

June 1, 2022

DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION

**FINAL DETERMINATION: APPROVAL WITH CONDITIONS OF THE 2022-2024
CONSERVATION AND LOAD MANAGEMENT PLAN**

The Connecticut Department of Energy and Environmental Protection (DEEP) hereby issues the following Determination modifying and approving, with conditions, the 2022-2024 Conservation and Load Management (C&LM) Plan based on input received from the Energy Efficiency Board (EEB), requests for information issued by DEEP, public input sessions, and subsequent written comments. DEEP thanks the members of the EEB, the energy efficiency vendor and contractor community, Eversource Energy, The United Illuminating Company (UI), the Southern Connecticut Gas Company, the Connecticut Natural Gas Corporation, (collectively the Utilities), members of the public, and the rest of the stakeholder community who participated in this process, for the thoughtful consideration evident in their feedback regarding the 2022-2024 C&LM Plan.

I. Procedural History

Pursuant to Conn. Gen. Stat. § 16-245m, the Utilities, in consultation with the EEB, develop and submit to DEEP a combined electric and gas Conservation and Load Management Plan to implement “cost-effective energy conservation programs, demand management, and market transformation initiatives” for the state of Connecticut. The C&LM Plan is a three-year plan, including a detailed budget, that is supplemented by annual updates. DEEP is required, in an uncontested proceeding, to approve, modify or reject the three-year C&LM Plan and the detailed budget submitted with the Plan, including any annual updates submitted by the Utilities.

Connecticut’s energy efficiency programs have a strong track record of success and have been recognized as some of the best in the nation. In 2021, the programs generated over \$62 million in savings for Connecticut residents and businesses, eliminating the need for 114 megawatts of electricity generation capacity, enough to power approximately 43,138 homes for a year, and avoiding over 196,807 tons of carbon dioxide emissions.¹ The energy-saving investments funded by the 2022-2024 Plan are projected to provide over \$1.7 billion in cumulative benefits.²

The C&LM Plan is funded by ratepayer funds collected through the Conservation Adjustment Mechanism (CAM), revenues from the Regional Greenhouse Gas Initiative (RGGI) pursuant to Conn. Agencies Reg. § 22a-174-31, and proceeds from C&LM savings sold into the ISO New England Forward Capacity Market (FCM). In each Plan year, the Utilities collect ratepayer funds from each electric end use customers through the CAM charge at a rate of not more than six mills per kilowatt hour of electricity and

¹ See Energy Efficiency Board 2021 Programs and Operations Report, March 1, 2022, *available at*: <https://energizect.com/connecticut-energy-efficiency-board/about-energy-efficiency-board/annualreports>

² See Proposed 2022-2024 Conservation and Load Management Plan, November 1, 2021, *available at*: <http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/04d115cb68d338b785258788007091c9?OpenDocument>.

for gas customers at a rate of no more than the equivalent of four and six-tenth cents per hundred cubic feet of natural gas.³

The EEB voted to approve the 2022-2024 C&LM Plan text on September 8, 2021 and approved the budget on October 13, 2021.⁴ Subsequently, the Utilities filed the proposed 2022-2024 C&LM Plan and 2022 Program Savings Document with DEEP on November 1, 2021.⁵ The EEB provided several opportunities for public input throughout the development of the 2022-2024 C&LM Plan. The first of these occurred on March 10, 2021, while the C&LM Plan was in an earlier phase of development. On August 11 and 18, 2021, the EEB hosted two additional public input sessions to collect feedback on a draft of the 2022-2024 C&LM Plan. All comments received during the August 2021 are summarized in Appendix B of the 2022-2024 C&LM Plan, along with responses from both the Utilities and EEB.⁶

In its review of the proposed 2022-2024 Plan, DEEP submitted Requests for Information to the Utilities on November 3, 2021 soliciting additional information on a variety of topics.⁷ The Utilities submitted responses to these Requests on November 12 and 16, 2021.⁸ Following the DEEP Technical Meetings held on November 16 and 18, 2021, DEEP submitted additional Requests for Information to the Utilities on November 30, 2021.⁹

Pursuant to Conn. Gen. Stat. § 16-245m(d)(1), DEEP is required to initiate an uncontested proceeding to approve, modify, or reject a C&LM Plan, which may include a public meeting. DEEP held three public meetings to inform its review of the 2022-2024 C&LM Plan: two Technical Meetings on November 16

³ Historically, for electric and gas customers, when there are unused ratepayer funds at the end of a Plan year, the Utilities carry over up to five percent of the current annual budget related to the CAM into the next year. Any unspent funds from the CAM in excess of the five-percent threshold is returned to ratepayers through the following year's CAM. RGGI funds and FCM funds are not subject to the five-percent carryover threshold, and may be carried over without a cap. *See* Conn. Gen. Stat. § 16-245m(d)(1) and Final Decision, *Application of The Connecticut Light And Power Company And The United Illuminating Company For Approval Of A Conservation Adjustment Mechanism*, Docket No. 13-11-14, at 6, May 20, 2014; Final Decision, *PURA Investigation of the Annual Conservation Adjustment Mechanisms filed by: Connecticut Natural Gas Corporation, the Southern Connecticut Gas Company and Yankee Services Gas Company*, Docket No. 14-03-01, at 6, May 20, 2014.

⁴ *See* minutes from the September 8, 2021 and October 13, 2021 meetings of the Energy Efficiency Board, available at: <https://energizect.com/sites/default/files/2021-10/Minutes%20Sept%202021%20EEB.pdf> (September) and https://energizect.com/sites/default/files/2021-12/Oct%202021%20EEB%20Minutes_f.pdf (October)

⁵ *See* Proposed 2022-2024 Conservation and Load Management Plan, November 1, 2021, available at: <http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/04d115cb68d338b785258788007091c9?OpenDocument>.

⁶ *See* Proposed 2022-2024 Conservation and Load Management Plan (Appendix B), November 1, 2021, available at: <http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/04d115cb68d338b785258788007091c9?OpenDocument>

⁷ *See* DEEP Requests for Information: Questions and Comments Regarding Proposed 2022-2024 Conservation and Load Management Plan, November 3, 2021, available at: [http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/abcc7396b7044cd58525878300446ea6/\\$FILE/Requests%20for%20Information%20-%202022-2024%20CLM%20Plan.pdf](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/abcc7396b7044cd58525878300446ea6/$FILE/Requests%20for%20Information%20-%202022-2024%20CLM%20Plan.pdf)

⁸ *See* Utility Responses to DEEP Requests for Information, available at: <http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/7091cd5a6937ac5285258790005a4d16?OpenDocument> (RFI #BETP1-9) and <http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/6cade3d093b715be8525879200580264?OpenDocument> (RFI #BETP10-28)

⁹ *See* Requests for Information: Questions and Comments Regarding Proposed 2022-2024 Conservation and Load Management Plan, November 30, 2021, available at: [http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/d963f3c1f089626e8525879d0067a5d3/\\$FILE/Second%20Requests%20for%20Information%20-%202022-2024%20C&LM%20Plan.pdf](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/d963f3c1f089626e8525879d0067a5d3/$FILE/Second%20Requests%20for%20Information%20-%202022-2024%20C&LM%20Plan.pdf)

and 18, 2021 and one Public Input Session on November 17, 2021.¹⁰ The Technical Meetings included presentations from the Utilities and expert stakeholders regarding various elements of the 2022-2024 C&LM Plan, as well as opportunities for public comment.¹¹ The Public Input Session was held in the evening and included a high-level overview of the C&LM Plan from the Utilities and additional opportunities for public comment.¹² So as not to duplicate efforts, DEEP stated in its October 26 Notice that all comments received through the EEB public processes would be considered in DEEP's review of the C&LM Plan.¹³ Following the November 2021 meetings, DEEP issued a Notice of Request for Written Comments regarding the proposed 2022-2024 C&LM Plan.¹⁴ These comments are summarized in Attachment C. In addition to regular public meetings held by DEEP and the EEB throughout the year, these public participation opportunities provided an avenue for stakeholders to engage in the development of the 2022-2024 C&LM Plan.

DEEP issued an Interim Decision with respect to the 2022-2024 C&LM Plan budget on December 23, 2021. In this Interim Decision, DEEP approved the total budget for the 2022-2024 C&LM Plan and provided that DEEP would issue a Determination on the Plan text, subject to compliance conditions, to the Utilities at a later date.¹⁵

On April 12, 2022, DEEP issued a Draft Determination approving the Plan text with Conditions of Approval.¹⁶ Following the issuance of the Draft Determination, DEEP convened a public meeting to

¹⁰ See DEEP Notice of Technical Meetings and Public Input Session, October 26, 2021, *available at*: [http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/e4415567bfc5b3e285258782004d0852/\\$FILE/Notice%20of%20Technical%20Meeting%20-%202022-2024%20CLM%20Plan.pdf](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/e4415567bfc5b3e285258782004d0852/$FILE/Notice%20of%20Technical%20Meeting%20-%202022-2024%20CLM%20Plan.pdf).

¹¹ See DEEP Notice of Technical Meetings and Public Input Session, October 26, 2021, *available at*: [http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/e4415567bfc5b3e285258782004d0852/\\$FILE/Notice%20of%20Technical%20Meeting%20-%202022-2024%20CLM%20Plan.pdf](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/e4415567bfc5b3e285258782004d0852/$FILE/Notice%20of%20Technical%20Meeting%20-%202022-2024%20CLM%20Plan.pdf). Recordings of the Technical meetings are available here: https://ctdeep.zoom.us/rec/play/WCdG84uKS96n2x-gjZuROpKeb3euh4VdU4s1Pfe3MXz9x9oQNaLgyTgToHI_RDzAMfLdesaiLbZWS8ww.IUvzeQ55sAxsCmcG?continueMode=true (November 16) and here:

https://ctdeep.zoom.us/rec/play/ltR67izDoCJUBryEr3nMcHRMdxjziWuD38V0wh_DkV36dc74Ymf14a4DINKH7a_k8ZbAumtnrLLKciVdu.wWBYY0dm24hAbl-6J?continueMode=true&x_zm_rtaid=fSaU-jGkSa6eJMonBwzGSg.1637337535995.253bf4dff9e6955e3ed0b3b70047c0c&x_zm_rtaid=623 (November 18). Slide decks from the Technical Meetings are available here: <https://portal.ct.gov/-/media/DEEP/energy/ConserLoadMgmt/20211116-CLM-Technical-Meeting.pdf> (November 16) and here: <https://portal.ct.gov/-/media/DEEP/energy/ConserLoadMgmt/20211118-CLM-Technical-Meeting.pdf> (November 18).

¹² See DEEP Notice of Technical Meetings and Public Input Session, October 26, 2021, *available at*: [http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/e4415567bfc5b3e285258782004d0852/\\$FILE/Notice%20of%20Technical%20Meeting%20-%202022-2024%20CLM%20Plan.pdf](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/e4415567bfc5b3e285258782004d0852/$FILE/Notice%20of%20Technical%20Meeting%20-%202022-2024%20CLM%20Plan.pdf). A recording of the Public Input Session is available here: https://ctdeep.zoom.us/rec/play/kCpwKDLuHnAuZp2-IuApH164bJczhRs6KAcuqkuQMdd6ITkEBGx_zwb74V7SmxsFmicNzh0VhkOV-0f.M5DYF7R-HI7Eajy4?continueMode=true. A slide deck from the Public Input Session is available here: <https://portal.ct.gov/-/media/DEEP/energy/ConserLoadMgmt/20211117-Public-Input-Session.pdf>

¹³ See Id.

¹⁴ See DEEP Notice of Request for Written Comments, November 19, 2021, *available at*: [http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/f13e422d410439cc852587920057b0f3/\\$FILE/Notice%20of%20Request%20for%20Written%20Comments%20-%202022-2024%20C&LM%20Plan.pdf](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/f13e422d410439cc852587920057b0f3/$FILE/Notice%20of%20Request%20for%20Written%20Comments%20-%202022-2024%20C&LM%20Plan.pdf). All written comments submitted in response to this request can be found at: [http://www.dpuc.state.ct.us/DEEPEnergy.nsf/\\$EnergyView?OpenForm&Start=1&Count=30&Expand=7.1&Seq=3](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/$EnergyView?OpenForm&Start=1&Count=30&Expand=7.1&Seq=3)

¹⁵ See DEEP Approval and Determination of the 2022-2024 Conservation and Load Management Plan Budget, December 23, 2021, *available at*: <http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/871ac6d7479e1de8852587b800409cf8?OpenDocument>

¹⁶ See DEEP Draft Determination: Approval With Conditions of the 2022-2024 Conservation and Load Management Plan, April 12, 2022, *available at*:

discuss the Draft, its associated attachments, and Conditions of Approval.¹⁷ DEEP also provided an opportunity for stakeholders to submit written comments through April 27, 2022.¹⁸ Comments received in response to the Draft Determination are summarized in Attachment E.

II. 2022-2024 C&LM Plan Priorities

The proposed 2022-2024 C&LM Plan is structured around three priorities – equity, decarbonization, and energy affordability – and highlights the ways in which C&LM offerings advance these priorities.¹⁹ DEEP’s determination supports these priorities, providing several findings and Conditions of Approval intended to further advance equity, decarbonization, and energy affordability through the C&LM Plan.

a. Equity

The proposed 2022-2024 C&LM Plan asserts a commitment to ensuring that, “the Portfolios are equitable in their distribution of programs and benefits across the state, including communities and neighborhoods, market segments, and customer types.”²⁰ The Utilities propose to fulfill this commitment in a number of ways during the 2022-2024 Plan term, including through the development of new equity metrics, increased marketing to non-English speakers, supporting minority- and women-owned vendors, reaching priority communities with education and engagement initiatives, and ensuring that energy efficiency workforce opportunities are available in underserved communities.

Through its Equitable Energy Efficiency (E3) Proceeding, DEEP is working with the Utilities, EEB, and stakeholders to assess equity in C&LM programs and develop strategies to ensure equitable program delivery. There has already been progress on the recommendations from the first phase of the E3 Proceeding and DEEP looks forward exploring new issues in future phases.²¹ In particular, the EEB has acted on the E3 recommendation to hire a Diversity, Equity, and Inclusion Consultant who will play an important role in moving this work forward.²²

This Determination builds upon these efforts through Conditions of Approval directing the Utilities to, among other things, conduct targeted outreach to underserved communities in subsequent rounds of the Community Partnership Initiative, set goals for delivering workforce development offerings in distressed municipalities, and implement programmatic changes to make Connecticut’s energy efficiency programs more accessible.

<http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/ea714e056ac86bef852588220071e982?OpenDocument>

¹⁷ See DEEP Notice of Public Meetings and Request for Written Comments – Draft Determination on the 2022-2024 C&LM Plan, April 12, 2022, *available at*:

<http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/41b827a51e5366bb8525882200719b45?OpenDocument>. A recording of this meeting is available here:

https://ctdeep.zoom.us/rec/play/JD6l0q_TrAbn4AY_L4bZow136EF4jtm1-xwhnX2tJFTTq9q9sAPoz5qPTPmNrpZD-n0YnNzJdA_nhcfo.yLY5PZwTfYd0jpKc?continueMode=true

¹⁸ Written comments submitted in response to the Draft Determination are available here:

[http://www.dpuc.state.ct.us/DEEPEnergy.nsf/\\$EnergyView?OpenForm&Start=1&Count=30&Expand=7.1&Seq=11](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/$EnergyView?OpenForm&Start=1&Count=30&Expand=7.1&Seq=11)

¹⁹ See Proposed 2022-2024 Conservation and Load Management Plan, November 1, 2021, *available at*:

<http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/04d115cb68d338b785258788007091c9?OpenDocument>

²⁰ See Id.

²¹ See Equitable Energy Efficiency Proceeding Phase 1 Progress Report, December 28, 2021, *available at*:

<https://portal.ct.gov/-/media/DEEP/energy/ConserLoadMgmt/Fall-2021-E3-Progress-Report.pdf>

²² The EEB issued a Request for Proposals for a DEI Consultant on November 17, 2021, *available at*:

<https://energizect.com/sites/default/files/2021-12/DEI%20Consultant%20RFP.pdf>

During this Plan term, there may be opportunities to coordinate with the implementation of other funding sources, including increased Weatherization Assistance Program (WAP) funds pursuant to the Infrastructure Investment and Jobs Act (IIJA), to enhance the delivery of energy efficiency programs to low-income and other underserved communities. This Determination calls for DEEP, the Utilities, the EEB, and other stakeholders to seek opportunities to collaborate and coordinate to take full advantage of these opportunities. Additionally, this Determination provides further guidance on the use of RGGI funds to ensure equitable distribution in Section III.e., below.

b. Decarbonization

Decarbonization is the second key priority of the proposed 2022-2024 C&LM Plan. Although the proposed Plan includes several strategies to enhance the C&LM portfolio's impact on emissions, DEEP's recent report that Connecticut is not on track to meet economy-wide greenhouse gas emissions reduction targets established in the Global Warming Solutions Act (GWSA) demonstrates that more ambitious action is required.²³ As outlined later in this Determination, greenhouse gas emissions from use of fossil fuels in residences needs to be reduced several times more rapidly from 2018 to 2030 than they had been from 2001 to 2018; and emissions from use of these fuels in commercial buildings must be reduced even more rapidly. Specifically, the 2018 Connecticut Greenhouse Gas Emissions Inventory found that, based on the most recent greenhouse gas emission data available, emissions from residential, commercial and industrial buildings increased from 2017-2018, which is not in line with the approximately 30% reduction in such emissions that will be required to meet the 45% reduction in greenhouse gas emissions needed economy-wide by 2030.²⁴ The updated Comprehensive Energy Strategy (CES), which began development in early 2022, will provide a roadmap for some of this work. Pursuant to Governor Lamont's Executive Order 21-3, the CES must include strategies to, among other things, provide for more affordable heating and cooling for Connecticut residents and businesses and achieve reductions in greenhouse gas emissions from residential and commercial buildings and industrial facilities as required to meet GWSA targets.²⁵ There are critical steps that the C&LM Plan must take to remove barriers to increased decarbonization and position C&LM programs to be responsive to eventual CES directives. This Determination outlines a set of incremental steps designed to pave the way to more widespread building decarbonization. These steps include:

- Modifying cost-effectiveness testing to capture the impact of emissions on the energy system;
- Enabling customers to select the most efficient measures; and,
- Aligning C&LM incentives with statewide climate policy goals.

These steps will build toward a planned phase-out of all residential natural gas equipment incentives during this Plan term. This incremental approach reflects the need to identify and address existing economic, logistical, and other barriers to widespread adoption of renewable thermal measures, including heat pumps, and other natural gas alternatives as a critical step to prepare for phase-out of natural gas equipment incentives. In the near-term, the Utilities are directed to take certain steps to remove barriers to heat pump adoption, including strengthening workforce development and customer education initiatives and aligning incentives with the cost effectiveness testing approach adopted herein. DEEP will continue to work with the EEB, Utilities, and stakeholders throughout the 2022-2024 Plan term to phase natural gas equipment incentives out of the residential portfolio. A planned timeline for this phase-out is described in the sections below and in the Conditions of Approval (Attachment A).

c. Energy Affordability

²³ See DEEP 2018 Greenhouse Gas Emissions Inventory, October 2021, *available at*: <https://portal.ct.gov/DEEP/Climate-Change/CT-Greenhouse-Gas-Inventory-Reports>

²⁴ See DEEP 2018 Greenhouse Gas Emissions Inventory, October 2021, *available at*: <https://portal.ct.gov/DEEP/Climate-Change/CT-Greenhouse-Gas-Inventory-Reports>

²⁵ See Governor Lamont Executive Order No. 21-3, December 16, 2021, *available at*: <https://portal.ct.gov/-/media/Office-of-the-Governor/Executive-Orders/Lamont-Executive-Orders/Executive-Order-No-21-3.pdf>

Energy Affordability is the third key priority of the proposed 2022-2024 C&LM Plan. With Connecticut facing some of the highest average annual energy costs in the nation, the state’s energy efficiency programs are vital to managing residents’ energy burdens. The average Connecticut household spends \$3,600 per year on energy bills, the second highest average in the country.²⁶ Low-income households spend 8-19 percent of their annual income on energy bills, which is well above the commonly accepted 6 percent threshold for affordability.²⁷

The proposed Plan includes several enhancements to improve energy affordability, including deploying additional residential and commercial customer education resources, providing vendors with tools to reach priority customers, enhanced promotion of loan products for businesses, and targeting customers in distressed communities.

The sections below outline areas where work towards this priority could be improved and associated Conditions of Approval. These include continued targeted outreach to arrearage and shutoff customers, improvements to the Utilities’ proposed residential concierge service offering, and measures to streamline commercial and industrial projects.

There are interconnections among these three priorities, and they should not be considered in isolation. For example, data from the Energy Information Agency indicates that the least efficient, highest-emitting homes are concentrated in low-income communities that simultaneously face high energy burdens and significant barriers to receiving weatherization and energy retrofit services.²⁸ The 2022-2024 C&LM Plan and this Determination recognize and seek to address that intersection.

III. Findings

a. Statutory Consistency

DEEP is authorized to review and approve the C&LM Plan to ensure that it contains cost-effective energy conservation, demand management, and market transformation initiatives.²⁹ DEEP finds that the Plan, as modified by this Determination, is consistent with Conn. Gen. Stat. § 16-245m, Conn. Gen. Stat. § 16a-35k, Connecticut’s Comprehensive Energy Strategy, Connecticut’s Integrated Resources Plan, and the Global Warming Solutions Act.

In approving, with modifications and conditions, the 2022-2024 C&LM Plan, and ensuring coordination of this Plan with other state plans, DEEP is supporting the state’s responsibility to coordinate state plans and functions to maximize the use of energy efficient systems and minimize the environmental impact of energy production and use, pursuant to Conn. Gen. Stat. § 22a-1a. Consistent with Conn. Gen. Stat. § 16a-3a, the C&LM Plan advances Connecticut’s progress in ensuring that energy resource needs are first met “through all available energy-efficiency and demand reduction resources that are cost-effective, reliable, and feasible,” which will “minimize the cost of all energy resources to customers over time.” Additionally, the C&LM Plan contains steps to meet the emissions reductions targets established in the

²⁶ See U.S. Department of Energy Low-Income Energy Affordability Data (LEAD) Tool, *available at*: <https://www.energy.gov/eere/slsc/maps/lead-tool>

²⁷ See *Id.* The 6 percent affordability threshold assumes that a household should spend 30 percent of its income on shelter costs, and energy costs should be no more than 20 percent of shelter costs.

²⁸ See comments submitted by Acadia Center regarding DEEP’s Draft Determination on the 2022-2024 C&LM Plan, April 27, 2022, *available at*: <http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/036f5cb6b6a05b3c852588330033182c?OpenDocument>

²⁹ CGS 16-245m(d)(1)

Global Warming Solutions Act,³⁰ the goals and recommendations of the Governor’s Council on Climate Change (GC3),³¹ and the goal of weatherizing 80 percent of residential units by 2030 established in Conn. Gen. Stat. § 16-245m(d)(1).

b. Collaboration with Energy Efficiency Board and Coordinated Policy Priorities

The C&LM Plan reflects Connecticut’s energy and environmental policy priorities, provides details about program designs refined through collaboration with the EEB, identifies strategies for reaching targeted customer segments, and catalyzes technologies that will advance Connecticut’s energy efficiency goals. DEEP concurs with these areas of focus and appreciates the Utilities’ and the EEB’s efforts to ensure the Plan’s priorities reflect Connecticut’s energy and environmental strategies and statutes.

c. Accountability and Transparency

Progress made toward statutory and C&LM-related goals cited herein is reported through a variety of channels, including compliance filings with DEEP, quarterly and year-end reporting to the EEB, the statewide energy efficiency dashboard, and reports such as the annual Equitable Distribution Report, among others.³² In its review of the 2020 C&LM Plan Update, DEEP directed the Utilities to develop a list of quarterly program reports required for program oversight.³³ This list, submitted by the Utilities in June 2020, outlines the reporting structure to which the Utilities adhered during the 2019-2021 C&LM Plan term.³⁴

However, stakeholders have noted challenges accessing relevant reporting and commented that the Plan lacks clarity regarding how the programs as proposed are serving the three priorities for this C&LM Plan term: equity, decarbonization, and affordability.³⁵

As further described in the Conditions of Approval, DEEP is directing the Utilities to continue the reporting practices outlined in their response to Condition of Approval No. 18 to the 2020 C&LM Plan Update, with some modifications to ensure that reports are accessible to stakeholders and clearly demonstrate how the programs are advancing equity, decarbonization, and affordability.

³⁰ See Public Act No. 08-98 “An Act Concerning Connecticut Global Warming Solutions, *available at*: <https://www.cga.ct.gov/2008/ACT/PA/2008PA-00098-R00HB-05600-PA.htm>

³¹ See Governor’s Council on Climate Change, Phase 1 Report: Near-Term Actions, January 2021, *available at*: https://portal.ct.gov/-/media/DEEP/climatechange/GC3/GC3_Phase1_Report_Jan2021.pdf

³² For a full inventory of program data and reporting resources, *see* this September 2021 EEB Technical Consultant presentation: <https://app.box.com/s/m8885iktcpb5zxodi0t9lem2qablljbx/file/857348044627>

³³ See DEEP’s Conditional Approval of the 2020 C&LM Plan Update (Appendix A), February 11, 2020, *available at*: <http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/16d2e80a4a780ab78525850b0057ec6a?OpenDocument>

³⁴ See Utilities’ response to Condition of Approval No. 18 of the 2020 C&LM Plan Update, June 30, 2020, *available at*: <http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/23661838715798ce85258597006ce1e1?OpenDocument>

³⁵ See for instance, written and verbal comments submitted to DEEP by CT Green Building Council, Henry Auer, Vincent Giordano, Melissa Leonard (Naugatuck Conservation Commission), Shannon Laun (Conservation Law Foundation). Written comments *available at*: [http://www.dpuc.state.ct.us/DEEPEnergy.nsf/\\$EnergyView?OpenForm&Start=1&Count=30&Expand=7.1&Seq=5](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/$EnergyView?OpenForm&Start=1&Count=30&Expand=7.1&Seq=5). Recordings of verbal comments available at: https://ctdeep.zoom.us/rec/play/kCpwKDLuHnAuZp2-IuApHl64bJczhRs6KAcuqkuQMdd6lTkEBGx_zwb74V7SmxsFmicNzh0VhkOV-0f.M5DYF7R-Hl7Eajy4?continueMode=true

Additionally, in its review of the 2022-2024 C&LM Plan, the EEB is working to catalogue Plan commitments and establish a system for tracking progress toward these commitments over time.³⁶ DEEP looks forward to working with the EEB, Technical Consultants, and Utilities to develop a transparent process for reporting progress on these commitments.

d. Ability to Respond to New Funding Sources

The federal Infrastructure Investment and Jobs Act (IIJA), enacted on November 15, 2021, includes several programs and funding opportunities that have the potential to bring additional federal investment to Connecticut that will contribute to meeting the measures and objectives in the C&LM Plan.³⁷ Securing additional federal funding will require DEEP, the Utilities, and other stakeholders to be nimble and responsive to new funding opportunities.

To ensure a coordinated response, DEEP is directing the Utilities, through this Determination, to identify IIJA funding opportunities that are relevant to the C&LM Plan and for which the Utilities are eligible to apply, and to coordinate with DEEP on these opportunities. Further direction on this plan is provided in the Conditions of Approval.

DEEP is further directing the Utilities to coordinate with DEEP and other stakeholders to develop approaches to “braid” (or combine multiple sources of) funding for the C&LM programs and the federally funded Weatherization Assistance Program (WAP), so that increased funds from IIJA are leveraged to build WAP into a sustainable program that addresses energy affordability in distressed communities and environmental justice areas, targeted workforce development in populations disproportionately affected by climate change, and carbon emissions reduction through energy efficiency and renewable energy deployment in communities with poor social determinants of health.

e. Determination of Equitable Distribution

Pursuant to Conn. Gen. Stat. § 16-245ee, the DEEP Commissioner, “shall determine that an equitable amount of the funds administered by [various boards] are to be deployed among small and large customers with a maximum average monthly peak demand of one hundred kilowatts in census tracts in which the median income is not more than sixty per cent of the state median income.” A definition of “equitable” is not established in the statute, which grants the DEEP Commissioner the authority to “determine the equitable share.”

DEEP conducts regular, retrospective analyses of C&LM funds through its Equitable Distribution Reports, the most recent of which covers the 2018 program year. Historically, these reports have determined that equitable distribution occurs when, “census tracts (receive) an equal or greater percentage of total incentives than that same tract’s contributions as a percentage of total billed collections.”³⁸ Using that definition, DEEP’s review of the most recent data analyzed found that the overall distribution of revenues was not equitably deployed in 2018.³⁹ DEEP is currently reviewing data from 2019 and 2020

³⁶ While the development of this commitment tracker is still in progress, a presentation describing the process of commitment tracking can be found here:

<https://app.box.com/s/ht3zucrs01vm9izl0tlzow57p9afcakn/file/905319037330>

³⁷ See Public Act 117-58, An Act to authorize funds for Federal-aid highways, highway safety programs, and transit programs, and for other purposes, November 15, 2021, available at:

<https://www.congress.gov/117/plaws/publ58/PLAW-117publ58.pdf>

³⁸ See 2018 Equitable Distribution: Report on the Equitable Distribution of Conservation and Load Management and Renewable Energy Funds in Connecticut, July 2021, available at: <https://portal.ct.gov/-/media/DEEP/energy/ConserLoadMgmt/2018-EQD.pdf>

³⁹ See Id.

and will analyze data from 2021 when it becomes available in 2022. However, DEEP is also reexamining the definition of “equitable distribution.”

Given the directive of Conn. Gen. Stat. § 16-245ee, DEEP has been working with the EEB, Utilities, and other stakeholders on an Equitable Energy Efficiency (E3) Proceeding that sets forth strategies to increase deployment of energy efficiency programs to underserved communities. Among these strategies is an examination of current Equitable Distribution Reporting practices to ensure that the definition of “equitable distribution” is accurate and comprehensive. As a preliminary step, the 2019 Equitable Distribution Report will contain new lines of analysis, including an assessment of Home Energy Solutions (HES) and Home Energy Solutions-Income Eligible (HES-IE) in communities of color, census tracts with high average energy burdens, and areas with high rates of arrearages and utility shutoffs.⁴⁰

Some recommendations from Phase I of the E3 Proceeding were incorporated into the proposed 2022-2024 C&LM Plan, while others are still in progress.⁴¹ The E3 Proceeding is scheduled to continue with Phase 2 in 2022 with the support of a Diversity, Equity, and Inclusion (DEI) Consultant. Once in place, the DEI Consultant will work with the EEB and DEEP to thoroughly review how “equitable distribution” is both measured and achieved in C&LM programming.⁴²

The 2022-2024 C&LM Plan includes a parity analysis of revenues and budgets across customer classes. With some variation year-to-year, commercial and industrial customers account for 52 percent of the budget and 52 percent of revenues, residential income-eligible customers account for 14 percent of the budget and 13 percent of revenues, and market-rate residential customers account for 34 percent of the budget and 35 percent of revenues. These projections suggest near-parity for the electric sector.⁴³

During the public comment periods, some stakeholders called for budget allocations based on equity rather than parity, and enhanced funding for low-income programs.⁴⁴ Although equitable distribution of C&LM funding has historically been based on parity, equitable distribution, and not parity, is statutorily required.⁴⁵ Parity can be useful to ensure that, for example, residential rate classes and commercial rate classes are not unduly cross-subsidizing each other. But determining equitable distribution of benefits within a rate class requires more than an examination of parity according to income level. Additionally, in the event that income-eligible programs have over- or under-utilized their resources, the Utilities should re-allocate funds from market rate programs to ensure that income-eligible programs remain accessible.

Benchmarking of budget allocations for low-income programs in other states indicates that Connecticut’s low-income spending as a percentage of its total energy efficiency budget is comparable to regional

⁴⁰ See DEEP Final Determination, Equitable Energy Efficiency Phase I Goals and Actions, July 21, 2021, available at: <https://portal.ct.gov/-/media/DEEP/energy/ConserLoadMgmt/Final-E3-Phase-I-Determination.pdf>

⁴¹ See DEEP Equitable Energy Efficiency Proceeding Phase 1 Progress Report, December 28, 2021, available at: <https://portal.ct.gov/-/media/DEEP/energy/ConserLoadMgmt/Fall-2021-E3-Progress-Report.pdf>

⁴² See EEB Request for Proposals: Consultant on Diversity, Equity, and Inclusion to the CT Energy Efficiency Board, November 17, 2021 (revised December 2, 2021), available at: <https://energizect.com/sites/default/files/2021-12/DEI%20Consultant%20RFP.pdf>

⁴³ See Proposed 2022-2024 Conservation and Load Management Plan, November 1, 2021, available at: <http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/04d115cb68d338b785258788007091c9?OpenDocument>

⁴⁴ See, for instance, public comments provided by The Connecticut Green Building Council, Melissa Kops, and Kimberly Stoner, summarized in Appendix C and Summary of public comments from the Energy Efficiency Board’s August 2021 public input sessions, August 23, 2021, available at: <https://app.box.com/s/43qlddtxd0cxg4z9z4iaon4k0fc1utbh/file/853820676721>

⁴⁵ See Conn. Gen. Stat. § 16-245ee.

neighbors.⁴⁶ However, other states employ policies such as minimum low-income spending requirements and more expansive definitions of low-income to enhance funding directed at low-income programs.⁴⁷

DEEP has also examined federal policy and guidance regarding equity in low-income spending. The Biden Administration’s Justice40 Initiative (Justice40), for example, is an effort of the federal government to deliver at least 40% of the overall benefits from Federal investments in climate and clean energy to disadvantaged communities.⁴⁸ In Interim Guidance, issued on July 20, 2021, the “disadvantaged communities” at the center of the Justice40 Initiative were defined as “a group of individuals living in geographic proximity to one another, or a geographically dispersed set of individuals (such as migrant workers or Native Americans) where either type of group experiences common conditions.”⁴⁹ Those common conditions might include low-income or high poverty, high unemployment or underemployment, high housing and/or transportation costs, racial and/or ethnic segregation, or disproportionate impacts from climate change.⁵⁰ Justice40’s broad definition of “disadvantaged communities” goes beyond the population of residential income-eligible customers included in the parity analysis in the 2022-2024 C&LM Plan.

Given this difference, DEEP strongly encourages the EEB to work with the DEI Consultant, once hired, to investigate how future equity analyses can be conducted in alignment with Justice40 principles. With consultation of the Interim Guidance, these issues will be reviewed in DEEP’s Equitable Energy Efficiency (E3) Proceeding, for both residential and commercial customers. DEEP looks forward to coordinating with the EEB and the new DEI consultant to work towards a more equitable energy efficiency landscape. This work will also require a more granular understanding of parity among commercial and industrial customers, who are grouped into a single class in the 2022-2024 parity analysis. As further described in the Conditions of Approval, the Utilities are directed to perform a parity analysis that breaks down revenues and spending by C&I customer size.

DEEP agrees that equity requires more than parity, and that the increased funding should be provided for low-income programs. As noted above, the C&LM Plan is funded in part by RGGI auction proceeds. The use of RGGI auction proceeds for energy efficiency provides for a “virtuous cycle” of decarbonization as part of the State’s participation in this regional cap-and-invest program, by investing proceeds from the sale of emissions allowances to fossil fueled power plants into energy efficiency measures that further reduce greenhouse gas emissions from the electricity sector while lowering participants’ energy bills.

As further set forth below, as a result of this Determination, delivered fuel customers will be able to participate in the C&LM programs without the need to be funded by RGGI proceeds, which have historically been utilized to fund efficiency for delivered fuels. In considering allocation of RGGI funds within the C&LM Plan, it is appropriate to ensure those funds are directed in a manner that benefits those who have the highest energy burden and have been most impacted by emissions from fossil fuel generation. Since RGGI funds are not subject to the five-percent carryover threshold, and are carried over without a cap, the Utilities can engage in more flexible planning and budget management with the RGGI funding than the CAM funding. DEEP will direct the Utilities on how to prioritize the RGGI funding in a manner that complements the goals of this Determination.

⁴⁶ See EEB Technical Consultant presentation, Limited Income Program Budget Benchmarking, January 12, 2022, available at: <https://app.box.com/s/ht3zucrs01vm9izl0tlzow57p9afcakn/file/905320117622>

⁴⁷ See *Id.*

⁴⁸ See Young, Mallory, & McCarthy, The Path to Achieving Justice40, July 20, 2021,

<https://www.whitehouse.gov/omb/briefing-room/2021/07/20/the-path-to-achievingjustice40/#:~:text=Justice40%20is%20a%20whole%20of,clean%20energy%20to%20disadvantaged%20communities>.

⁴⁹ *Id.*

⁵⁰ *Id.*

DEEP recognizes that it is important to sustain programs with consistent incentive levels so that customers, including businesses, homeowners, landlords, and renters, know the level of support they can expect to receive. This consistency also helps to maintain stability for businesses that provide energy efficiency services. To that end, the Utilities are directed to take full advantage of all available funding sources, including those described above. Specifically, the Utilities should redirect RGGI funding as needed to programs benefitting low-income and other underserved customers, including those who live in multi-unit dwellings. The Utilities are directed to immediately apply this guidance to address any budgetary issues and keep DEEP apprised of any pressure on budgets, particularly those related to low-income programs, so that reallocations or other solutions can be investigated.

f. Enabling Fuel-Neutral Efficiency Upgrades

Existing statutes support fuel-neutral approaches within the C&LM Plan. Public Act 18-50 establishes a requirement “to reduce energy consumption by not less than 1.6 million MMBtu, or the equivalent megawatts of electricity, as defined in subdivision (4) of section 22a-197 of the general statutes, annually each year for calendar years commencing on and after January 1, 2020, up to and including calendar year 2025.”⁵¹ Accordingly, the proposed 2022-2024 C&LM Plan outlines the Utilities’ annual fuel-neutral MMBtu savings goals in service of state legislative goals. Additionally, in 2018, Conn. Gen. Stat. § 16-245m(d)(3) was changed to provide that cost effectiveness analysis under the C&LM Plan must include “the value and payback period of program benefits for all energy savings,” not just savings of electricity and natural gas. The statute does not limit calculation of energy savings based on fuel-type; rather, it is fuel neutral. Based on this language, C&LM incentives should enable the most cost-effective and efficient upgrades on a fuel-neutral basis. Prior to the issuance of this Determination, this statutory change had not been fully implemented.

Currently, oil- and propane-heated homes participating in the residential program offerings are funded by proceeds from the Regional Greenhouse Gas Initiative (RGGI), as available, rather than through the CAM funding provided for in Section 16-245m(d)(1). Given the statutory requirement set forth above, oil- and propane-heated homes should have no barrier to participating in the programs. Additionally, program structures, and especially savings baselines, may constrain customers’ ability to select more efficient equipment when doing so would result in conversion from one fuel source to another. For example, from a pure energy-savings perspective, residential heat pumps have higher demonstrated efficiencies than efficient gas furnaces on an annual basis, even in cold climates like Connecticut. Yet, the current incentive structure may make a less-efficient gas furnace more attractive to a customer. Incentive offerings should be crafted to provide all customers with *affordable, reliable, and efficient* upgrade options that also align with state and federal policy objectives to reduce our state’s carbon footprint. Aligned and appropriate incentives are especially important given the planned phase out of natural gas equipment incentives for residential customers during the 2022-2024 Plan term, as described in Section II.b., above.

Some stakeholders have raised these same concerns, noting that programmatic barriers may be preventing customers from adopting the most energy-efficient and cost-effective measures. They also requested additional guidance from DEEP on this topic.⁵² In their response to DEEP’s November 3, 2021, Requests for Information, the Utilities reiterated the need for guidance, stating, “regulatory direction from DEEP is

⁵¹ See Public Act 18-50, An Act Concerning Connecticut’s Energy Future, May 24, 2018, *available at*: <https://www.cga.ct.gov/2018/act/pa/pdf/2018PA-00050-R00SB-00009-PA.pdf>

⁵² See for instance, Acadia Center comments regarding the 2022-2024 C&LM Plan, submitted to the EEB August 23, 2021, *available at*: <https://app.box.com/s/43qlddtxd0cxg4z9z4iaon4k0fc1utbh/file/850323139512> and Connecticut Industrial Energy Consumers’ comments submitted to DEEP, December 3, 2021, *available at*: <http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/c7169b9a0c2c9fea852587a700558f44?OpenDocument>

needed regarding whether electric ratepayer funds can be used for fuel switching and fuel optimization offerings.”⁵³

Recent guidance from DEEP has offered support for fuel neutrality. The 2018 CES supports electrification in the building and transportation sectors.⁵⁴ In 2018, DEEP’s conditional approval of the 2019-2021 C&LM Plan authorized the Heat Pump Pilot program, while noting: “DEEP is not endorsing the use of conservation and load management dollars for fuel avoiding a full endorsement of fuel neutral incentives.⁵⁵ However, in recognition of increased focus on delivered fuel savings in C&I projects, DEEP’s conditional approval of the 2021 Plan Update contained a provision allowing the Utilities to “calculate energy savings using a base building or baseline that reflects a fuel type that would have been chosen, absent incentives, regardless of whether it is a different fuel type than that chosen after incentives.”⁵⁶ This savings calculation method has not been universally applied to C&LM programs. Meanwhile, neighboring jurisdictions, including New York and Massachusetts, have instituted policies that allow for a more widespread fuel-neutral approach to energy efficiency incentives.

As further described in the Conditions of Approval, DEEP is directing the Utilities to develop a fuel-neutral approach to C&LM incentives that prioritizes energy savings irrespective of fuel type, supports customer choice and affordability, and aligns with state policy goals, including the Global Warming Solutions Act. This approach should consider appropriate, fuel-neutral baselines and accounting methods to allocate costs equitably among programs, in accordance with Public Act 18-50.⁵⁷ It should also account for changes to the cost-effectiveness test, as further described in Section III.g. and Attachment B of this Determination.

The state and region are taking steps to prepare the grid for any increased load associated with heat pumps. ISO-New England (ISO-NE), the regional system operator, has built state-specific heat pump deployment projections into its forecasts, and Connecticut participates in the working group to provide feedback while ISO-NE develops that forecast.⁵⁸ These projections are updated annually, which ensures that ISO-NE and the state are not caught off guard as adoption of heat pumps accelerates. Connecticut has also begun planning for increased electrification from deployment of heat pumps and electric vehicles in its Integrated Resources Planning (IRP) process. In the most recently released 2020 IRP, DEEP assumed heat pump deployment would triple by 2040 under its electrification modeling scenarios.⁵⁹

⁵³ This statement was in reference to additional information the Utilities would need to transition the Heat Pump Pilot to a standard program offering. See Utility response to RFI #BETP-013, November 16, 2021, available at: <http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/6cadc3d093b715be8525879200580264?OpenDocument>

⁵⁴ See DEEP Comprehensive Energy Strategy, February 8, 2018, available at: <https://portal.ct.gov/-/media/DEEP/energy/CES/2018ComprehensiveEnergyStrategy.pdf>.

⁵⁵ See DEEP Conditional Approval of the 2019-2021 C&LM Plan, Attachment A: Schedule of Conditions of Approval, December 20, 2018, available at: <https://portal.ct.gov/-/media/DEEP/energy/ConserLoadMgmt/AttachmentAScheduleofComplianceConditionsofApprovalof20192021CLMPlanFinal121918pdf.pdf?la=en&hash=BF8647A8C1BE168FA7C93619D7171469>

⁵⁶ See DEEP Determination: Approval With Conditions of the 2021 Plan Update to the 2019-2021 C&LM Plan, March 4, 2021, available at: [http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/d80f7ae5059c5efc8525868e00598e40/\\$FILE/Determination%20Approval%20with%20Conditions%202021%20Plan%20Update%20%202020%20MI%20Adjustment%20\(002\).pdf](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/d80f7ae5059c5efc8525868e00598e40/$FILE/Determination%20Approval%20with%20Conditions%202021%20Plan%20Update%20%202020%20MI%20Adjustment%20(002).pdf)

⁵⁷ See Public Act 18-50, An Act Concerning Connecticut’s Energy Future, May 24, 2018, available at: <https://www.cga.ct.gov/2018/act/pa/pdf/2018PA-00050-R00SB-00009-PA.pdf>

⁵⁸ See e.g., ISO-NE’s Final 2021 Heating Electrification Forecast, available at https://www.iso-ne.com/static-assets/documents/2021/04/final_2021_heat_elec_forecast.pdf.

⁵⁹ Connecticut DEEP, 2020 Integrated Resources Plan- Appendix A1 Factor Inputs, October 7, 2021, available at: <https://portal.ct.gov/-/media/DEEP/energy/IRP/2020-IRP/Appendix-A1--Factor-Inputs-and-Assumptions.pdf>.

Additionally, PURA is conducting a series of dockets focused on modernizing the electric grid and increasing its resilience.⁶⁰ The programs adopted through these dockets will support increased electrification both directly and indirectly. One of these dockets focuses specifically on DEEP’s 2020 Integrated Resources Plan (IRP) (which analyzed the effects of increased heat pump adoption on electric demand)⁶¹ and seeks to “leverage DEEP’s work [in the IRP] to ensure that cost-effective and efficient approaches are in place to deliver on the recommended pathways to achieving a one hundred percent zero carbon electric grid by 2040.”⁶² PURA also approved an energy storage program in Docket No.17-12-03RE03. Combining solar and/or storage with heat pump deployment will allow the load from heat pumps to be offset by these distributed energy resources, thereby providing resilience benefits, reducing participants’ energy bills, and reducing harmful emissions. Accordingly, the state has mechanisms in place to ensure grid reliability as heat pump adoption increases.⁶³ Moreover, given the barriers to heat pump deployment identified herein, DEEP does not expect near-term uptake to significantly impact electric load and will continue to assess heat pump deployment through sensitivities in its electric system modeling of the biennial Integrated Resources Plan.⁶⁴

g. Continuing Review of Program Cost-Effectiveness Testing

Pursuant to Conn. Gen. Stat. § 16-245m(d)(3), DEEP has reviewed the Utilities’ cost-effectiveness screening for the programs in the C&LM Plan. The Plan includes detailed information on the development of the Utilities’ programs’ savings goals, as well as their individual benefit/cost ratio models, demonstrating that they are seeking to acquire all cost-effective energy efficiency resources.

Concurrent with development of the proposed 2022-2024 C&LM Plan, DEEP has been conducting a review of cost-effectiveness screening processes and opportunities to align these processes with state policy priorities, including the Global Warming Solutions Act. Drawing on past public processes, testimony received during the November 16, 2021, Technical Meeting, and subsequent public comments, DEEP has developed an updated approach to cost-effectiveness practices that is provided in Attachment B. A draft of this approach was issued with DEEP’s Draft Determination on the 2022-2024 C&LM Plan on April 12, 2022.

DEEP modified this approach to cost-effectiveness testing based on feedback received through a public comment process that concluded on April 27, 2022.⁶⁵ Based on that feedback, the cost-effectiveness test update included as Attachment B makes two modifications to current cost-effectiveness testing practices: 1) it applies a Modified Utility Cost Test to all C&LM programs in order to capture all fuel savings, and 2) it incorporates the impact of avoided greenhouse gas emissions resulting from C&LM programs using the Avoided Energy Supply Cost Study (AESC) New England marginal abatement cost, derived from the

⁶⁰ See PURA, Interim Decision, Docket No. 17-12-03, PURA Investigation into Distribution System Planning of the Electric Distribution Companies (Oct. 2, 2019).

⁶¹ See Connecticut 2020 Integrated Resources Plan, App. A1. Factor Inputs, at p. 19-22, available at <https://portal.ct.gov/-/media/DEEP/energy/IRP/2020-IRP/Appendix-A1--Factor-Inputs-and-Assumptions.pdf>.

⁶² See PURA, Notice of Proceeding, Docket No. 17-12-03RE08, PURA Investigation into Distribution System Planning of the Electric Distribution Companies – Building Blocks of Resource Adequacy and Clean Electric Supply, at 1 (Nov. 18, 2021), available at [http://www.dpuc.state.ct.us/2nddockcurr.nsf/8e6fc37a54110e3e852576190052b64d/6bd751ea426c8019852587910060dbd8/\\$FILE/17-12-03RE10%20NOP.pdf](http://www.dpuc.state.ct.us/2nddockcurr.nsf/8e6fc37a54110e3e852576190052b64d/6bd751ea426c8019852587910060dbd8/$FILE/17-12-03RE10%20NOP.pdf).

⁶³ See also Conn. Gen. Stat. § 16a-3b, Implementation of the Integrated Resources Plan (“[PURA] shall oversee the implementation of the Integrated Resources Plan and the Procurement Plan.”)

⁶⁴ See supra note 53

⁶⁵ See for instance, comments submitted by Acadia Center, Northeast Energy Efficiency Partnerships; Sierra Club Connecticut; CMC Energy Services, New England Smart Energy Services, and HE Energy Services; and Eversource Energy and Avangrid Networks, Inc., available at:

[http://www.dpuc.state.ct.us/DEEPEnergy.nsf/\\$EnergyView?OpenForm&Start=1&Count=30&Expand=7.1&Seq=3](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/$EnergyView?OpenForm&Start=1&Count=30&Expand=7.1&Seq=3)

electric sector, for non-embedded emissions (currently \$125/short ton).⁶⁶ While stakeholders did express support for the use of social cost of carbon in the cost-effectiveness test,⁶⁷ DEEP notes that the AESC New England marginal abatement cost for the electric sector and the AESC recommended value for social cost of carbon are comparable at \$125/short ton and \$128/short ton, respectively.⁶⁸ DEEP's rationale for this and other modifications to the cost-effectiveness test are further explained in Attachment B.

h. Aligning Incentives with Policy Goals

The Global Warming Solutions Act (GWSA) requires an economy-wide greenhouse gas (GHG) emissions reduction of 45 percent from 2001 to 2030.⁶⁹ Although the GWSA does not establish specific reduction targets for individual sectors of the economy, applying the 2030 economy-wide target to individual sectors illustrates the scale of the challenge of adequately decarbonizing residential and commercial thermal loads.

Between 2001 and 2018, *residential* thermal emissions from combustion of fossil fuels (principally heating oil, natural gas, and propane) fell 10.6 percent -- far less than the 26.4 percent reduction the GWSA's 2030 economy-wide target implies was needed during that period.⁷⁰ Bringing residential emissions in line with the target of 45 percent reductions by 2030 will require reducing emissions 3.6 times faster between 2018 and 2030 than they fell between 2001 and 2018. Meanwhile, between 2001 and 2018 *commercial* GHG emissions from combustion of fossil fuels were essentially unchanged. This means that the full 45 percent reduction the GWSA's 2030 economy-wide target implies for commercial buildings for the period 2001-2030 will need to be accomplished between 2018 and 2030. Moreover, in both of these sectors fossil fuel emissions will need to continue decreasing sharply between 2030 and 2050, when the GWSA requires an additional 35 percent emission reduction across the economy (against a 2001 baseline). Because thermal electrification is one of Connecticut's decarbonization strategies for residential and commercial buildings, DEEP recognizes it will need to factor the pace of decarbonization in the electricity sector (via the Renewable Portfolio Standard and state zero-carbon procurements) into the C&LM Plan.

Results from Connecticut's 2018 Greenhouse Gas Emissions Inventory demonstrate the importance of decarbonizing the buildings sector.⁷¹ In accordance with these findings and public feedback received during DEEP and the EEB's public processes regarding the 2022-2024 C&LM Plan, this Determination outlines strategies to phase out incentives for residential natural gas equipment during this term.⁷² Other

⁶⁶ See *Avoided Energy Supply Components in New England: 2021 Report*, May 2021, *available at*: https://www.synapse-energy.com/sites/default/files/AESC_2021_20-068.pdf

⁶⁷ See for instance, comments submitted by Acadia Center *available at*: [http://www.dpuc.state.ct.us/DEEPEnergy.nsf/\\$EnergyView?OpenForm&Start=1&Count=30&Expand=7.1&Seq=3](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/$EnergyView?OpenForm&Start=1&Count=30&Expand=7.1&Seq=3)

⁶⁸ See *Avoided Energy Supply Components in New England: 2021 Report*, May 2021, *available at*: https://www.synapse-energy.com/sites/default/files/AESC_2021_20-068.pdf

⁶⁹ See *An Act Concerning Connecticut Global Warming Solutions*, PA 08-98, 2008, *available at*: <https://www.cga.ct.gov/2008/ACT/PA/2008PA-00098-R00HB-05600-PA.htm>.

⁷⁰ See DEEP, "2018 Connecticut Greenhouse Gas Emissions Inventory," 2021, *available at*: https://portal.ct.gov/-/media/DEEP/climatechange/GHG_Emissions_Inventory_2018.pdf.

⁷¹ See DEEP 2018 Greenhouse Gas Emissions Inventory, October 2021, *available at*: <https://portal.ct.gov/DEEP/Climate-Change/CT-Greenhouse-Gas-Inventory-Reports>

⁷² For public comments regarding the cessation of natural gas incentives, *see*, for instance, public comments submitted to DEEP by the Conservation Law Foundation, Nicolette Doukas, Dwayne Escola, Save the Sound, Elizabeth Raisbeck, Tom Swan, December 3, 2021, *available at*: [http://www.dpuc.state.ct.us/DEEPEnergy.nsf/\\$EnergyView?OpenForm&Start=1&Count=30&Expand=7.1&Seq=2](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/$EnergyView?OpenForm&Start=1&Count=30&Expand=7.1&Seq=2) and verbal comments before DEEP from, among others, Sierra Club Connecticut, Yale Center on Climate Change and Health, CT Green Building Council, Kimberly Stoner, The Nature Conservancy Connecticut, *available at*: https://ctdeep.zoom.us/rec/play/WCdG84uKS96n2x-gjZuROpKeb3euh4VdU4s1Pfe3MXz9x9oQNaLgyTgToHI_RDzAMfLdesaiLbZWS8ww.IUvzeQ55sAxsCmcG?co

elements of this Determination, including modifications to the cost-effectiveness test and permitting fuel-neutral incentives, will support and enable these strategies to align C&LM incentives with state policy goals.⁷³

Although electrification is a key strategy for reducing emissions resulting from the buildings sector, DEEP recognizes that the consumer economics of thermal electrification are sometimes challenging. In late 2021 and early 2022, the EEB Technical Consultants conducted a preliminary cost-effectiveness analysis of space- and water-heating electrification across a variety of displacement scenarios. For the residential sector, this analysis found that replacing oil or propane systems with a ductless or ducted air-source heat pump was almost always cost-effective from the Utilities' perspective. However, there was more variation in utility cost-effectiveness in scenarios where air-source heat pumps replaced a natural gas system. From the customers' perspective, these heat pumps had a positive annual cash flow and life cycle cost only in propane and some oil displacement scenarios under the conditions the consultants examined.⁷⁴ This Determination includes provisions -- including changes to cost-effectiveness testing practices and savings calculation baselines -- to more accurately account for all utility-system impacts of C&LM measures.⁷⁵ These changes will capture previously unaccounted benefits, allowing for increased incentives that are expected to make air-source heat pumps a more viable option for customers.

In the C&I sector, ductless and ducted air-source heat pumps and heat pump hot water heaters replacing oil and propane systems were found to be cost-effective from the Utilities' perspective, while gas system replacements were not. From the customers' perspective, the results were mixed: while gas displacements always had a negative first-year cash flow and lifecycle cost, oil and propane displacement cash flows and lifecycle costs often were positive. The C&I analysis also found that variable refrigerant flow air-source heat pump systems combined with a dedicated outdoor air system could be cost-effective from the Utilities' perspective, though the customer first year cash flow and life cycle costs were still negative.⁷⁶ Additionally, an analysis of ground source heat pumps demonstrated that they were generally cost effective from the Utilities' and customers' perspective.⁷⁷

To ensure investment in measures that optimize decarbonization and energy affordability, DEEP will work with the EEB, Utilities, and other stakeholders to ensure that the transition away from residential natural gas equipment incentives does not place undue burden on customers and makes alternatives, including heat pumps, a viable and affordable option. While changes to cost-effectiveness testing and a fuel-neutral approach to incentives may result in higher incentives for heat pumps, DEEP will also explore strategies to bring down the operating cost of heat pumps for customers, including pathways to advocate for aligned rate design, a strategy supported by stakeholder comments.⁷⁸ Progress toward these

ntinueMode=true (November 16) and https://ctdeep.zoom.us/rec/play/kCpwKDLuHnAuZp2-luApHl64bJczhRs6KAcuqkuQMdd6lTkEBGx_zwb74V7SmxsFmicNzh0VhkOV-0f.M5DYF7R-Hl7Eajy4?continueMode=true (November 18)

⁷³ For more on cost-effectiveness testing modifications and fuel-neutral incentives, see Sections III.f. and III.g. of this Determination.

⁷⁴ See EEB Technical Consultant presentation, Heating Electrification Analysis – Preliminary Residential Results, December 8, 2021, available at: <https://app.box.com/s/kewx0nkos2c2xsvts8xitm0d60hipwsl/file/893583006058>

⁷⁵ More information on these provisions can be found in Sections III.f. and III.g. of this Determination.

⁷⁶ See EEB Technical Consultant presentation, Heating Electrification Analysis – Preliminary C&I Results, February 8, 2022, available at: <https://app.box.com/s/cy013af0uvcsgyynz7hlxw19bbfb4wgq/file/916308638383>

⁷⁷ Ground source heat pumps were cost-effective under the Modified Utility Cost Test, which is the primary mechanism for cost-effectiveness testing of C&LM programs. The incremental cost of a ground source heat pump was not cost-effective under the Total Resource Cost Test, which is used as a secondary testing mechanism. Ground source heat pumps in commercial new construction demonstrated positive annual lifecycle costs but negative first-year cash flow. See Id.

⁷⁸ See for instance, comments submitted to DEEP by the CT Green Building Council, December 3, 2021, available at:

[http://www.dpuc.state.ct.us/DEEPEnergy.nsf/\\$EnergyView?OpenForm&Start=1&Count=30&Expand=7.1&Seq=2](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/$EnergyView?OpenForm&Start=1&Count=30&Expand=7.1&Seq=2)

strategies is already underway, including through PURA's May 4, 2022, release of a Low-Income Discount Rate Straw Proposal in Docket No. 17-12-03RE11.⁷⁹

Customer understanding of heat pumps and inadequate workforce development present additional barriers to thermal decarbonization, as noted by stakeholders during public processes provided by DEEP and the EEB.⁸⁰ Positive customer experiences are an important driver of heat pump adoption – an outcome that requires, on one hand, a highly trained workforce that is familiar with the latest technologies, customer needs, and installation practices, and, on the other hand, thorough customer education regarding best operation and maintenance practices. In their response to DEEP's November 30, 2021, Requests for Information, the Utilities elaborated on their plans to launch a Heat Pump Installer Network (HPIN) in 2022 that will connect contractors with training resources on proper installation of heat pump technologies, customer outreach and education strategies, and operation and maintenance practices.⁸¹ Additional DEEP findings regarding the HPIN and customer outreach regarding heat pumps can be found in Sections III.i. and III.k of this Determination.

The 2022-2024 C&LM Plan presents a critical opportunity to address barriers to deeper decarbonization measures like heat pumps and lay the groundwork for enhanced deployment. In early 2022, DEEP began the process of developing a new Comprehensive Energy Strategy (CES) that will concentrate on, among other things, energy-related GHG emissions from residences and commercial buildings, affordable clean heating and cooling options, deployment targets for renewable thermal technologies, and policy mechanisms to meet the state's GHG emissions-reduction goals.⁸² While the more specific goal setting of the CES is underway, there are opportunities to enhance the C&LM Plan's decarbonization strategies and position the C&LM portfolio to achieve greater GHG reductions in accordance with the GWSA upon completion of the CES.

These opportunities (listed below) present an incremental approach to advancing decarbonization goals through the C&LM Plan. As a first step, the Utilities will evaluate the continued need to incentivize a sub-set of highly efficient natural gas measures that may no longer be cost-effective. Second, DEEP will work with the Utilities, EEB, and other stakeholders on a comprehensive plan to address barriers to heat pump adoption. Third, the Utilities are directed to develop a proposal for transitioning the Residential New Construction program to an all-electric offering by July 2023.

In addition to the fuel-neutral approach to incentives and modifications to cost-effectiveness testing described above, these three steps present near-term actions to remove barriers to and prepare the market for increased decarbonization measures. Additional guidance from the CES will provide further direction on feasible steps to achieve the goal, established in this Determination, of phasing out residential natural gas equipment incentives during this Plan term.

⁷⁹ See PURA Notice of Issuance of Low-Income Discount Rate Straw Proposal and Request for Associated Tariffs, May 4, 2022, *available at*:

<http://www.dpuc.state.ct.us/2nddockcurr.nsf/All/789310985B3927D385258838006E9B2C?OpenDocument>

⁸⁰ See for instance, public comments submitted to DEEP by the Northeast Energy Efficiency Partnerships and Dandelion Energy, December 3, 2021, *available at*:

[http://www.dpuc.state.ct.us/DEEPEnergy.nsf/\\$EnergyView?OpenForm&Start=1&Count=30&Expand=7.1&Seq=2](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/$EnergyView?OpenForm&Start=1&Count=30&Expand=7.1&Seq=2) and public comments submitted to the EEB by People's Action for Clean Energy, August 18, 2021, *available at*: <https://app.box.com/s/43qlddtxd0cxg4z9z4iaon4k0fc1utbh/file/853820676721>

⁸¹ See Utilities' response to DEEP Request for Information #BETP-29, December 9, 2021, *available at*:

<http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/8c9906744d48f122852587ab00524a63?OpenDocument>

⁸² See DEEP Notice of Proceeding and Scoping Meeting, 2022 Comprehensive Energy Strategy, January 6, 2022, *available at*: <https://portal.ct.gov/-/media/DEEP/energy/CES/2022CESnoticeofproceedingpdf.pdf>

i. Assessing the continued need, and potentially discontinuing incentives, for certain natural gas measures

Currently, the C&LM Plan provides incentives only for natural gas measures that qualify as efficient and does not provide incentives for delivered fuel measures. In response to DEEP's November 3, 2021, Requests for Information, the Utilities provided a list of incentive levels and year-to-date reporting for all Residential and Commercial & Industrial natural gas measures supported by the C&LM Plan.⁸³ These include incentives for highly efficient condensing equipment and comparatively less efficient non-condensing equipment.

As noted in the EEB's response to public input on the proposed 2022-2024 C&LM Plan, "a recent evaluation has found that the C&I boiler market is largely transformed, such that it is now industry standard practice in many cases for customers to purchase an efficient condensing boiler for new construction or at end of life for an existing boiler. As a result of this finding, the baseline has risen to a point where it may no longer be cost effective to offer incentives for many commercial boilers."⁸⁴ This study indicates the need for further examination of incentives for certain natural gas measures in the C&I sector.

Similarly, in the residential sector, the Utilities have committed to "investigating whether program supported natural gas-fired condensing equipment is replacing existing condensing equipment as a market baseline, and if so, whether there is continued need to [continue program support for this equipment]" during the 2022-2024 Plan term.⁸⁵

As further described in the Conditions of Approval, if an evaluation determines that such equipment should now be considered the baseline, incentives should be discontinued. Thus, DEEP is directing the Utilities to work with the Evaluation Administrator to complete this investigation by June 2022 and file their findings with DEEP for approval shortly thereafter.

Moreover, DEEP will work with the Utilities and the EEB to phase out residential incentives for other gas measures over the 2022-2024 Plan term.

ii. Developing a comprehensive strategic plan to address barriers to heat pump deployment.

Key barriers to deployment of heat pumps identified in a Yale University report in 2017 continue to hinder these renewable thermal technologies in 2022.⁸⁶ The Plan establishes decarbonization as a priority and highlights efforts to promote installation of more heat pumps. While the Plan outlines many of the elements necessary to achieve decarbonization, it does not

⁸³ See Utilities' response to DEEP Request for Information #BETP-1, November 12, 2021, available at: <http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/7091cd5a6937ac5285258790005a4d16?OpenDocument>

⁸⁴ See EEB's response to August 1, 2021 comments from Sierra Club of Connecticut (Samantha Dynowski), proposed 2022-2024 C&LM Plan (Appendix B), available at: <https://portal.ct.gov/-/media/DEEP/energy/ConserLoadMgmt/Final-2022-2024-Plan-to-EEB-1112021.pdf>

⁸⁵ See Proposed 2022-2024 Conservation and Load Management Plan, November 1, 2021, available at: <http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/04d115cb68d338b785258788007091c9?OpenDocument>

⁸⁶ See Helle Gronli et al., "Feasibility of Renewable Thermal Technologies in Connecticut — Barriers and Drivers," 2017, available at: <https://cbey.yale.edu/research/feasibility-of-renewable-thermal-technologies-in-connecticut-barriers-and-drivers>.

place these elements in an explicit strategic framework and does not lay out specific benchmarks.

In its review of the proposed Plan and through the stakeholder engagement process, DEEP has identified three primary categories of barriers to heat pump deployment: 1) workforce development and quality assurance, 2) financial impediments, and 3) marketing, education, and customer support. DEEP will work with stakeholders and the Utilities to develop a strategic plan to address those barriers. The strategic plan will also consider strategies to co-deliver heat pumps with measures that will improve customer experiences, such as weatherization, integrated controls, and demand response. Specific items for consideration include:

Adequate workforce and quality assurance

- workforce development, training, and certification;
- potential additional support for the installer network;
- HES vendor training and compliance;
- post-installation quality certification;
- training for HVAC contractors on implementing thermal envelope improvements to improve in-home comfort levels and achieve cost savings in heat pump deployment;

Optimal incentives and measure delivery

- expected impacts of changes in cost-effectiveness testing on heat pump incentives;
- potential revision of heat pump installation incentives;
- potential need to revise equipment specifications for heat pump incentives in light the availability of the new national specifications (including the Energy Star v. 6 specification, the DOE Cold-Climate Heat Pump Challenge specification, revised NEEP cold-climate specification; and EXP07 Load-based Test Procedure);
- potential need to revise loan programs;
- opportunities for integration with rooftop PV;
- opportunities for integration with HES and weatherization;
- potential role of controls that integrate operation of heat pumps with operation of conventional fossil-fuel equipment;

Effective marketing, education, and consumer support

- market research and market segmentation;
- enhancement of heat pump emphasis and effective public messaging in Energize CT;
- potential employment of advertising and public-service announcements;
- heat pump installer locator tool;
- consumer education before and after installation;
- concierge service;

Co-delivery of heat pumps with other supportive measures:

- incentivizing the co-delivery of weatherization and heat pumps;
- integrating heat pump offerings with distributed generation, including through PURA's new statewide electric storage program and solar tariff;
- coupling heat pump installations with integrated controls and active demand response measures

To develop this strategic plan, DEEP will convene a Technical Meeting to explore barriers and best practices related to the topics above. This Technical Meeting will be held pursuant to this C&LM Plan approval proceeding as well as in conjunction with DEEP's ongoing CES development process. Following the Technical Meeting, DEEP will issue a framework for the

strategic plan. The Utilities will then be directed to propose a strategic plan for addressing barriers to heat pump adoption that reflects the discussion from the Technical Meeting. This plan should propose strategies that can be incorporated into annual C&LM Plan Updates.

iii. Transitioning to an all-electric new construction offering.

All-electric new construction presents an opportunity for savings on both up-front costs and utility bills compared to new mixed-fuel homes. Analysis of residential new construction markets found the net present cost of all-electric new construction to be lower than mixed-fuel new construction in Boston and New York City. In these markets, all-electric new construction is also projected to result in significant carbon emissions reductions, with individual homes reducing annual carbon emissions by 46 and 51 tons (for Boston and New York City, respectively) over a 15-year period.⁸⁷

Despite some of the highest electricity rates in the nation,⁸⁸ efficient, all-electric homes can still provide savings for Connecticut customers. An analysis of all-electric homes with heat pumps in Connecticut found similar or lower operating costs compared to homes that utilize heating oil or natural gas.⁸⁹ When paired with solar and/or storage installations, costs could be considerably lower. Additionally, advances in heat pump technology have made them a more viable option for keeping homes warm throughout the winter months.⁹⁰

Therefore, in the Conditions of Approval, the Utilities are directed to develop a proposal for transitioning the Residential New Construction program to an all-electric offering by the end of 2023.

The timeline for implementing these strategies will also be dependent on the adoption and contents of Connecticut's new Statewide Building Code. Governor Lamont's Executive Order No. 21-3 directs the State Building Inspector to present the most recent International Energy Conservation Code (IECC) for adoption and "develop a plan to incorporate the reduction of greenhouse gas emissions as a core consideration when adopting the State Building code given the health implications of continued greenhouse gas emissions."⁹¹ As the Codes and Standards Committee works to adopt the 2022 Connecticut State Building Code, DEEP will ensure that the provisions of this Determination align with the new code, including making adjustments to timelines as necessary.⁹²

Additionally, the Utilities are directed through the Conditions of Approval to propose updated incentives for C&LM measures, applying the tenets of Sections III.f.-III.h. In this proposal, DEEP has directed the Utilities to consider optimal incentive structures for building decarbonization, including an exploration of renewable thermal measures that are not currently incentivized through C&LM, and methods of co-

⁸⁷ See RMI, *The New Economics of Electrifying Buildings: An Analysis of Seven Cities*, 2020, available at: <https://rmi.org/insight/the-new-economics-of-electrifying-buildings?submitted=1983dhtw8>

⁸⁸ See *State Electricity Profiles*, U.S. Energy Information Administration, November 2, 2020, available at: <https://www.eia.gov/electricity/state/>

⁸⁹ See Acadia Center comments to the Energy Efficiency Board regarding the 2022-2024 Conservation and Load Management Plan, August 2021, available at: <https://app.box.com/s/43qlddtxd0cxg4z9z4iaon4k0fc1utbh/file/846152859499>

⁹⁰ See *Load-based and Climate-Specific Testing and Rating Procedures for Heat Pumps and Air Conditioners*, Northwest Energy Efficiency Alliance, July 7, 2020, available at: <https://neea.org/img/documents/CSA-EXP07-Interim-Testing-Report.pdf>

⁹¹ See Governor Lamont Executive Order No. 21-3, December 16, 2021, available at: <https://portal.ct.gov/-/media/Office-of-the-Governor/Executive-Orders/Lamont-Executive-Orders/Executive-Order-No-21-3.pdf>

⁹² More information about the Connecticut State Building Code adoption process is available on the Department of Administrative Services website: <https://portal.ct.gov/DAS/Office-of-State-Building-Inspector/Building-and-Fire-Code-Adoption-Process>

delivery with supportive measures including weatherization, integrated controls, demand response, and distributed generation.

The steps outlined in Sections III.f.-III.h, of this Determination are near-term actions that, paired with forthcoming guidance from the CES, will build towards a phase-out of residential natural gas equipment during this Plan term. DEEP will continue to work with the Utilities, EEB, and other stakeholders to further explore decarbonization opportunities in the commercial and industrial space. For example, DEEP anticipates that the CES will establish a need for a broad strategy for industrial decarbonization and outline a series of steps to move in this direction, which would likely include opportunities for stakeholder engagement on, among other issues, alignment with corporate sustainability goals.⁹³

i. Customer Outreach and Engagement

DEEP recognizes the importance of community outreach and, in particular, engaging municipalities and other partners in promoting and delivering energy efficiency. The proposed 2022-2024 C&LM Plan includes continuation of the Community Partnership Initiative, the Utilities' strategy to work with community groups, nonprofit organizations, and municipalities to raise awareness and measurable participation in energy efficiency programs.⁹⁴ The Utilities selected the first round of sponsors in Fall 2021 to deliver local outreach strategies to advance goals such as increasing participation in Home Energy Solutions and Home Energy Solutions-Income Eligible, increasing the number of rebates submitted for heat pumps that displace electric-resistance heating, and increasing participation in the Small Business Energy Advantage program.⁹⁵ During the 2022-2024 Plan term, DEEP will be prioritizing community approaches to energy efficiency, and the EEB Diversity, Equity, and Inclusion Consultant will play an important role in consulting on the design and implementation of community outreach strategies.⁹⁶ As further described in the Conditions of Approval below, the Utilities are directed to use subsequent rounds of the Community Partnership Initiative to serve the Plan's three priorities: equity, decarbonization, and energy affordability. Future rounds of the Community Partnership Initiative will occur according to the Utilities' schedule. The Utilities will engage the expertise of the EEB's Diversity, Equity, and Inclusion Consultant (once hired) on future rounds of the Community Partnership Initiative and keep DEEP and the EEB apprised of developments.

Decarbonization of residential thermal demand requires significant time and attention by building owners and residents and warrants significant enhancements to the proposed concierge service. Residential thermal decarbonization often involves multiple steps, starting with the initial visit and audit of a building, addressing health and safety barriers to weatherization, and providing air sealing and installing insulation. Deeper measures often involve sophisticated, rapidly evolving technologies such as heat pumps with which many HVAC installers – and the vast majority of residents – have limited or outdated experience. These low- and zero-carbon technologies must be integrated into complex home energy systems that HES assessments touch upon in only limited fashion. As the Utilities attempt to make clean

⁹³ See comments from Connecticut Industrial Energy Consumers regarding DEEP's Draft Determination on the 2022-2024 C&LM Plan, April 27, 2022, *available at*: <http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/5416f73f42c7aeef852588330033d242?OpenDocument>

⁹⁴ See Energize CT, Community Partnership Initiative, *available at*: Proposed 2022-2024 Conservation and Load Management Plan, November 1, 2021, *available at*: <http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/04d115cb68d338b785258788007091c9?OpenDocument>

⁹⁵ See Energize CT, Community Partnership for Energy Efficiency Engagement Initiative: Round 1 Application for Interested Parties, August 4, 2021, *available at*: https://energizect.com/sites/default/files/2021-08/20210804%20REVISED%20Community%20Partnership%20Application_p1-8.pdf

⁹⁶ See Request for Proposals: Consultant on Diversity, Equity, and Inclusion to the CT Energy Efficiency Board, December 2, 2021: <https://energizect.com/sites/default/files/2021-12/DEI%20Consultant%20RFP.pdf>

heating technologies more visible, more accessible, better understood, and more effectively implemented in Connecticut homes, they are acknowledging a need for a concierge service that will help residents navigate this new terrain successfully.

During the 2022-2024 Plan term, the Utilities plan to offer heat pump consultation services that will support customer adoption of heat pumps statewide. As of March 1, 2022, the Utilities have contracted with an implementation vendor to provide a variety of services, including virtual no-cost heat pump consultations, community webinars, and educational resources for customers and contractors, and to manage the new Heat Pump Installer Network.⁹⁷ These consultation services will give customers access to a heat pump specialist that possesses the technical expertise required to assist customers throughout the process of selecting and installing a heat pump.⁹⁸

In addition to the heat pump consultation services that the Utilities plan to provide during this Plan term, the 2022-2024 C&LM Plan also includes a residential energy efficiency concierge service. The concierge service the Utilities proposed relies on a combination of e-mail communications and a series of videos that provide instruction on add-on measures such as insulation, heat pumps, efficient appliances, and clean energy and electrification technologies.⁹⁹ This is considerably less comprehensive than a program recently launched by Mass Save, which involves live, virtual, one-on-one sessions with subject-matter experts who are associated with a Mass Save vendor.¹⁰⁰ These experts, who have technical backgrounds and HVAC training, answer questions and direct customers to qualified contractors participating in Mass Save's Residential Heat Pump Installer Network. The Massachusetts utilities plan to conduct post-participation surveys.

Other initiatives now underway in the region provide additional examples of comprehensive concierge services. The I Heart My Home (IHMH) service offered by the nonprofit organization NHS New Haven¹⁰¹ allows home-energy specialists to meet one-on-one with customers and provide custom, in-depth analyses of their homes' energy needs and upgrade options. They assist customers in navigating technical options and utility incentive programs, work with customers to understand contractor proposals, and, if needed, communicate with contractors on behalf of customers. IHMH provides these services as a disinterested third party. The City of Hartford is also developing an energy coaching program for residents.¹⁰²

The HeatSmart CT program,¹⁰³ run by the nonprofit People's Action for Clean Energy and carried out in some instances with the assistance of IHMH, demonstrates that hands-on programs that holistically address each home's specific energy needs can address the generally low level of public understanding of heat pumps and other efficient technologies. The program also equips the HVAC community with more knowledge of heat pump technologies.

⁹⁷ See Eversource Energy and Avangrid Networks, Inc. comments in response to DEEP's Draft Determination regarding the 2022-2024 C&LM Plan, April 27, 2022, *available at*: <http://www.dpuc.state.ct.us/DEEP/Energy.nsf/c6c6d525f7cdd1168525797d0047c5bf/a3a4beb1919a550d8525883e006e1a87?OpenDocument>

⁹⁸ See *Id.*

⁹⁹ See Proposed 2022-2024 Conservation and Load Management Plan, November 1, 2022, *available at*: <https://portal.ct.gov/-/media/DEEP/energy/ConserLoadMgmt/Final-2022-2024-Plan-to-EEB-1112021.pdf>

¹⁰⁰ See Mass Save, Heating & Cooling Consultations, *available at*: <https://www.masssave.com/en/heatpump/hvac-specialist>

¹⁰¹ See Neighborhood Housing Services of New Haven, I Hear My Home CT, *available at*: <https://nhsfnewhaven.org/homeownership/i-heart-my-home-ct/>

¹⁰² See "Hartford's Office of Sustainability Launches Energy Coaching Service," January 10, 2022, *available at*: <https://www.hartfordct.gov/Government/Departments/Mayors-Office/Mayor-News/EnergyCoaching>

¹⁰³ See HeatSmart Connecticut, *available at*: <https://heatsmartct.org/>

Additionally, during the public process that informed DEEP’s Determination on the 2022-2024 C&LM Plan, stakeholders noted that a concierge service would be an especially impactful resource for low-income communities.¹⁰⁴ Low-income customers face additional barriers to receiving weatherization services; however, weatherizing and retrofitting low-income households presents an outsize opportunity to advance the Plan’s three priorities: equity, decarbonization, and affordability.¹⁰⁵

These initiatives signal the need for the Utilities to draw more fully upon growing experience and expertise within the region. As further described in the Conditions of Approval, DEEP is directing the Utilities to move forward with the concierge service described in the proposed 2022-2-24 C&LM Plan while simultaneously exploring an enhanced concierge service that includes the elements and best practices described above. During the development process, the Utilities are directed to solicit information and feedback from administrators of other successful energy concierge services, and to work with DEEP to identify any competitive IJA programs through which funding may be available for an enhanced program.

j. Steps to Weatherize 80 Percent of Residential Units by 2030

Pursuant to Conn. Gen. Stat. § 16-245m(d)(1), in order to be approved by DEEP, a C&LM Plan must “include steps that would be needed to achieve the goal of weatherization of eighty per cent of the state’s residential units by 2030.” The residential portfolio of the 2022-2024 C&LM Plan includes strategies to increase performance for a variety of home types. The definition of “weatherization” is left at DEEP’s discretion and has not yet been formally established to assess progress towards the statutory weatherization goal.

Over the past several years, DEEP and the EEB have conducted studies and public processes to inform this definition. On August 22, 2012, the EEB submitted to DEEP a recommended weatherization standard for single-family homes. On November 7, 2012 DEEP issued its Draft Determination to Establish Weatherization Standards for Single-Family Dwellings in Connecticut Pursuant to Section 33 of Public Act 11-80 (Draft Determination).¹⁰⁶ Following issuance of the Draft Determination, DEEP conducted a Technical Meeting on December 7, 2012, where stakeholders were provided the opportunity to comment on the Draft Determination. Following the Technical Meeting, ten stakeholders submitted written comments to DEEP.¹⁰⁷

These comments called on DEEP to wait for the completion of the Baseline Weatherization Study conducted by the EEB before issuing a final decision on the weatherization standard. Consequently, DEEP determined that it would re-engage stakeholders on the weatherization standard when the Baseline

¹⁰⁴ See for instance, comments from Kathy Fay and Acadia Center in response to DEEP’s Draft Determination regarding the 2022-2024 C&LM Plan, April 27, 2022, *available at*:

[http://www.dpuc.state.ct.us/DEEPEnergy.nsf/\\$EnergyView?OpenForm&Start=1&Count=30&Expand=7.1&Seq=2](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/$EnergyView?OpenForm&Start=1&Count=30&Expand=7.1&Seq=2)

¹⁰⁵ See comments from Acadia Center in response to DEEP’s Draft Determination regarding the 2022-2024 C&LM Plan, April 27, 2022, *available at*:

<http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/036f5cb6b6a05b3c852588330033182c?OpenDocument>

¹⁰⁶ See DEEP Draft Determination to Establish Weatherization Standards for Single-Family Dwellings in Pursuant to Section 33 of Public Act 11-80, November 7, 2012, *available at*:

[http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/c4b6caf0059e937f85257aaf005faea2/\\$FILE/Draft%20Determination%20for%20Weatherization%20Standards%20for%20Single-family%20Dwellings.pdf](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/c4b6caf0059e937f85257aaf005faea2/$FILE/Draft%20Determination%20for%20Weatherization%20Standards%20for%20Single-family%20Dwellings.pdf)

¹⁰⁷ See DEEP Request for Additional Comments: Weatherization Standard for Single-Family Dwellings, June 28, 2013, *available at*:

[http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/4bae084458559b7c85257b01004b7b09/\\$FILE/1-28-13%20Notice%20of%20Request%20for%20Additional%20Comments.pdf](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/4bae084458559b7c85257b01004b7b09/$FILE/1-28-13%20Notice%20of%20Request%20for%20Additional%20Comments.pdf)

Study was finalized. The Baseline Study submitted to the Energy Efficiency Board on June 3, 2014.¹⁰⁸ On August 13, 2015, DEEP conducted another Public Information Meeting to review its weatherization definition.¹⁰⁹ The previously proposed standard was not adopted for a variety of reasons, including the high technical cost of assessing homes using this standard at a large scale and its inability to account for multifamily properties, which comprise approximately 36 percent of Connecticut’s housing stock.

Public comments received as part of DEEP’s review of the Proposed C&LM Plan indicated a need for developing a standard of weatherization that would allow DEEP to assess progress towards its statutory goals.¹¹⁰ In response to these comments, and in furtherance of its statutory goals, DEEP included a draft weatherization standard as Attachment D to its Draft Determination issued on April 12, 2022 and requested feedback on the draft weatherization standard through the associated public comment process.¹¹¹ Stakeholders provided significant feedback on the draft standard.¹¹² Additionally, the Single-Family Weatherization Assessment and Update evaluation study that is currently being prepared for the Energy Efficiency Board will assess the draft standard for veracity and feasibility.¹¹³ As a result, DEEP will issue a final determination on the weatherization standard separately from this Determination at a later date. The draft standard that was issued with DEEP’s Draft Determination on the 2022-2024 C&LM Plan is included with this Determination as Attachment D.

Additionally, during the 2022-2024 C&LM Plan term, DEEP is launching a Weatherization Barriers Remediation Program to increase the number of low-income households that are able to receive weatherization services. After a thorough stakeholder process, DEEP issued a Request for Proposals in November 2021 for a Program Operator(s) that will leverage funding from the Low-Income Heating Assistance Program (LIHEAP) and American Rescue Plan Act (ARPA) to remediate health and safety barriers, such as mold and asbestos, that currently prevent an estimated 23 percent of income-eligible homes from receiving weatherization services.¹¹⁴

k. Leveraging Demand Flexibility and Pay-for-Performance

¹⁰⁸ See Single-family Weatherization Baseline Assessment (R5) Final Report, June 3, 2014, *available at*: <https://energizect.com/sites/default/files/R5-Connecticut%20Weatherization%20Baseline%20Assessment-FINAL%2006-04-14.pdf>

¹⁰⁹ See DEEP Notice of Public Information Meeting and Opportunity for Comments, Definition of “Weatherization” For Single-Family Residential Units, August 4, 2015, *available at*: [http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/67db1b8d9400b48a85257e9700531584/\\$FILE/Notice%20of%20Info%20Mtg%20081315%20%20Comments%20re%20Weatherization%20Definition%20%20FINAL.pdf](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/67db1b8d9400b48a85257e9700531584/$FILE/Notice%20of%20Info%20Mtg%20081315%20%20Comments%20re%20Weatherization%20Definition%20%20FINAL.pdf)

¹¹⁰ Public comments from DEEP’s review of the 2022-2024 Conservation and Load Management Plan can be found here:

[http://www.dpuc.state.ct.us/DEEPEnergy.nsf/\\$EnergyView?OpenForm&Start=1&Count=30&Expand=7.1&Seq=2](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/$EnergyView?OpenForm&Start=1&Count=30&Expand=7.1&Seq=2)

¹¹¹ See DEEP Draft Determination Attachment D – Draft Weatherization Standard, April 12, 2022, *available at*: <http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/ea714e056ac86bef852588220071e982?OpenDocument> and DEEP Notice of Public Meeting and Request for Written Comments, April 12, 2022, *available at*:

<http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/41b827a51e5366bb8525882200719b45?OpenDocument>

¹¹² See for instance, comments submitted by People’s Action for Clean Energy; CT Green Building Council; Aroseal, LLC; Dandelion Energy; Michael Uhl; Kathy Fay; Save the Sound; Northeast Energy Efficiency Partnerships; Sierra Club Connecticut; CMC Energy Services, New England Smart Energy, and HE Energy Services; Connecticut Energy Efficiency Board; and Eversource Energy and Avangrid Networks, Inc., *available at*: [http://www.dpuc.state.ct.us/DEEPEnergy.nsf/\\$EnergyView?OpenForm&Start=1&Count=30&Expand=7.1&Seq=7](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/$EnergyView?OpenForm&Start=1&Count=30&Expand=7.1&Seq=7)

¹¹³ See Connecticut R2029 Single-Family Weatherization Assessment and Update Kickoff Presentation, March 17, 2022, *available at*: http://energizect.com/sites/default/files/2022-05/CT_R2029_SF_Wx_Assessment_KO_Slides_20220317_Out70x2a.pdf

¹¹⁴ See Request for Proposals for Statewide Weatherization Barrier Remediation Program Operator, November 10, 2021, *available at*: <https://portal.ct.gov/-/media/DEEP/energy/ConserLoadMgmt/FINAL-DEEP-WxBRP-RFP.pdf>

Active demand response offerings and performance-based incentives drive further innovation in the energy efficiency space by providing more granular customer usage insights and deeper energy savings. The proposed 2022-2024 C&LM Plan continues existing active demand response offerings and includes pilot programs for pay-for-performance incentive structures in the residential sector and natural gas demand response.

Avangrid's natural gas demand response pilot programs provide an opportunity to address natural gas reliability concerns, alleviate temporary physical pipeline constraints in low pressure areas, negate the need for additional pipeline capacity, and reduce emissions from gas use.¹¹⁵ Avangrid provided status updates and initial results from these pilot programs in their response to DEEP's November 2021 Requests for Information.¹¹⁶ While these programs are in the pilot phase, DEEP will be closely following program results and will explore the possibility of expanding the pilot offerings to additional customers or service territories.

The more-established portfolio of electric active demand response offerings in the proposed 2022-2024 C&LM Plan provide additional reliability, savings, and emissions reduction benefits. Given the focus on electrification described in the sections above, active demand response in the electric sector will be a critical strategy for meeting future demand. DEEP will work with the Utilities, EEB, and other stakeholders to further promote the co-delivery of active demand response and other energy efficiency measures throughout this Plan term.

In addition to the active demand response offerings, the Utilities are also launching a HES pay-for-performance pilot during the 2022-2024 Plan term that aims to determine the persistence of energy savings resulting from comprehensive, multi-measure projects and customer behavioral changes. Incentives through this pilot will be contingent open energy savings realized through customer energy bills.¹¹⁷ In the development of this pilot, the Utilities consulted with entities including BlocPower and Sealed. They also utilized the evaluation, measurement, and verification capabilities of Recurve and are exploring additional pay-for-performance opportunities that this data can provide.¹¹⁸ As further described in the Conditions of Approval, DEEP is directing the Utilities to move forward with the residential pay-for-performance pilot as proposed. DEEP will continue to work with the Utilities to explore additional pay-for-performance opportunities.

DEEP recognizes that the deployment of some of these strategies is hindered by a dearth of advanced metering infrastructure (AMI), particularly in Eversource territory.¹¹⁹ When there is more widespread deployment of AMI in Connecticut, DEEP expects that the Utilities will develop comprehensive demand

¹¹⁵ For a summary of Avangrid gas demand response pilot programs and objectives, *See* Utility presentation at the November 18 C&LM Technical Meeting, 2022-2024 Energy Efficiency Plan Demand Management Programs, November 18, 2021, *available at*: <https://portal.ct.gov/-/media/DEEP/energy/ConserLoadMgmt/20211118-CLM-Technical-Meeting.pdf>

¹¹⁶ *See* Avangrid responses to DEEP Requests for Information #BETP18-24, November 18, 2021, *available at*: <http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/6cadc3d093b715be8525879200580264?OpenDocument>

¹¹⁷ *See* Utilities' response to DEEP Condition of Approval #3 of the 2021 C&LM Plan Update, March 25, 2021, *available at*: <http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/8525797c00471adb852586a30069e413?OpenDocument>

¹¹⁸ *See* Utilities' response to DEEP Request for Information #BETP-15, November 18, 2021, *available at*: <http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/6cadc3d093b715be8525879200580264?OpenDocument>

¹¹⁹ *See* Utilities' response to DEEP Request for Information #BETP-04, November 12, 2021, *available at*: <http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/7091cd5a6937ac528525879005a4d16?OpenDocument>

management and performance-based programs that take full advantage of the usage insights that AMI provides.¹²⁰ PURA is currently considering utility proposals for AMI deployment in one of its grid modernization dockets. On February 28, 2022, DEEP filed comments in that docket noting federal funding opportunities available to the Utilities for AMI through IJA and encouraging PURA to “consider how to fairly motivate the utilities to make good faith effort(s) to access and leverage external dollars that will reduce the burden on ratepayers.”¹²¹

Given the prospect of increased AMI deployment statewide, the C&LM Plan must be prepared to fully leverage the capabilities of AMI in its active demand response and pay-for-performance programs. To develop a record of potential opportunities and stakeholder feedback, DEEP will hold a Technical Meeting, in conjunction with its ongoing CES development process, to explore new opportunities for active demand response offerings and pay-for-performance incentive structures. This Technical Meeting may include presentations from experts in fields such as demand flexibility and aggregation and virtual power plants. Following this Technical Meeting, DEEP will work with the Utilities and EEB to incorporate findings into forthcoming annual C&LM Plan Updates.

I. Developing Connecticut’s Energy Efficiency Workforce

The energy efficiency industry, which includes high efficiency and traditional HVAC, renewable heating and cooling, efficient lighting, advanced materials, construction, and other sectors is the largest source of clean energy jobs in Connecticut, accounting for over 35,000 jobs in 2020.¹²² However, during the public input process, stakeholders noted a need for enhanced workforce training and educational opportunities, particularly in sectors, like HVAC, where the programs may see increased participation over the next Plan term.¹²³ This feedback has been further supported by multiple surveys of contractors, installers and manufacturers both before and during the COVID-19 pandemic.¹²⁴

Recognizing the importance of Connecticut’s clean energy workforce, Governor Lamont’s Executive Order No. 21-3 established the Connecticut Clean Economy Council (CCEC) to “advise on strategies and policies to strengthen our climate mitigation, clean energy resilience, and sustainability programs, thereby lowering emissions and advancing the state of economic and environmental justice for our residents.”¹²⁵ The CCEC, currently in the formative stage of development, will be a critical resource and source of guidance for strategies to develop and sustain the energy efficiency workforce. Additionally, in 2021 the Office of Workforce Strategy announced its new CareerConneCT grant program to support innovative

¹²⁰ For examples of potential opportunities to leverage AMI, *See* Eversource Advance Metering Infrastructure Business Case and Implementation Plan, July 31, 2020 (refiled October 19, 2020), *available at*: <http://www.dpuc.state.ct.us/2nddockcurr.nsf/8e6fc37a54110e3e852576190052b64d/c28735f2972646b7852587520079905d?OpenDocument>

¹²¹ *See* DEEP comments, Docket 17-12-03RE02, PURA Investigation into Distributed System Planning – AMI, February 28, 2022, *available at*: <http://www.dpuc.state.ct.us/2nddockcurr.nsf/8e6fc37a54110e3e852576190052b64d/e655412de4dcf619852587f70062dbf8?OpenDocument>

¹²² *See* Energize CT, Connecticut Clean Energy Industry Report, September 2021, *available at*: <https://www.ctgreenbank.com/wp-content/uploads/2022/01/2021-CT-Clean-Energy-Industry-Report.pdf>

¹²³ *See* for instance, written comments submitted to DEEP by the CT Green Building Council, Dandelion Energy, People’s Action for Clean Energy (PACE), Northeast Energy Efficiency Partnerships (NEEP), Save the Sound, and Henry Auer, *available at*:

[http://www.dpuc.state.ct.us/DEEPEnergy.nsf/\\$EnergyView?OpenForm&Start=1&Count=30&Expand=7.1&Seq=2](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/$EnergyView?OpenForm&Start=1&Count=30&Expand=7.1&Seq=2)

¹²⁴ *See* CBIA and Connecticut DEEP, *2017 Survey of Energy and Energy Efficiency Workforce Needs*, 2017, pg 4, *available at*: <https://portal.ct.gov/-/media/DEEP/energy/efficiency/CTEnergyWorkforceSurvey17pdf.pdf>, and Energize Connecticut, *Connecticut Clean Energy Industry Report*, September 2021, pg 25, *available at*: <https://www.ctgreenbank.com/wp-content/uploads/2022/01/2021-CT-Clean-Energy-Industry-Report.pdf>.

¹²⁵ *See* Governor Lamont Executive Order No. 21-3, December 16, 2021, *available at*: <https://portal.ct.gov/-/media/Office-of-the-Governor/Executive-Orders/Lamont-Executive-Orders/Executive-Order-No-21-3.pdf>

workforce development programs in high-demand industries such as energy efficiency.¹²⁶ This funding opportunity was shared with energy efficiency stakeholders at DEEP's November 18, 2021 Technical meeting.¹²⁷

The proposed 2022-2024 C&LM Plan outlines the Utilities' workforce development and educational offerings, including programs such as GreenSTEP and ee Smarts. These programs have had thousands of students participate since their inception but, as ratepayer funded education programs, they should be regularly reviewed to ensure they are tailored to, and reaching, all of Connecticut's students. In 2021, an evaluation of these programs conducted through the EEB's Evaluation Committee found that the programs would be improved with better-defined goals and metrics.¹²⁸ More specifically, the study identified that the eeSmarts program measured quantitative data like number of assemblies, number of students in attendance, and teachers at professional development workshops, but not how the content is absorbed and applied by students and teachers, i.e. whether their families are more likely to participate in Home Energy Solutions program or whether the program influences teachers' future lesson plans. There also appears to be limited evaluation of how program outcomes are influenced by geographic, demographic or socioeconomic indicators. To that end, the Conditions of Approval include directives for the Utilities to develop and regularly report on metrics to track progress in supporting and expanding educational programs that will contribute to a robust energy efficiency workforce in Connecticut.

Additionally, a highly skilled and trained workforce is necessary to expand customer choice and access to renewable thermal technologies like heat pumps. Positive customer experiences with these technologies will be essential for their continued deployment, and comprehensive installer training will support these outcomes. Course offerings should align with "best-in-class" trainings available elsewhere in the region and be made available to Connecticut contractors. In 2022, the Utilities plan to launch a Heat Pump Installer Network (HPIN) of independent, licensed, and insured HVAC contractors that demonstrate the requisite training for successful heat pump installation.¹²⁹ This approach was taken in Massachusetts, and provides heat pump installers with training resources, rebates and financing options; sales tools; listing on the Mass Save website; and other resources.¹³⁰ DEEP supports the development of the HPIN as a tool to aid in quality control and contractor education during the early stages of heat pump market development, and has directed the Utilities to provide additional information and regular reporting on the HPIN and associated heat pump technology trainings in the Conditions of Approval.

The Utilities and DEEP have also been working jointly to identify opportunities for federal funding to be used in advancing other workforce programs, trainings, and wrap around services. DEEP will continue to act as a partner and advisor with respect to the multiple, concurrent strategies and funding sources that now exist to further develop Connecticut's energy efficiency educational programming and workforce.

¹²⁶ See Office of Workforce Strategy, CareerConneCT, *available at*:

https://portal.ct.gov/careerconnect?language=en_US

¹²⁷ See Office of Workforce Strategy presentation on CareerConneCT (slide 72), November 18, 2021, *available at*:

<https://portal.ct.gov/-/media/DEEP/energy/ConserLoadMgmt/20211118-CLM-Technical-Meeting.pdf> recording *available at*:

https://ctdeep.zoom.us/rec/play/ltR67izDoCJUBryEr3nMcHRMdxjziWuD38V0wh_DkV36dc74Ymf14a4DlNkH7aK8ZbAumtnrLLKciVdu.wWBY0dm24hAbl-6J?continueMode=true&_xzm_rtaid=fSaU-jGkSa6eJMonBwzGSg.1637337535995.253bf4dff9e6955e3ed0b3b70047c0c&_xzm_rhtaid=623

¹²⁸ See Illume, Energize Connecticut Evaluation of Educate the Workforce, Educate the Students, Educate the Public, and Customer Engagement Initiatives, presented to the EEB Evaluation Committee December 10, 2021, *available at*: https://energizect.com/sites/default/files/2022-02/X2022_Presentation%20Slides%20_10Dec2021_v3x2.pdf

¹²⁹ See Utilities' response to DEEP RFI #BETP-29, December 9, 2021, *available at*:

<http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/8c9906744d48f122852587ab00524a63?OpenDocument>

¹³⁰ See Mass Save, Heat Pump Installer Network, *available at*: <https://www.masssave.com/learn/partners/heat-pump-installer-network>

DEEP's role on the CCEC will promote coordination between these various efforts to maximize the benefits and outcomes. In order to do this, it is essential that DEEP has the opportunity to review and approve the development of workforce programs offered through the C&LM programs, and that DEEP is provided with reporting on the results of such programs. This will allow DEEP to better assist the Utilities and other energy efficiency stakeholders in identifying opportunities to coordinate with these statewide workforce development initiatives. The Conditions of Approval will allow DEEP to track progress and help identify gaps that can be met with other resources.

m. Evaluation Data

DEEP's Approval with Conditions of the 2021 C&LM Plan Update noted significant delays in conducting evaluation studies due to contracting and data availability and directed the Utilities to develop a secondary metric to their Performance Management Incentive (PMI) to encourage improvement.¹³¹ Throughout 2021 the EEB Evaluation Administrator has worked with the Evaluation Committee and the Utilities to develop an assessment mechanism to inform this secondary metric.

However, testimony from the Evaluation Administrator provided at DEEP's November 16, 2021 Technical Meeting indicates that data provisioning for evaluation studies is an ongoing challenge with significant impacts on study timelines and costs.¹³² A report from the Evaluation Administrator found that Eversource and UI met due dates and provided adequate data about 69% and 46% of the time, respectively, for studies conducted in 2021. This report estimated that the cost of data delays and inadequacies exceeded \$300,000 in 2021, averaging about 5.5 percent of the cost of projects reviewed. According to the Evaluation Administrator, this cost is, "equivalent to the loss of 1-2 Evaluation projects per year, and provides a strong incentive for contractors to overcharge what they would bid for similar work in other states – and higher than the cost difference, because of the unknown level of risk by project."

The Utilities are statutorily mandated to "communicate with the Evaluation Administrator for purposes of data collection . . . and providing necessary factual information during the course of evaluations."¹³³ Calculation of the Utilities' performance incentives is based on program savings, and DEEP will hold the Utilities responsible for facilitating the production of data needed to calculate and verify those claimed savings. Any failure by the Utilities to provide timely and responsive data or information necessary for evaluations impairs the evaluation process and slows down the program savings verification process. Inefficiencies with data collection, along with any other problems identified in the evaluation process, will be reflected in the Utilities' evaluations.¹³⁴ Additionally, the Evaluation Administrator has identified other elements that would improve evaluation study data. DEEP, in the Conditions of Approval, directs the Utilities to take certain steps in the 2022-2024 C&LM Plan term to improve the timeliness and quality of data provided for evaluation studies.

n. Performance Management Incentives

¹³¹ See DEEP Determination: Approval with Conditions of the 2021 Plan Update to the 2019-2021 Conservation and Load Management Plan, March 4, 2021, available at: <https://portal.ct.gov/DEEP/Energy/Conservation-and-Load-Management/Conservation-and-Load-Management>

¹³² A recording of the November 16, 2021 Technical Meeting is available at: https://ctdeep.zoom.us/rec/play/WCdG84uKS96n2x-gjZuROpKeb3euh4VdU4s1Pfe3MXz9x9oQNaLgyTgToHI_RDzAMfLdesaiLbZWS8ww.IUvzeQ55sAxsCmcG?continueMode=true

¹³³ Conn. Gen. Stat. § 16-245m(d)(4).

¹³⁴ See *Id.* ("All evaluations shall contain a description of any problems encountered in the process of evaluation, including, but not limited to, data collection issues . . .").

In their review of the 2022-2024 C&LM Plan, the EEB directed the Utilities to consider an alternative Performance Management Incentive (PMI) structure.¹³⁵ These changes included:

- i. Including all fuel savings in primary metrics, consistent with program goals and the current Modified Utility Cost Test and Total Resource Cost Test used to assess program cost-effectiveness.
- ii. The addition of demand response metrics that target demand reduction efforts.
- iii. Revised sector-specific allocations for electric and gas based on average C&LM Plan benefits as assessed by the Modified Utility Cost Test.
- iv. Revised payout v. performance percentages and goals.

Items (i)-(iii) have been incorporated into the PMI structure included in the 2022-2024 C&LM Plan and DEEP finds that the inclusion of these items in the PMI structure is reasonable.

With respect to item (iv) above, the EEB Technical Consultants and Utilities proposed different variations to the payout v. performance structure. In July 2021, the Utilities and Consultants presented two proposed payout v. performance structures to the EEB. These proposals and the structure that was employed during the 2019-2021 C&LM Plan term are outlined in the table below.¹³⁶ On October 13, 2021, the EEB voted to approve a PMI structure that matched the Technical Consultants' proposal.¹³⁷ The proposed 2022-2024 C&LM Plan filed with DEEP on November 1, 2021 contains this PMI structure.

From 2019-2021, Eversource reached an average of 115.81 percent achievement on its metrics with an average 5.6 percent payout across metrics. UI reached an average of 104.03 percent achievement on its metrics with an average 4.05 percent payout across metrics.¹³⁸

DEEP has developed an alternative PMI structure that brings Connecticut into closer alignment with regional practices while maintaining incentives for high performance.¹³⁹ This structure contains elements of the proposed structures described in the table below. Under this structure, the Utilities will need to achieve higher levels of performance to receive the same payout that they would have achieved through the current structure. Additionally, while the 2019-2021 structure has a maximum payout of 8 percent, this proposed structure has a maximum payout of 7 percent.

¹³⁵ See EEB Technical Consultant Presentation, Proposed Revisions to the 2022-2024 Performance Management Incentives (PMIs), June 9, 2021, *available at*:

<https://app.box.com/s/iytqdw372f6bxxylgrx9mjnn5g8fbc5/file/820206797419>

¹³⁶ Proposals from both parties can be found in July 14, 2021 presentations to the EEB. Technical Consultant presentation *available at*: <https://app.box.com/s/qaefcivp2n6k8072bn6oc3vbk3enz57/file/833748999480>. Utilities' presentation *available at*: <https://app.box.com/s/qaefcivp2n6k8072bn6oc3vbk3enz57/file/833370169646>.

¹³⁷ A record of the vote on this matter and accompanying discussion by EEB members can be found in the minutes from the October 13, 2021 EEB meeting, *available at*: https://energizect.com/sites/default/files/2021-12/Oct%202021%20EEB%20Minutes_f.pdf

¹³⁸ See Eversource 2020 Annual Filings, March 1, 2021, *available at*:

<http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/8525797c00471adb8525868700526385?OpenDocument>, and UI/CNG/SCH Annual Filings, February 26, 2021, *available at*:

<http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/8525797c00471adb8525868800725477?OpenDocument>, and YGS 2019 Annual Filing, February 28, 2020, *available at*:

<http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/8525797c00471adb8525851c00502e09?OpenDocument>, and Eversource 2019 Annual Filing, February 28, 2020, *available at*:

<http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/8525797c00471adb8525851c0050043d?OpenDocument>, and UI/CNG/SCG 2019 Annual Filings, March 3, 2020, *available at*:

<http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/8525797c00471adb85258520049b8d6?OpenDocument>

¹³⁹ For a comparison of regional PMI structures *see* EEB Technical Consultant Presentation on Performance Management Incentives (PMI), delivered November 16, 2021, *available at*: <https://portal.ct.gov/-/media/DEEP/energy/ConserLoadMgmt/20211116-CLM-Technical-Meeting.pdf>

Performance Level	Payout			
	2019-2021 Structure	2022-2024 Structure ¹⁴⁰	Utility Proposal	DEEP Proposal
75%	2.0%	2.50%	2.50%	2.50%
80%	2.5%	3.00%	3%	3.00%
85%	3.0%	3.50%	3.50%	3.50%
90%	3.5%	4.00%	4%	4.00%
95%	4.0%	4.50%	4.50%	4.50%
100%	4.5%	5.00%	5.00%	5.00%
105%	5.0%	5.50%	5.50%	5.29%
110%	5.5%	6.00%	6%	5.57%
115%	6.0%	6.50%	6.50%	5.86%
120%	6.5%		6.75%	6.14%
125%	7.0%		7.00%	6.43%
130%	7.5%		7.25%	6.71%
135%	8.0%		7.50%	7.00%

o. Previous Orders and Conditions are rescinded, some are updated into new Conditions of Approval

All Compliance Orders and Conditions of Approval from previous DEEP Determinations on C&LM Plans are rescinded. DEEP has reviewed all previous Compliance Orders and Conditions of Approval and those still applicable are updated into Conditions of Approval for this Determination.

p. Areas of further refinement and Conditions of Approval

DEEP has determined that some further refinement of the 2022-2024 C&LM Plan is necessary to achieve stated objectives of the Plan as well as state policy priorities. Consequently, DEEP has included a Schedule of Compliance for Conditions of Approval, including required modifications and requirements to submit reports on certain topics, as detailed in Section IV, below.

IV. Conditions of Approval

DEEP’s approval of the 2022-2024 C&LM Plan is subject to the 2022-2024 Schedule of Conditions of Approval included as Attachment A. This Schedule includes all Conditions of Approval with which the Utilities must comply during the 2022-2024 C&LM Plan term. Conditions of Approval from previous DEEP determinations that are still applicable have been carried over to the 2022-2024 Schedule of Conditions of Approval and in some cases. In some cases, these Conditions have been modified and assigned new numbers. As stated above, all prior Conditions of Approval that have not been included in the 2022-2024 Schedule are rescinded.

V. Conclusion

The 2022-2024 C&LM Plan has the potential to advance equity, decarbonization, and affordability through Connecticut’s energy efficiency programs. This three-year term presents an opportunity to

¹⁴⁰ This is the PMI structure included in the proposed 2022-2024 C&LM Plan that was approved by the Energy Efficiency Board.

position the C&LM Plan to be responsive to existing and new state policies and plans, including the upcoming CES, ensuring that the energy efficiency and demand management programs can continue providing significant benefits to Connecticut businesses and residents.