Historical and Cost per Projected Annual kWh (2014-2025)
- Table D7 - United Illuminating Electric Historical and Cost per Projected Lifetime kWh (2014-2025)
- Table D8 – United Illuminating Electric Historical and Projected Annual MMBtu
- Table D9 – United Illuminating Electric Historical and Projected Lifetime MMBtu
- United Illuminating Electric PMI (2023)
- United Illuminating Electric PMI (2024)

D.5 Combined Natural Gas Budget and Savings Tables

- Combined Natural Gas Table A1 (2023)

- Combined Natural Gas Table A1 (2024)
- Combined Natural Gas Table A2 (2022-2025)
- Combined Natural Gas Table A1 Pie Chart (2023)
- Combined Natural Gas Table A1 Pie Chart (2024)

D.6 Eversource Natural Gas Budget and Savings Tables

- Table A – Eversource Natural Gas (2022-2025)
- Table A Pie Chart – Eversource Natural Gas (2023)
- Table A Pie Chart – Eversource Natural Gas (2024)
- Eversource Natural Gas Table A Budget Allocation (2021-2025)
- Table B – Eversource Natural Gas (2023)
- Table B – Eversource Natural Gas (2024)
- Table C – Eversource Natural Gas (2023)
- Table C Pie Chart – Eversource Natural Gas (2023)
- Table C – Eversource Natural Gas (2024)
- Table C Pie Chart – Eversource Natural Gas (2024)
- Table D – Eversource Natural Gas CT Historical and Projected Expenditures (2014-2025)
- Table D1 – Eversource Natural Gas Annual Savings CCF (2014-2025)
- Table D2 – Eversource Natural Gas Lifetime Savings CCF (2014-2025)
- Table D3 - Eversource Natural Gas Cost per Annual Savings CCF (2014-2025)
- Table D4 – Eversource Natural Gas Cost per Lifetime Savings CCF (2014-2025)
- Table D5 – Eversource Natural Gas Units (2014-2025)
- Eversource Gas CT PMI (2023)
- Eversource Gas CT PMI (2024)

D.7 Connecticut Natural Gas Budget and Savings Tables

- Table A – Connecticut Natural Gas (2022-2025)
- Table A Pie Chart – Connecticut Natural Gas (2023)
- Table A Pie Chart – Connecticut Natural Gas (2024)
- Connecticut Natural Gas Table A Budget Allocation (2021-2025)
- Table B – Connecticut Natural Gas (2023)
- Table B – Connecticut Natural Gas (2024)
- Table C – Connecticut Natural Gas (2023)

- Table C Pie Chart – Connecticut Natural Gas (2023)
- Table C – Connecticut Natural Gas (2024)
- Table C Pie Chart – Connecticut Natural Gas (2024)
- Table D – Connecticut Natural Gas CT Historical and Projected Expenditures (2014-2025)
- Table D1 – Connecticut Natural Gas Annual Savings CCF (2014-2025)
- Table D2 – Connecticut Natural Gas Lifetime Savings CCF (2014-2025)
- Table D3 - Connecticut Natural Gas Cost per Annual Savings CCF (2014-2025)
- Table D4 – Connecticut Natural Gas Cost per Lifetime Savings CCF (2014-2025)
- Table D5 – Connecticut Natural Gas Units (2014-2025)
- Connecticut Natural Gas PMI (2023)
- Connecticut Natural Gas PMI (2024)

D.8 Southern Connecticut Gas Budget and Savings Tables

- Table A – Southern Connecticut Gas (2022-2025)
- Table A Pie Chart – Southern Connecticut Gas (2023)
- Table A Pie Chart – Southern Connecticut Gas (2024)
- Southern Connecticut Gas Table A Budget Allocation (2021-2025)
- Table B – Southern Connecticut Gas (2023)
- Table B – Southern Connecticut Gas (2024)
- Table C – Southern Connecticut Gas (2023)
- Table C Pie Chart – Southern Connecticut Gas (2023)
- Table C – Southern Connecticut Gas (2024)
- Table C Pie Chart – Southern Connecticut Gas (2024)
- Table D – Southern Connecticut Gas CT Historical and Projected Expenditures (2014-2025)
- Table D1 – Southern Connecticut Gas Annual Savings CCF (2014-2025)
- Table D2 – Southern Connecticut Gas Lifetime Savings CCF (2014-2025)
- Table D3 - Southern Connecticut Gas Cost per Annual Savings CCF (2014-2025)
- Table D4 – Southern Connecticut Gas Cost per Lifetime Savings CCF (2014-2025)
- Table D5 – Southern Connecticut Gas Units (2014-2025)
- Southern Connecticut Gas PMI (2023)
- Southern Connecticut Gas PMI (2024)