January 7, 2025

Request for Information

and

Notice of Technical Conference

To Support Program Design of the
New England Heat Pump Accelerator Program

Technical Conference (virtual) on January 24, 2025 at 10:00 am, EST
Request for Information responses due by January 29, 2025 at 4:00 pm, EST

Purpose

The Connecticut Department of Energy and Environmental Protection (DEEP) is requesting feedback on the design of the New England Heat Pump Accelerator (Accelerator) program. Given the Accelerator's scale and goals, DEEP would like to offer interested parties and stakeholders an opportunity to provide information for consideration in determining the program's structure and role of the Accelerator's regional implementer. References to elements of the Workplan submitted to EPA, funding levels for Hubs, or other proposed details of the program stated herein are not necessarily final program parameters or components, and are subject to change prior to program implementation, the issuance of an RFP, or selection of any contractors or projects.

The Accelerator is a new program to increase adoption of residential cold-climate heat pumps and heat pump water heaters across New England. It is funded by the federal Environmental Protection Agency's (EPA') Climate Pollution Reduction Grant (CPRG) Implementation Grants.[1] While Connecticut is the lead state for the Accelerator, the program will also operate in Maine, Massachusetts, New Hampshire, and Rhode Island and will be implemented over 5 years across the region with activities in each of these states. The Accelerator will be implemented through a single regional implementer that will coordinate with existing programs and operate through three hubs: Market Hub, Innovation Hub, and Resource Hub, described below:

- The Market Hub will be a $270 million midstream heat pump and heat pump water heater incentive program implemented on a regional scale. It will seek to engage manufacturers and distributors through midstream incentives to drive the sales, stocking, and quality installation of residential heat pumps and heat pump water heaters suited to New England's climate and housing stock. The Market Hub will seek to improve cross-state

[1] CPRG aims to reduce greenhouse gas emissions, achieve community benefits such as reduced criteria air pollutants, complement other funding sources, and pursue innovative programs that are replicable and scalable. https://www.epa.gov/inflation-reduction-act/about-cprg-implementation-grants

alignment at the distributor level to ensure quality products are stocked and sold across the region. Program design will aim to ensure incentives flow down to the end-use customers. The Market Hub will also look to coordinate with and leverage existing heat pump and heat pump water heater programs. Because the landscape of heat pump and heat pump water heater programs is different across the states in the Accelerator, the regional implementer will need to be able to adapt to the current landscape of each state and work with the existing administrators. To the extent possible, it will also work with distributors and manufacturers to provide contractors with access to trainings and other resources on the installation and operation of heat pumps.

- The Innovation Hub will fund large-scale state-based initiatives and smaller-scale community-based projects that overcome technology and market barriers to heat pump adoption for Low-Income and Disadvantaged Communities (LIDACs).[2] Smaller scale community-level grants will be available yearly and distributed to community-based groups. Separately, states will determine which pilots and projects to implement for the state-level grants. The Innovation Hub will seek to share best practices and lessons learned from these pilots to scale successful strategies throughout the region.
- The Resource Hub will include a publicly accessible website that will share training resources and provide valuable data on the adoption of heat pumps throughout New England. The training resources will include information on installation, sizing, and operation of heat pumps for both contractors and customers. The data portal will provide aggregated information on heat pump and heat pump water heater adoption in all five states to inform implementation of the Accelerator and other decarbonization policies and programs across the region.

Please see Attachment A (updated portion of Workplan submitted to EPA) for additional information on the program.

This Request for Information (RFI) is seeking information on the program design for the Accelerator to ensure the program is successful. The RFI will inform and be followed by a Request for Proposals (RFP) for a Regional Implementer in late February 2025. A second RFP for an independent evaluator of the program will be issued later in 2025.

Eligible Respondents

Anyone can respond to this RFI. In particular, DEEP is interested in responses from current implementers of midstream programs, community-based organizations, and other market actors (including distributors, manufacturers, and contractors). Responses from organizations or

[2] For the purposes of the CPRG grant, LIDAC communities will follow the definition put out by the EPA for in the Notice of Funding for CPRG Implementation Grants. This includes: any census tract that is included as disadvantaged in the Climate and Economic Justice Screening Tool (CEJST); any census block group that is at or above the 90th percentile for any of EJScreen's Supplemental Indexes when compared to the nation or relevant state; or any geographic area within tribal lands as included in EJScreen.

individuals in any of the Accelerator states (Connecticut, Massachusetts, Rhode Island, Maine, and New Hampshire) are encouraged.

DEEP plans to issue competitive solicitations related to the Programs in the near term, and, in doing so, may use information obtained from responses to this RFI, at the public meeting or otherwise obtained.

Other than providing initial feedback that may help in the conceptual development of RFP requirements, responding to this RFI will not provide any advantage or conflict with respect to any such subsequent competitive solicitation, nor will failure to respond to this RFI prejudice any respondent in the solicitation.

Notice of Technical Conference

DEEP will host a virtual technical conference on the Zoom platform with an opportunity for public comment on Friday, **January 24, 2025 at 10 am ET**.

> **Register for the Technical Conference** https://neep-org.zoom.us/webinar/register/WN_s8EUpITOQz2fUoYDxIPzdg#/registration

The Technical Conference will provide an opportunity for brief technical presentations and public comments in response to this RFI. DEEP will issue a final meeting agenda by January 21st.

The meeting will include two tracks for offering comments:

- **Technical presentations:** DEEP invites stakeholders with midstream heat pump and/or heat pump water heater program expertise (e.g., current implementers of midstream heat pump programs; technical experts; manufacturers, distributors, contractors) to give technical presentations for up to 10 minutes, with or without slides. These presentations should identify and discuss any best practices in midstream programs for heat pumps and/or heat pump water heaters. Stakeholders seeking to give 10-minute technical presentations must email a request to present to cprg@neep.org[3] with the subject line "CPRG Technical Presentation" by January 17th at 5 pm. The email must identify who will be presenting and provide a summary of the information that will be presented. DEEP will notify all requesters of selection by January 21st. If using slides, presenters must also send slide decks in PowerPoint format to cprg@neep.org by January 21st at 5 pm. At its discretion, DEEP may not accept all submitted technical presentations for presentation during the technical portion of the meeting due to time constraints and/or topic relevance. However, all attendees will have the opportunity to participate in the

[3] DEEP, as the lead state for the New England Heat Pump Accelerator coalition, has partnered with the Northeast Energy Efficiency Partnerships (NEEP) to administer the Accelerator program. In this role, NEEP will be working on behalf of Connecticut DEEP to collect responses and organize the technical conference. NEEP is a non-profit whose mission is to accelerate regional collaboration to promote advanced energy efficiency and related solutions in homes, buildings, industry, and communities.

public comment portion of the meeting, and all submissions will be considered as written responses to this RFI.

- **Public comments:** Members of the public and other interested stakeholders will be invited to offer general comments on the Accelerator at the end of the meeting, for no more than 2 minutes per person. Individuals interested in providing public comment may sign up while registering for the meeting or at the meeting through the chat or verbally at the beginning of the public comment period section of the meeting.

The Connecticut Department of Energy and Environmental Protection is an Affirmative Action/Equal Opportunity Employer that is committed to complying with the requirements of the Americans with Disabilities Act. Please contact us at (860) 418-5910 or deep.accommodations@ct.gov if you: have a disability and need a communication aid or service; have limited proficiency in English and may need information in another language; or if you wish to file an ADA or Title VI discrimination complaint. Any person needing a hearing accommodation may call the State of Connecticut relay number - 711. Requests for accommodations must be made at least two weeks prior to any agency hearing, program, or event.

Instructions for Responding to this RFI

Responses are due by **January 29, 2025 at 4:00 PM EST, via email to cprg@neep.org. Please include "CPRG Accelerator RFI" in the subject line of the email.**

Responses may include answers to as many or as few questions as is relevant or practical. You do not need to respond to all questions or sub-questions to submit a response. **All comments related to the Accelerator are encouraged. Comments are not required to be in direct response to any questions listed below.**

CT DEEP has designated the individual below as the Official Contact for the purposes of this RFI. The Official Contact is the **only authorized contact** for this RFI, and, as such, handles all related communications on behalf of CT DEEP.

Name: Yiran He
Address: cprg@neep.org

Please ensure that email screening software (if used) recognizes and accepts emails from the Official Contact.

Please submit your response as either a Microsoft Word or PDF file to the official contact above by the deadline. ***Please label responses according to the question number, if applicable.***

If you have any questions regarding this RFI, they should be submitted to the Official Contact.

Disclosure & Waiver Authority

Neither the Connecticut nor DEEP shall assume any liability for expenses incurred by a respondent in preparing, submitting, or clarifying any response to this RFI.

Respondents are advised that all materials associated with this RFI are subject to the terms of the Freedom of Information Act (FOIA), the Privacy Act, and all applicable rules, regulations, and interpretations. If a respondent deems that certain information required by this RFI is confidential, the respondent must label such information as CONFIDENTIAL prior to submission. The respondent must provide a convincing explanation and rationale sufficient to justify an exemption of the information from release under the FOIA. The explanation and rationale must be stated in terms of (a) the prospective harm to the competitive position of the respondent that would result if the identified information were to be released and (b) the reasons why the information is legally exempt from release pursuant to C.G.S. § 1-210(b).

Questions

Reminder: Stakeholders should feel free to respond to as many or as few questions as is relevant or practical.

Overarching Program Design and Goals

This coalition of five states will launch the Accelerator to rapidly scale adoption of heat pump and heat pump water heater technologies suited to New England's cold climate and older housing stock by filling gaps in funding and program coverage that prevent the full activation of the supply chain of manufacturers, distributors, and contractors and by addressing barriers to access for LIDAC households (Attachment A, page 2).

1. ***What recommendations do you have for the New England Heat Pump Accelerator to encourage market transformation for heat pumps and heat pump water heaters across the region?***
2. ***The Accelerator will invest a portion of Market Hub funds and 100% of Innovation Hub funds in LIDACs. How can the Accelerator prioritize equitable outcomes? What recommendations or insights do you have for program design and implementation that can center equity?***
3. ***What resources and practices currently exist to promote heat pump and heat pump water heater workforce capacity, trainings, and certifications, and what more is needed at the state and regional level? What role should the Accelerator play in addressing these needs? How can the Accelerator help to align the region on heat pump and heat pump water heater workforce trainings and certifications?***
4. ***What other information would you desire that DEEP provide to assist you with your submittal of a proposal with the upcoming Regional Implementer RFP?***
5. ***What other recommendations do you have for the Accelerator? What have we not asked that is important to consider?***

Market Hub: Midstream Program, Design and Goals

The Market Hub will implement midstream incentives on a regional scale to improve cross-state alignment on heat pumps and heat pump water heaters at the distributor level. In coordination with existing energy efficiency program administrators, it will seek to engage manufacturers, distributors, contractors, and existing programs to drive the sales, stocking, and quality installation of heat pumps suited to New England's climate and housing stock. Because the landscape of programs is different across the states in the Accelerator, the regional implementer will need to be able to adapt to the current landscape of each state and work with the existing administrators. (Attachment A, page 4 – 5).

6. ***What are the best practices for midstream programs? What is most critical for success?***
7. ***What are best practices for monitoring equipment costs for potential inflation?***
8. ***Each state may choose to focus midstream incentives on different heat pump technologies (e.g., water heaters, geothermal, air source, etc.). How can the Accelerator best support differing state technology priorities while driving forward regional market transformation?***
9. ***What are lessons learned from previous midstream programs that can be applied to the Accelerator? What practices or policies should be avoided?***
10. ***What are the best opportunities to align heat pump and heat pump water heater programs standards in New England? What benefits and risks are there to aligning heat pump and heat pump water heater standards regionally in New England?***
11. ***What mechanisms could be employed at the midstream level to ensure proper equipment installation practices and sizing for New England? Are there examples of replicable models the program can learn from? Please include links to program information where possible.***
12. ***There are existing programs in Connecticut, New Hampshire, Rhode Island, Massachusetts, and Maine that the Accelerator will complement and interact with. How the regional implementer works with these programs will vary by state. What are some best practices and lessons learned from how other midstream programs have interacted with downstream programs? Please provide details on these programs and any information on how the Accelerator can best work with existing programs.***
13. ***How can the Market Hub prioritize equity with midstream rebates and meet its low-income and disadvantaged communities (LIDAC) investment goal, specifically:***

a. *What recommendations or strategies would increase adoption in LIDACs as defined by the EPA?*[4]

b. *Please share examples of successful workforce development programs, strategies or trainings that would promote job creation and entrepreneurship in LIDACs.*

14. *Are there specific examples of successful midstream programs, particularly for residential heat pumps and heat pump water heaters? Please identify these programs and, for each program, provide information on key features, particularly:*

    a. *How incentives and rebates are structured, including:*

        i. *Whether incentives are paid to the distributor, contractor, customer, or some combination.*

        ii. *Whether the distributor, contractor, and/or customer share is set by the program or left to the discretion of the distributor or contractor.*

        iii. *Any information on why the program chose this incentive structure.*

    b. *What data is collected from distributors and/or contractors that participated in the program? Are there are any reporting procedures or structures set up to help collect data from distributors/contractors.*

    c. *How are accounts managed with distributors? Specifically, is there a certain approach the program uses to engage distributors and/or contractors initially and throughout implementation of the program? Also, have any approaches appeared to be more or less successful?*

    d. *Information on marketing strategies, including*

        iv. *How the program is marketed or communicated to distributors and/or retailers.*

        v. *How the program is marketed or communicated to contractors and installers.*

        vi. *If the program is marketed to end-user customers, how, and how important this is in a midstream program relative to marketing and communications with distributors and contractors.*

[4] For the purposes of the CPRG grant, LIDAC communities will follow the definition put out by the EPA for in the Notice of Funding for CPRG Implementation Grants. This includes: any census tract that is included as disadvantaged in the Climate and Economic Justice Screening Tool (CEJST); any census block group that is at or above the 90th percentile for any of EJScreen's Supplemental Indexes when compared to the nation or relevant state; or any geographic area within tribal lands as included in EJScreen.

vii. *If the program is marketed alongside other efficiency, electrification, decarbonization, or housing programs in the territory or state.*

viii. *Whether an incentive amount is communicated to the customer, and specifically if that includes the full incentive amount or only a portion of the incentive.*

e. *What results has the program achieved?*

15. *What tools or mechanisms can be used to ensure that distributors are paid in less than a month by the program? Are there any midstream programs where incentives are distributed in less than a month? How are those rebates distributed and what tools or mechanisms can the Accelerator adopt to achieve similar results?*
16. *Are certain contractual or payment structures (e.g., performance-based, milestone-based, time and materials) preferred by midstream program implementers? Are there any contractual or payment structures that should be avoided?*
17. *In addition to greenhouse gas (GHG) impacts, how should the Market Hub determine and measure success?*
18. *How could the Accelerator be visible to end-use customers while not adding additional complexity to a heat pump purchase process? What are best practices for ensuring midstream incentives reach end-use customers?*
19. *What are the best practices states should consider incorporating into the Accelerator to enhance the delivery of weatherization measures alongside heat pump installations as a means to minimize grid impacts of heat pump adoption and maximize cost reduction for customers?*

Innovation Hub: Community and State Grants, Design and Goals

The Innovation Hub will fund large-scale initiatives and community-level projects that test and deploy strategies to overcome technology and market barriers to heat pump adoption for LIDACs.[5] Smaller scale community-level grants will be available yearly and distributed to community-based groups. Separately, states will determine which pilots and projects to complete for the larger-scale, state-level initiatives. Potential projects under the Innovation Hub might include: solutions for multifamily buildings and mobile homes, networked geothermal systems, heat pump technologies to address specific housing barriers (e.g., 120V HPWHs for housing with limited electric panel capacity), inclusive financing strategies, hydronic system replacement

[5] For the purposes of the CPRG grant, LIDAC communities will follow the definition put out by the EPA for in the Notice of Funding for CPRG Implementation Grants. This includes: any census tract that is included as disadvantaged in the Climate and Economic Justice Screening Tool (CEJST); any census block group that is at or above the 90th percentile for any of EJScreen's Supplemental Indexes when compared to the nation or relevant state; or any geographic area within tribal lands as included in EJScreen.

options, and interventions to make heat pumps standard practice within state low-income programs (Attachment A, page 5 – 6).

20. ***What are the key barriers to the adoption of heat pumps by low-income households and residents of LIDACs in New England? Please include any reports or additional resources that provide insight into these barriers.***

21. ***What criteria should states use when comparing projects for selection at the state-level? How should the selection criteria be weighted?***

22. ***What kind of projects should the Innovation Hub prioritize at the state- and community-level?***

23. ***To the extent that LIDACs have launched similar or related pilots and projects targeting heat pump adoption, what best practices or lessons learned have been identified? How might these best practices or lessons learned inform the development of the New England Heat Pump Accelerator Innovation Hub? What considerations should there be for avoiding conflicts or confusion among multiple initiatives that are actively serving these targeted communities?***

24. ***How can the Accelerator ensure that the community-level Quick Start Grants are accessible to CBOs and other groups with limited resources, specifically:***

    a. ***How can the Accelerator streamline the application process and make it more accessible for CBOs?***

    b. ***What kind of support will grantees need during project implementation?***

    c. ***What are examples of programs that have succeeded in distributing community-based grants for heat pump deployment and what were the lessons learned from those projects?***

25. ***Who are the key organizations (implementers of existing low-income heat pump programs, community-based organizations, etc.) that the Accelerator should coordinate with in each state (CT, MA, ME, NH, RI)?***

26. ***How should the Accelerator seek input and feedback from LIDAC stakeholders on the program design for the Innovation Hub Grants? What existing state- or community-level groups should the Accelerator coordinate with? Please provide any contact information.***

27. ***What best practices for designing and deploying stipends for stakeholder or community engagement should the Accelerator use? Please include any examples of past or current programs that used stipends.***

28. ***The community-level Quick Start Grants are intended to bolster existing efforts and fill in funding gaps or pilot new approaches to installation of heat pumps in communities. Will funding in the range of $100,000 to $300,000 per grant be sufficient to***

complement existing programs at the community level? Should there be a cap on the community-level grants?

29. ***Grants from the Innovation Hub may be subject to Build America, Buy America (BABA)[6] and Davis-Bacon[7] requirements if they involve construction, such as substantial building upgrades. Are there other building efficiency or electrification pilots or projects that you know of that are complying or have complied with BABA and Davis-Bacon? What barriers have appeared when projects have been subject to BABA and/or Davis-Bacon? Please include any projects you are aware of.***

Resource Hub, Design and Goals

The Resource Hub will be a public online platform to share resources for contractors and customers and to show regional data on heat pump sales to inform the implementation of the Accelerator and other efficiency policies across the region. The resources available will include:

- Contractor training resources covering topics such as: trainings on cold-climate heat pumps, quality installation practices, sizing tools and guidance, emerging heat pump technologies, whole-home installation, multifamily options, and customer sales and support techniques for heat pumps.
- Consumer resources covering topics such as: selecting a heat pump, assessing operating cost impacts, cold-climate tools, operating and maintaining a heat pump, and developing a plan to fully electrify homes.
- A data portal with aggregated information on heat pump and heat pump water heater adoption in all five states to inform implementation of the Accelerator and other decarbonization policies and programs across the region (Attachment A, page 6 – 7).

30. ***What are some best practices for identifying and publishing training and materials that will be available for contractors and customers on the Resource Hub? What are some examples of successful online resource centers that include training and materials for contractors and/or customers? Please provide any links where possible.***

31. ***What aspects of heat pump and/or heat pump water heater sales, installation, and operation would benefit from improved training for contractors? Examples might include sizing tools, educational materials on how to operate heat pumps, etc.***

32. ***What aspects of heat pump and/or heat pump water heater sales, installation, and operation would benefit from improved resources for customers?***

[6] For more information on BABA, please see: https://www.commerce.gov/oam/build-america-buy-america.
[7] For more information on Davis Bacon, please see: https://www.dol.gov/agencies/whd/government-contracts/construction.

33. ***Are there best practices related to technology awareness campaigns that the Accelerator should look to emulate?***

34. ***Are there aspects of heat pump and/or heat pump water heater sales, installation, and operation that would benefit from regional alignment in New England? Are there any specific tools or resources that would provide value at the regional level, such as trainings, education materials, or sizing guidance? How might this information differ to account for regional or state-by-state differences?***

35. ***Are there any educational or training materials or programs specific to contractors in LIDACs that the Accelerator should provide? Please provide any links to example materials or programs where possible.***

36. ***What are some best practices for gathering and publishing data related to efficiency and electrification programs? What resources on efficiency and electrification data already exist in the region? Are there any examples of successful online resource centers that publish aggregated data that the Accelerator can look to replicate? Please provide links to websites where possible.***

37. ***What data should the Accelerator prioritize gathering and publishing? Currently, the workplan outlines that the program will seek to collect: market data (ASHP, GSHP, and HPWH sales and full-category HVAC and water heater sales), wholesale and installation cost data (as available), and high-level program participation data. Are there other data points that would be helpful in transforming the market?***

EPA, Climate Pollution Reduction Grants – Implementation Grants
New England Heat Pump Accelerator
Workplan

The details of the program stated herein are not necessarily final program parameters or components, and are subject to change prior to program implementation, the issuance of an RFP, or selection of any contractors or projects.

1. Overall Project Summary and Approach

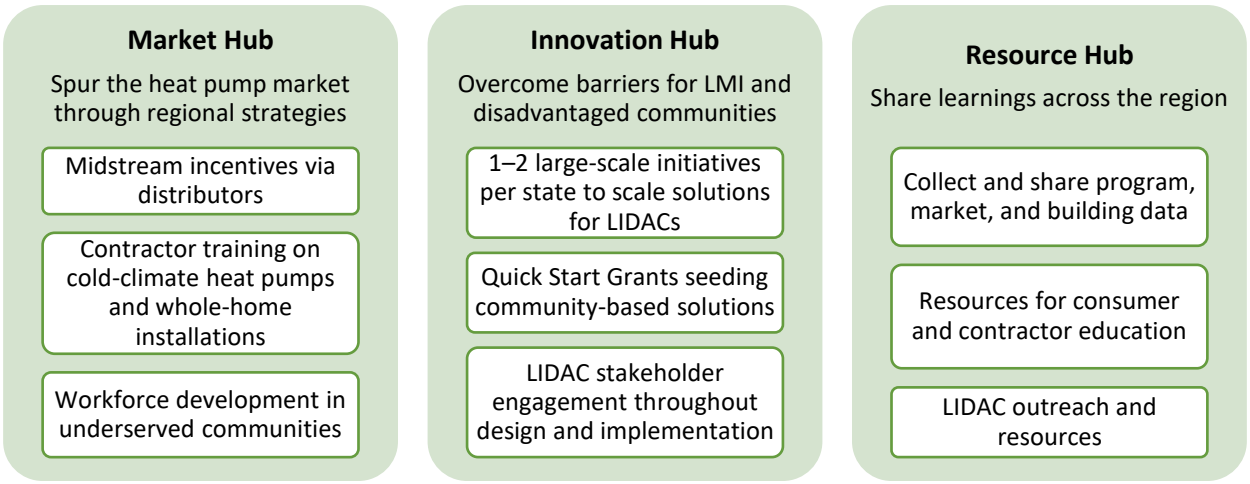
Connecticut Department of Energy and Environmental Protection (CT DEEP), Maine Governor's Office of Policy Innovation and the Future (ME GOPIF), Massachusetts Department of Energy Resources (MA DOER), New Hampshire Department of Environmental Services (NH DES), and Rhode Island Office of Energy Resources (RI OER) (hereinafter referred to collectively as "the coalition") propose to create the New England Heat Pump Accelerator (Accelerator) to achieve substantial greenhouse gas (GHG) reductions.[1] The coalition will undertake the efforts described in this workplan if awarded funding under the Climate Pollution Reduction Grants (CPRG) Program: Implementation Grants General Competition.

The New England Heat Pump Accelerator will leverage the power of a multistate market to rapidly accelerate adoption of cold-climate air-source heat pumps (ASHPs), heat pump water heaters (HPWHs), and ground source heat pumps (GSHPs) in single-family and multifamily residential buildings across the region. The Accelerator is designed to achieve GHG emissions reductions even after its funding ends by overcoming systemic barriers to residential building electrification at this critical moment in the region and making heat pumps standard practice in the HVAC and water heating industries. If the Accelerator achieves its goals, nearly every space and water heater sold in New England will be a heat pump by 2040. Specifically, the Accelerator aims for heat pumps to make up at least 65% of residential-scale heating, air conditioning, and water heating sales by 2030 and 90% by 2040, in line with recent efforts on the national stage to increase adoption, notably the U.S. Climate Alliance Commitments to Decarbonize Buildings and the Northeast States for Coordinated Air Use Management (NESCAUM) Memorandum of Understanding to Accelerate the Transition to Zero-Emission Residential Buildings.[2] Both of these efforts were joined by states in the coalition and rely on the rapid adoption of heat pump technology to permanently shift the market from fossil fuel equipment to heat pumps.

[1] Letters of Intent from each coalition member are included as part of the application.
[2] U.S. Climate Alliance, US Climate Alliance Commitments to Decarbonize Buildings; NESCAUM (Northeast States for Coordinated Air Use Management), https://www.nescaum.org/our-work/stationary-sources/building-electrification.

The Accelerator will achieve these goals through three program pillars designed to activate the supply chain, scale solutions to address the specific barriers that low- and moderate-income (LMI) households and disadvantaged communities (collectively, LIDACs) face in adopting heat pumps, and share data and educational resources to drive rapid, aligned progress across the region, as shown in Figure 1.

Figure 1 New England Heat Pump Accelerator Pillars



This coalition of five states has joined forces to rapidly scale adoption of heat pump technologies suited to New England's cold climate and older housing stock by filling gaps in funding and program coverage that prevent the full activation of the supply chain of manufacturers, distributors, and contractors and addressing barriers to access for LIDAC households. New England is comprised of small states that share a labor and supplier market. Therefore, states must work together to accelerate the regional heat pump market; the Accelerator's pillars tackle the activities that are most essential for growth. The Accelerator is thoughtfully designed to coordinate with utility and state heat pump programs in the coalition states and will build on and learn from Maine's national leadership in driving heat pump adoption.[3]

In alignment with EPA's Justice40 goals, at least 40% of Accelerator funding will be directed to LIDACs. 100% of the Innovation Hub funding will serve LIDACs and LIDAC-targeted programs are included in each pillar. The Resource Hub will employ a multilayered approach to outreach and engagement with LIDACs and other stakeholders. It will collect resources for equitable building electrification policies, programs, and processes that center the needs of communities and provide stipends for LIDAC representatives and community members to participate in the Advisory Council and other stakeholder processes.

[3] Woody, T. (2003, October 6). *How Maine Became the Heat Pump Capital of the US.* Bloomberg. https://www.bloomberg.com/news/articles/2023-10-06/how-maine-became-the-heat-pump-capital-of-the-us.

All five states have identified residential heat pump installations as a priority GHG reduction measure in their Priority Climate Action Plans (PCAPs) and recognize that they can achieve greater impact by working

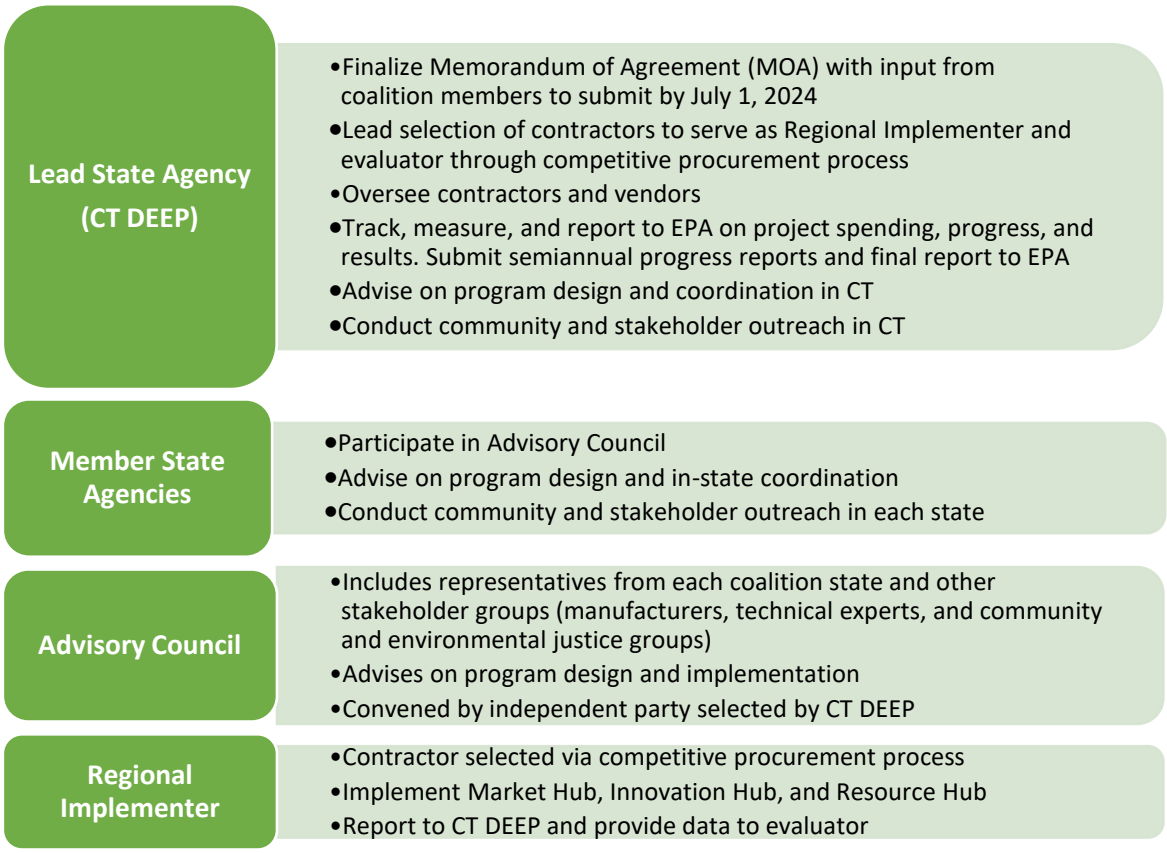


Figure 2 Coalition Roles and Responsibilities

together in a regional coalition to implement the Accelerator. Roles and responsibilities of each coalition member, as well as key supporting functions, are described in Figure 2.

a. Description of GHG Reduction Measures

Collectively, the activities of the Accelerator address one significant GHG reduction measure: transformation of the residential space and water heating market to heat pumps. Heat pumps are a highly efficient, all-electric replacement for fossil fuel heating equipment and a highly efficient replacement for homes with electric resistance heating. A recent analysis by the National Renewable Energy Laboratory (NREL) found that "nationally, heat pumps would cut residential sector greenhouse gas emissions by 36%-64%, including the emissions from new electricity generation."[4]

[4] National Renewable Energy Laboratory (NREL). (2024, February 12). *News Release: Benefits of Heat Pumps Detailed in New NREL Report*. https://www.nrel.gov/news/press/2024/benefits-of-heat-pumps-detailed-in-new-nrel-report.html (hereinafter NREL, *Benefits of Heat Pumps*).

This transition is especially important in New England, where many homes rely on expensive and highly polluting delivered fuels (propane, kerosene, and heating oil), which contribute disproportionately to GHG and air pollutant emissions and household energy burden. According to Atlas Public Policy, New England has the highest reliance on fuel oil and kerosene for home heating of any region in the U.S., as shown in Figure 3. Maine and New Hampshire also have a high percentage of households using propane. Propane and home heating oil are 19% and 40% more carbon-intense than natural gas, respectively. [5] For example, heating oil and propane account for 61% of residential GHG emissions in Connecticut but serve only 43% of homes.[6]

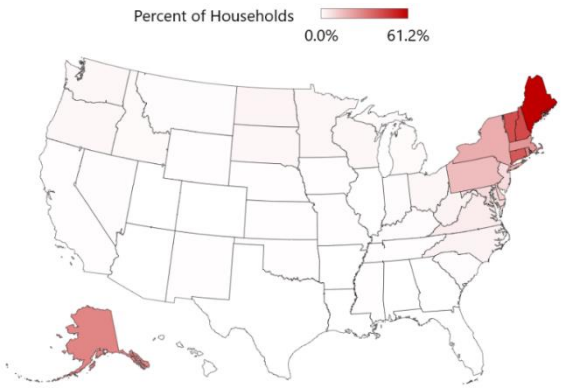


Figure 3 Percent of Households Using Fuel Oil or Kerosene for Primary Space Heating by State in 2020 (Source: Atlas Public

Delivered fuels, along with electric baseboard heating, are also the most expensive options for heating on a dollar-per-BTU basis. Due to the region's cold climate, older building stock, and reliance on expensive delivered fuels, low-income households in New England—many of whom are located in rural communities—have the highest median energy burden of any region in the country, with 10.5% of income spent on energy bills.[7] Delivered fuels are also unregulated, leading to volatile and unpredictable pricing that places a particular strain on household budgets as well as a risk of dangerous fuel cut-off situations. NREL found that nearly all households that use fuel oil and propane for heating would see energy bill savings from switching to heat pumps, with more significant savings in colder climates.[8]

Each state's PCAP identifies residential buildings as a significant contributor to total GHG emissions:[9]

- CT: Residential buildings are the second largest source of GHG emissions at 19%.[10]
- MA: Residential and commercial buildings are the second largest GHG source at 35%.[11]
- ME: Residential buildings are the second largest source of GHG emissions at 21%.[12]
- NH: Residential and commercial buildings are the second largest GHG source at 16.9%.[13]
- RI: Residential heating alone is 19.3% of the state's emissions.[14]

Table 1 outlines the GHG reduction measure in coalition member PCAPs and provides PCAP links.

Table 1 PCAP Measures Related to Heat Pump Adoption

GHG Reduction Measure	PCAP Title(s) and Page Numbers

[5] Gabriel, N. (2023, April 3). *Fuel Oil and Propane Space Heating Across the United States*. Atlas Buildings Hub. https://atlasbuildingshub.com/2023/04/03/fuel-oil-and-propane-space-heating-across-the-united-states/.
[6] CT DEEP. (2023, April). 1990-2021 Connecticut Greenhouse Gas Emissions Inventory. https://portal.ct.gov/-/media/DEEP/climatechange/1990-2021-GHG-Inventory/DEEP_GHG_Report_90-21_Final.pdf.
[7] ACEEE. (2020, September). *National and Regional Energy Burdens*. ACEEE | American Council for an Energy-Efficient Economy. https://www.aceee.org/sites/default/files/pdfs/ACEEE-01%20Energy%20Burden%20-%20National.pdf.
[8] NREL, *Benefits of Heat Pumps*.
[9] PCAP links for the five coalition states are provided here and are not subsequently cited for each PCAP reference.
[10] CT DEEP. (2024, March). *A Priority Climate Action Plan*. U.S. EPA. (hereinafter *CT PCAP*).
[11] MA Office of Climate Innovation & Resilience (OCIR) and Department of Transportation (DOT). (2024, March). U.S. EPA *Massachusetts PCAP* (hereinafter *MA PCAP*).
[12] ME GOPIF. (2024, March 1). *State of Maine PCAP*. U.S. EPA. (hereinafter *ME PCAP*).
[13] NH DES. (2024, March). *State of New Hampshire PCAP*. U.S. EPA. (hereinafter *NH PCAP*).
[14] RI DEM. (2024, March 7). *PCAP*. U.S. EPA. (hereinafter *RI PCAP*).

"Support increased adoption of heat pumps statewide" and "Support deployment of networked geothermal system"	Connecticut: EPA Climate Pollution Reduction Grant Planning Grant First Deliverable: A Priority Climate Action Plan; Appendix I-7 page(s) 83–91; Appendix I-10 page(s) 106–115.
"Transition to cleaner heating and cooling systems and efficient appliances"	State of Maine: Priority Climate Action Plan; page(s) 27
"Decarbonizing Building Heating Systems"	Massachusetts Priority Climate Action Plan; page(s) 64–66; Appendix G – B2 page(s) 117–119
"Heat Pumps to Improve Energy Efficiency of Space and Water Heating of Buildings"	State of New Hampshire: Priority Climate Action Plan; page(s) 62–66, 96; Appendix A page(s) A3–A7
"Increase Residential and Commercial Heat Pump Adoption"	State of Rhode Island Priority Climate Action Plan; page(s) 32–34; Appendix 2-J

The Accelerator is purpose-built to address the region's unique challenges and opportunities to fundamentally transform the market for residential heat pumps through three program pillars: Market Hub, Innovation Hub, and Resource Hub. The features of these program pillars are described below.

Market Hub Features

The Market Hub will supercharge participation in the coalition states' existing heat pump programs by engaging manufacturers, distributors, and contractors to drive the sales, stocking, and quality installation of heat pumps suited to New England's climate and housing stock. While utility and state programs currently offer incentives for heat pump technologies across the five states, these mainly take the form of "downstream" rebates to end-use customers. In contrast, "midstream" incentives typically include a smaller stipend to the wholesale distributor and a larger "pass-through" incentive to the contractor and/or customer, applied as an instant discount at point of sale. Currently, as described in Section 1.b, few midstream incentives are available in the region and engagement with the supply chain is inconsistent. Moreover, manufacturers and distributors highly value program consistency, since they operate in all five coalition states and frequently sell equipment across the borders of New England's small states.[15] The five largest distributors (F.W. Webb, Homans, Plumbers' Supply Company, The Granite Group, and S.G. Torrice) sell more than 50% of the heat pumps sold in the region.[16] The Accelerator will address this missed opportunity and drive equipment stocking and sales across the region. The Market Hub will also incorporate strategies that support LIDAC access to heat pumps, such as incentive adders for distributors and contractors serving LIDACs and incentivizing equipment types needed in LIDAC buildings.

The Market Hub will also meet the need for training New England contractors on cold-climate heat pumps and the value of whole-home electrification with efficiency. This approach will address gaps in the market; according to one major heat pump manufacturer, "only 30% of contractors are aware that a modern heat pump can supply 100% of a home's heating load at outdoor temperatures of around 0°F."[17] The Market Hub will raise the quality of training and installation across the region, while also incorporating a focus on workforce development and job creation in LIDACs. Details on these workforce strategies are provided in Section 5. The Market Hub will look to train contractors on the value of efficiency alongside electrification and look to cross-promote existing efficiency programs alongside installation of heat pumps. Table 2 provides a summary of Market Hub features.

Table 2 Market Hub Program Features

Program Features

[15] Personal Communication, New England Program Implementer, March 2024.
[16] Ibid.
[17] Jachman, M. (2024, March 9). *Are HVAC Contractors Getting the Message on Heat Pumps?* Air Conditioning, Heating & Refrigeration News (ACHR News). https://www.achrnews.com/blogs/17-opinions/post/154290-are-hvac-contractors-getting-the-message-on-heat-pumps.

Midstream Incentives	• $500-$1,000 (on average) per unit incentive to wholesale distributors for qualifying ASHPs, GSHPs, and HPWHs, with distributors retaining 20%-30% of the incentive and 70%-80% passed through to participating contractors and/or customers. • Standardized tool for distributor reporting, invoicing, and incentive processing, with streamlined data collection and rapid reimbursement. • Equipment eligibility (updated annually) based on qualifying product lists to drive adoption of products suited to New England's climate and housing stock and the needs of LIDAC buildings, such as cold-climate ASHPs, variable-speed heat pumps, and 120-volt HPWHs. • Collaboration with distributors to increase stocking and sales of qualified products, ensuring product availability to meet growing demand for heat pumps across the region. • Collaboration with utility and multifamily program implementers to ensure program can be used when applicable to these projects.
Contractor Training	• Training resources for contractors to drive consistent quality installation practices in New England on topics such as: cold-climate ASHPs, equipment sizing, control strategies, whole-home installations, fuel switching, and emerging technologies. • Leveraging distributors' contractor networks/relationships to reach contractors quickly. • Integration of electrification and New England program-specific content into existing manufacturer and distributor training infrastructure.
Workforce Development in Underserved Communities	• Workforce development programs to grow the contractor base, with a focus on promoting job creation and entrepreneurship in LIDACs. • Outreach and engagement with workforce organizations in LIDACs. • Tools and training to overcome barriers to entry in current workforce programs. • Collect data on workforce development program participation; records and evaluation of outreach activities to workforce organizations in low-income and disadvantaged communities

Innovation Hub Features

Low-income households in New England have the highest median energy burden of any region in the country.[18] It is essential that these households and communities are not left behind in the clean energy transition. At the same time, households in LIDACs face unique barriers to heat pump adoption, which are described further in Section 4. The Innovation Hub is designed to address these barriers by funding state-based projects and community-based Quick Start Grant projects that support heat pump adoption for LMI households and disadvantaged communities. 100% of Innovation Hub funding will serve LIDACs. Table 3 summarizes key features of the Innovation Hub.

Table 3 Innovation Hub Program Features

	Program Features
State Initiatives	• 1-2 large-scale, multiyear projects in each coalition state to address specific state priorities and develop scalable solutions to overcome LIDAC barriers. • Examples might include: heat pump strategies for multifamily buildings and mobile homes, networked geothermal systems, heat pump technologies to address specific housing barriers (e.g., 120V HPWHs for housing with limited electric panel capacity), inclusive financing, hydronic system replacement options, and interventions to make heat pumps standard practice within state low-income programs. • Modeled on TECH Clean California's regional pilots.

[18] U.S. DOE (Department of Energy). (2020). *LEAD (Low-Income Energy Affordability Data) Tool*. Energy.gov. https://www.energy.gov/scep/slsc/lead-tool. (hereinafter *DOE LEAD Tool*).

	Program Features
Quick Start Grants	• "Bottom-up" annual grants for smaller-scale, community-based pilots. • Simple, accessible application process to invite creative ideas that expand access to heat pumps for LMI households and LIDACs. • Modeled on TECH Clean California's Quick Start Grants.
EJ Engagement in Design and Implementation	• Representatives from environmental justice (EJ) and community groups involved in the design of the state pilots and selection criteria for Quick Start Grants, with stipends to support their time. • Community-based groups can apply for Quick Start Grant funding. • Shared outcomes and learnings from pilots and grant-funded projects.

Resource Hub Features

The Resource Hub will serve as the Accelerator's central repository for data and resources. Currently, each of the five coalition states offers various programs promoting heat pump adoption, but there is no mechanism to share data, best practices, lessons learned, and other information across state lines or scale the successes being achieved in states like Maine. Since the states already have well-established consumer brands, such as Mass Save and Efficiency Maine, the Resource Hub will not seek to establish a new brand or portal for consumers. Instead, it will serve as a central portal for distributors, contractors, program implementers, and other stakeholders in the heat pump supply chain to access relevant data and educational resources. The Regional Implementer will collaborate closely with existing heat pump programs (Efficiency Maine and utility energy efficiency programs in Connecticut, Massachusetts, Rhode Island, and New Hampshire) to collect resources and insights from these programs to share across the region, and to provide resources for these programs to disseminate information within their customer and contractor networks. Table 4 summarizes key features of the Resource Hub.

Table 4 Resource Hub Program Features

	Program Features
Data Hub	• Website hosting publicly accessible aggregate or anonymized data, including: market data (ASHP, GSHP, and HPWH sales and full-category HVAC and water heater sales), wholesale and installation cost data (as available), and program participation data. • Maps and tools for regional trend analysis, synthesizing publicly available information from each coalition state on building decarbonization policy and programs, housing stock and fuel sources, available incentives, and electricity and fuel costs. • Modeled after the TECH Clean California Public Data Portal and the Midwest ASHP Collaborative.[19]
Educational Resources	• Web-based, easily searchable repository of educational resources for distributors, contractors, program implementers, and other stakeholders. • Contractor training resources covering topics such as: trainings on cold-climate heat pumps, quality installation practices, sizing tools and guidance, emerging heat pump technologies, whole-home installation, multifamily options, and customer sales and support techniques for heat pumps. • Consumer resources covering topics such as: selecting a heat pump, assessing operating cost impacts, cold-climate tools, operating and maintaining a heat pump, and developing a plan to fully electrify your home. • Policy and program resources including: market studies and program evaluations from across the region; resources on topics such as rate design and grid impacts; and insights and best practices from successful heat pump programs.

[19] TECH Clean California. (2024). https://techcleanca.com/public-data/ and Midwest ASHP Collaborative. (2024). https://www.mwalliance.org/midwest-ashp-collaborative.

Program Features	
LIDAC Outreach & Engagement	• Multilayered outreach and engagement with groups representing LMI households and disadvantaged communities. Stipends to support community participation. • Collected resources for equitable building electrification policies and programs.

Accelerator Tasks, Milestones, Risks, and Mitigation Strategies

Table 5 summarizes key tasks and milestones for the Accelerator by month. Tasks for the whole Accelerator are italicized, and hub specific tasks are listed in their own columns. If awards are made in October 2024, then we would assume month 1 to be the first month that the lead state executes a contract with EPA, likely November or December 2024.

Table 5 Accelerator Key Tasks and Milestones

	Tasks and Milestones		
Month	**Market Hub**	**Innovation Hub**	**Resource Hub**
1/ Nov	*Select Regional Convener/RFP Support Role through Sole Source Justification Authority consistent with CT Procurement Practices; Finalize Contract w/ Regional Convener*		
2/ December	*Kickoff meeting with coalition states*		
3/ January	*Identify Advisory Council members and convene first meeting to guide program design* *Initiate stakeholder engagement, including LIDAC outreach and meetings with current program implementers, to inform program design, coordination, and RFP design*		
4	*Issue RFP for Regional Implementer*		
5	*Hold Advisory Council Meeting to guide program design and implementation, monitor progress, and adjust as needed*		
6	*Hold Advisory Council Meeting to Select Regional Implementer; Begin Contract Negotiations w/ Regional Implementer*		
7	*Continue Contracting Process with Regional Implementer; Obtain Internal Connecticut Agency Contract Approvals (DEEP, OPM, OAG, etc.)*		
8	*Finalize contract with Regional Implementer* *Finalize outputs, outcomes, and performance measures that will be tracked* *Advisory Council Meeting to guide program design and implementation, monitor progress, and adjust as needed*		
9/ July	Determine equipment eligibility criteria Develop Qualified Product Lists (QPLs) Draft distributor participation agreement and reporting requirements	Engage states and LIDACs to identify priorities and selection criteria for Innovation Hub projects	Identify regional resources for heat pump training, sizing, and quality installation
10	Complete first round of distributor enrollment Launch tool for distributor reporting and incentive processing	Engage states and LIDACs to identify priorities and selection criteria for Innovation Hub projects	Launch Resource Hub website
11	*Launch Accelerator* *Advisory Council Meeting to guide program design and implementation, monitor progress, and adjust as needed*		
	Midstream incentives available through participating distributors	Open solicitation for Quick Start Grants and State Initiatives	Initial resources posted on website
12	Engage manufacturers, training providers, LIDACs, and utility program implementers to identify workforce priorities and gaps	Select Quick Start Grant projects	Promotional Materials Available
13	*Issue RFP for Program Evaluator* *Advisory Council Meeting to guide program design and implementation, monitor progress, and adjust as needed*		
14	Formalize partnerships with workforce development partners and training providers	Finalize agreements and project plans with implementers	

Month	Tasks and Milestones		
	Market Hub	Innovation Hub	Resource Hub
15	Launch contractor trainings and other workforce development programming	Launch implementation State Initiatives and Quick Start Grants	Second round of resources posted on website
16	*Select Program Evaluator and put contract in place.* *Advisory Council Meeting to guide program design and implementation, monitor progress, and adjust as needed*		
Ongoing	*Convene Advisory Council Meeting at least quarterly, beginning in Month 3, to guide program design and implementation, monitor progress, and adjust program as needed*		
Ongoing	*Collect distributor sales data and process incentives monthly, beginning in Month 10; share updates with Advisory Council quarterly, beginning in Month 12 and continuing in months 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57, 60.*		
Ongoing	*Update Resource Hub with anonymized sales data on quarterly basis beginning in month 13 and lasting through the duration of the project (months 16, 19, 22, 25, 28, 31, 34, 37, 40, 43, 47, 50, 53, 56, 59, 60)*		
Ongoing	*Update midstream incentive requirements and QPLs at least annually beginning with the initial activities in Month 9 and continuing at a minimum in months 21, 33, 45, 57.*		
Ongoing	*Conduct annual Quick Start Grant solicitations beginning in Month 11 and concluding in Month 12. Repeat annual Quick Grant solicitation process in Months 23-24; 35-36; 47-48. Report on results of prior year Quick Grant grants in each successive year beginning in Month 24 and continuing in Months 36, 48, 60.*		
Ongoing	*Continuously improve program tools, resources, and trainings including an Advisory Council review of all programs at least annually. This review may include public comment opportunities to receive recommendations directly from stakeholders.*		
Ongoing	*Regularly add new reports, resources, and information to the Resource Hub with at least quarterly review by the Advisory Council.*		
Ongoing	*Publish annual reports to stakeholders on Accelerator results for Market Hub and Innovation Hub beginning in month 23 and continuing each 12 months thereafter until program expiration.*		
Ongoing	*Publish annual program evaluation by third-party Program Evaluator beginning in month 23 and continuing each 12 months thereafter until program expiration.*		
Ongoing	*Submit semiannual and final reports to EPA beginning in month 7 and continuing for months 13, 19, 25, 31, 37, 43, 49, 55, and 60 (final report).*		
To Be Determined	*Specific dates for Quality Assurance Project Plan (QAPP) development are not included in the timeline; however, as needed CT DEEP will prepare a QAPP in accordance with the current version of EPA's QAPP Standard. CT DEEP will submit the QAPP for EPA review prior to beginning environmental information operations.*		