



Decarbonization Pathways Pilot

Program Manual

Posted: July 15, 2022

Applications to the Massachusetts Clean Energy Center's ("MassCEC") Decarbonization Pathways Pilot ("Pilot") will be accepted from July 15, 2022 through July 31, 2022. Applicants recruited by All In Energy who live in Environmental Justice ("EJ") communities may apply outside of this application window.

If funding remains and/or if MassCEC is approved for additional funding, MassCEC will announce future deadlines for application submissions.



Total Funding Available: \$635,000

The Application Form is available online:

jotform.com/MassCECForms/decarbonizationpathways



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1 Introduction

1.1 Decarbonization Pathways Pilot Overview

The Decarbonization Pathways Pilot is a MassCEC pilot that seeks to develop and test a protocol for assessing small residential buildings (“Project Sites”), including single-family homes and multi-family buildings with four (4) units or fewer, in order to understand their current energy use and greenhouse gas emissions (“Decarbonization Assessment”), which will result in customized decarbonization recommendations (“Decarbonization Report”). Through the Pilot, MassCEC is looking to build upon the foundation of a Mass Save® Home Energy Assessment to generate a decarbonization pathway for homeowners to follow as they implement recommendations in a logical order that aligns with their needs and budget, as well as the specific conditions of their Project Site.

MassCEC will offer the homeowners selected for the Pilot (“Participants”) financial incentives to implement the decarbonization measures listed in Table 3 (“Decarbonization Measures”). In addition to the initial Decarbonization Assessment, Participants will also receive technical assistance at times of decision making (“Decision Time Support”) from the Pilot’s technical consultant (“Home Decarbonization Advisor”), including support in developing a detailed plan to take action to decarbonize the Project Site during the Pilot (“Decarbonization Plan”). Participants will share feedback on the Pilot and allow performance monitoring of their Project Site.

MassCEC has contracted with Abode Energy Management LLC (“Abode”) to be the Home Decarbonization Advisor for the Pilot. Abode will be working directly with Participants during the Decarbonization Assessment, Decarbonization Plan, Decision Time Support, and post-implementation data collection processes. Abode will maintain a website for Participants that will include resources and support, as well as a location for Participants to submit required documentation (“Participant Portal”). All In Energy, a non-profit focused on advancing an inclusive clean energy economy, will also be providing assistance for the Pilot by recruiting Participants from EJ communities.

The phases of the Pilot are described in Table 1 below. For each Participant, these four (4) phases will collectively be referred to as the Project. For more details about these phases and how to participate in the Pilot, see Section 5.

Phase Number	Phase Category	Duration	Description
Phase 1	Application and Awarding	1 month	Applicants will fill out the Application Form, and MassCEC will notify them if they have been selected to participate in the Pilot or not. Selected Participants will submit required documentation through the Participant Portal. MassCEC will send Participants an Award Letter. The Home Decarbonization Advisor will reach out to Participants to schedule a Decarbonization Assessment.



Phase 2	Planning	3 months	The Home Decarbonization Advisor will conduct an in-person Decarbonization Assessment at the Project Site and provide Participants with a Decarbonization Report. Over the following three (3) months, Participants and the Home Decarbonization Advisor will create a detailed Decarbonization Plan for their Project Sites. The Home Decarbonization Advisor will provide Decision Time Support as needed.
Phase 3	Implementation	1 year	Participants will implement the recommendations in the Decarbonization Plan and the Home Decarbonization Advisor will continue to provide Decision Time Support as needed. During this phase or within one (1) month after completion of this phase, Participants will submit incentive payments requests to the Participant Portal.
Phase 4	Post-Implementation	2 years	Participants will share feedback about the Pilot and utility bill data with the Home Decarbonization Advisor and allow them to monitor the energy usage of the Project Site.

1.2 Purpose of the Program Manual

The purpose of this Program Manual is to seek homeowners interested in the Pilot (“Applicants”). MassCEC is looking for Applicants that are committing to decarbonizing their Project Site, either as part of a large renovation project or as a standalone effort. Applicants do not need to have fully developed strategies to decarbonize their Project Site since the Pilot will offer technical support.

This Program Manual describes the eligibility requirements, incentive levels, application process, and participation process for the Pilot.

1.3 About MassCEC

MassCEC is a state economic development agency dedicated to accelerating the growth of the clean energy sector across the Commonwealth to spur job creation, deliver statewide environmental benefits and to secure long-term economic growth for the people of Massachusetts. MassCEC works to increase the adoption of clean energy while driving down costs and delivering financial, environmental, and economic development benefits to energy users and utility customers across the state.

MassCEC’s mission is to accelerate the clean energy and climate solution innovation that is critical to meeting the Commonwealth’s climate goals, advancing Massachusetts’ position as an international climate leader while growing the state’s clean energy economy. MassCEC is committed to creating a diverse, equitable, and inclusive organization where everyone is welcomed, supported, respected, and valued. We are committed to incorporating principles of diversity, equity, inclusion, and environmental



justice in all aspects of our work in order to promote the equitable distribution of the health and economic benefits of clean energy and support a diverse and inclusive clean energy industry. MassCEC strives to lead and innovate in equitable clean energy and climate solutions.

2 Eligibility Requirements

2.1 Minimum Project Site Eligibility Requirements

Project Sites must be one of the following residential building types in order to be eligible to participate in the Pilot:

- Single-family home
- Multi-family building with four (4) or fewer units*
 - Single owner or multiple owners
 - All units in the building must participate

The Pilot is **not** intended for the following:

- Condos
- Commercial buildings
- New construction or homes built within the last ten (10) years

Project Sites must also meet the following criteria:

- Project Sites must be located in a utility territory that contributes to the Massachusetts Renewable Energy Trust. This includes the Massachusetts service territory of National Grid, Eversource, Until, and municipal light plants that have elected to pay into the Renewable Energy Trust (please see masscec.com/municipal-lighting-plant-communities for more information).
- Project Sites must be an occupied residence year-round. For example, summer homes that are unoccupied in the winter are not eligible for the Pilot.

*Building owners of three-story triple decker buildings should apply to MassCEC's [Triple Decker Retrofit Pilot](#).

2.2 Minimum Project Eligibility Requirements

MassCEC only intends to make one award per Participant. All Projects must meet the following minimum requirements:

- Applicant must own the Project Site.
- Applicant must be committed to decarbonizing their Project Site over time. During the Pilot, Applicants should plan to, at a minimum:
 - Complete all Mass Save® weatherization recommendations.
 - Install cold-climate heat pumps (Applicants who are replacing their heating or cooling system and/or plan to install a whole home heat pump system are preferred).
- Project Sites can be owner or tenant occupied.



- If applicable, tenants of the Project Site must be aware of the Pilot and willing to cooperate with the Pilot.
- Applicant and, if applicable, tenants of the Project Site, must be willing to cooperate with data gathering.
 - During Phase 1 (Application and Awarding), Participants will be asked to provide energy bills, including tenant utility data if tenants pay their own utility bills, for two (2) years prior to the Pilot (if available).
 - During Phase 4 (Post-Implementation) of the Pilot, Participants will be asked to provide energy bills for two (2) years after Phase 3 (Implementation), including tenant utility data if tenants pay their own utility bills.
 - Participants, and tenants if applicable, must agree to allow energy monitoring to be conducted at the Project Site for up to two (2) years after Phase 3 (Implementation).
 - Participants must be willing to answer interview or survey questions to capture their experience with the Pilot and the Decarbonization Measures they implemented.
 - Participants must provide contact information for tenants (either tenants that are in-place during Phase 3 (Implementation) or tenants that move in during Phase 4 (Post-Implementation)) so they can be reached for an interview or survey to capture their experience with the Decarbonization Measures.
 - Participants must work with any tenants that are in place to coordinate and manage the impacts of the Decarbonization Assessment and the Decarbonization Plan, including allowing blower door testing pre- and post-construction and potentially after major project milestones.
- All Projects must be performed in compliance with all local, state, and federal laws and codes.

2.3 Income Based Incentives

In the interest of increasing access to Decarbonization Measures to all residents of Massachusetts, MassCEC will offer additional incentives for households with income below eighty percent (80%) and one-hundred twenty percent (120%) of the state median income (“SMI”). Eligibility thresholds are determined based on household size as detailed in Table 2 below. Eligibility is based on total household income (Tax Return Form 1040 line 9), as determined by the Participant and any household members’ federal income tax filings for the most recent year available.



Table 2. State Median Income Levels by Household Size			
Household Size	<80% of SMI	80% - 120% of SMI	>120% of SMI
1	<\$54,601	\$54,601 - \$81,902	>\$81,902
2	<\$71,402	\$71,402 - \$107,103	>\$107,103
3	<\$88,201	\$88,201 - \$132,302	>\$132,302
4	<\$105,002	\$105,002 - \$157,503	>\$157,503
5	<\$121,802	\$121,802 - \$182,703	>\$182,703
6	<\$138,602	\$138,602 - \$207,903	>\$207,903
7	<\$141,752	\$141,752 - \$212,628	>\$212,628
8	<\$144,902	\$144,902 - \$217,353	>\$217,353
9	<\$148,052	\$148,052 - \$222,078	>\$222,078
10	<\$151,202	\$151,202 - \$226,803	>\$226,803

To receive the income-based incentive, Participants must follow the process described in Section 5 to verify income.

For rental properties, the Participant is the landlord. Each Participant household is only eligible to receive a higher income-based incentive for one (1) residence/unit.

3 Project Incentives

3.1 Award Details

MassCEC has \$635,000 available for awards under the Pilot. As described in Section 4.3 of this Pilot, applications will be competitively evaluated. MassCEC will select Participants based on the criteria in Section 4.3. MassCEC anticipates making around thirty (30) awards as part of the Pilot, with around ten (10) of those awards going to Participants recruited by All In Energy in EJ communities.

The incentives awarded to Participants through the Pilot may be combined with any other local, state, or federal incentives, and Participants are encouraged to do so where possible. MassCEC will not provide funding that would, in MassCEC's sole determination, exceed total Project costs. Total Project costs shall include all costs of all Decarbonization Measures installed during Phase 3 (Implementation), less all other available incentives, including any state or federal rebates, subsidies, and tax incentives, discounted to present value where necessary. MassCEC will evaluate these situations on a case-by-case basis and reserves the right to reduce any award projected to exceed total Project costs by an amount sufficient to prevent the excess.

3.2 Incentive Levels

Incentive levels for Participants are outlined in Table 3 below. Incentive levels are based on the household SMI levels described in Section 2.3 of this RFP. They are subject to change at the sole discretion of MassCEC. Participants should check the Pilot webpage to confirm that they are reviewing the most recent version of the Program Manual.



As stated in Section 2.2, all Participants are required to implement all recommended Mass Save[®] weatherization measures and install heat pumps in order to be eligible for the incentives outlined in Table 3 below. Participants may use the incentives for any Decarbonization Measures outlined in the table below, subject to the caps in the table. All Decarbonization Measures should be reviewed and approved by the Home Decarbonization Advisor as part of the Participant's Decarbonization Plan.

Selected small multi-family Participants will be eligible for the incentives described below per unit. For example, a two-family home owned by a Participant with a household income above 120% of the state median income would be eligible for a maximum incentive of up to \$20,000 for both units.

Table 3. Incentive Levels per Unit			
State Median Income Level	<80% of SMI	80-120% of SMI	>120% of SMI
Maximum Total Pilot Incentive	Up to \$30,000	Up to \$20,000	Up to \$10,000
Category Sub-Limits (Note: The sum of the category sub-limits is greater than the maximum total pilot incentive above to allow flexibility, but in no case will the total incentive exceed the values above.)			
Weatherization, Envelope Improvement, and Ventilation	Up to \$12,000	Up to \$8,000	Up to \$4,000
Heat Pumps	Up to \$18,000	Up to \$12,000	Up to \$6,000
Hot Water Solution	Up to \$6,000	Up to \$4,000	Up to \$2,000
Electrical Upgrades and Barrier Mitigation	No Cap – must be paired with the implementation of another Decarbonization Measure(s)		
Electric appliances: Stove/Range, Dryer, Outdoor Equipment, and Vehicle Charger	Up to \$1,500 each		
Electric Vehicle (including electric bicycles) and Solar Photovoltaic (including Battery Storage)	Up to \$15,000 (Participant must implement Mass Save® weatherization requirements, a heat pump, and hot water solution in order to receive incentive money in this category)	Not Eligible	

4 How to Apply

4.1 Application Instructions

Applications should be completed online at jotform.com/MassCECForms/decarbonizationpathways. This online application includes questions about the Applicant and Project Site. It can be saved so that the application can be completed over multiple sessions. A PDF version of the Application Form is available for reference on the [Pilot webpage](#).



If desired, applicants may submit a scanned version of the completed PDF via email to buildings@masscec.com instead of completing the online form, although MassCEC prefers the completed online form. Applications will be accepted from July 15, 2022 through July 31, 2022. Applicants recruited by All In Energy who live in EJ communities may apply outside of this application window.

If funding remains and/or if MassCEC is approved for additional funding, MassCEC will announce future deadlines for application submissions.

4.2 Applicants' Questions and Answers

Questions concerning the Pilot can be submitted in writing by email to buildings@masscec.com. All inquiries should reference the "Decarbonization Pathways Pilot."

MassCEC will post questions and answers from Applicant's emails in the "FAQ" section of the Pilot webpage (masscec.com/program/decarbonization-pathways-pilot). MassCEC will periodically update this list. Applicants are encouraged to visit the website for updates prior to submitting a question. Only answers posted on the website should be treated as MassCEC's official response to any question.

4.3 Selection Criteria

Applications will be evaluated using the criteria in Table 4 below.

Table 4. Selection Criteria	
Criteria	Sub-Criteria
Minimum Criteria	MassCEC reserves the right to only consider applications that, in its sole judgement, meet the minimum threshold criteria, including: <ul style="list-style-type: none"> • The Application Form is complete and responsive to the Program Manual and application requirements. • The clarity, specificity, and consistency of the application are sufficient to be deemed credible. • The proposed Project Site and Project meets all requirements stated in Section 2.1 and Section 2.2.
Diversity of Applicants	MassCEC is looking to award a diverse group of Projects, including: <ol style="list-style-type: none"> 1. Geographical diversity 2. Income diversity 3. Existing heating fuel type (e.g., oil, natural gas) 4. Existing heating system distribution type (e.g., radiators, ductwork) 5. Home type (i.e., size, floorplan, basement type)
Selection Priorities	MassCEC will prioritize the following when evaluating applications: <ol style="list-style-type: none"> 1. Project Sites located in EJ communities 2. Applicants who intend to install whole home heat pump systems during the Pilot 3. Applicants who intend to fully decarbonize their Project Site during the Pilot



5 How to Participate

5.1 Participant Steps

In order to participate in the Pilot, Participants must agree to the steps below. MassCEC, at its sole discretion, may consider extending the timelines described below on a case-by-case basis.

Phase 1 (Application and Awarding)

1. Applicants will fill out the Application Form between July 15, 2022 and July 31, 2022.
2. MassCEC review applications will notify Applicants by mid-August 2022 if they have been selected to participate in the Pilot or not.
3. Selected Participants will upload the documents listed below to the Participant Portal.
 - Signed Participant Agreement Form
 - Signed Utility Release Form
 - Electric utility data (usage and cost)
 - For two (2) years prior to the Pilot (if available)
 - If applicable, include tenant utility data if tenants pay their own utility bills
 - Gas or delivered fuel utility data (usage and cost)
 - For two (2) years prior to the Pilot (if available)
 - If applicable, include tenant utility data if tenants pay their own utility bills
4. If applicable, Participants will complete the income verification process through the Participant Portal. (Note: MassCEC may also elect to have Participants complete the income verification process at a later point in the Pilot if the income verification process is not established by the start of the Pilot. In this case, Participants would initially be awarded the incentive level for households above 120% of state median income, and the award would be modified after successful completion of the income verification process.)
5. Once these documents are received, MassCEC will send an Award Letter to Participants.
6. Participants will work with the Home Decarbonization Advisor to get oriented and schedule their Decarbonization Assessment.

Phase 2 (Planning)

1. The Home Decarbonization Advisor will conduct the in-person Decarbonization Assessment.
 - This will take around four (4) hours during which the Participant is required to be present.
 - The Home Decarbonization Advisor will provide a Decarbonization Report.
 - This will include an assessment of the Project Site and customized high-level recommendations for decarbonization based on input from the Participant on their priorities and budget.
2. Over the three (3) months following the Decarbonization Assessment, Participants and the Home Decarbonization Advisor will work together to create a detailed Decarbonization Plan to be submitted to MassCEC.



- Participants will reach out to contractors, installers, and vendors to provide services to advance a decarbonization measure (each a “Decarbonization Measure Vendor”) for estimates and begin to select Decarbonization Measure Vendors.
- As needed during Phase 2 (Planning), Participants will contact the Home Decarbonization Advisor for Decision Time Support Services.
 - Decision Time Support may be offered via email, phone, or video calls, based on the preferences of the Participant.
 - The Home Decarbonization Advisor can offer Decision Time Support including how to find a Decarbonization Measure Vendor, what to discuss with Decarbonization Measure Vendors, and reviewing estimates.
 - The Home Decarbonization Advisor will offer a report comparing heat pump quotes (“Heat Pump Quote Comparison Report”).
 - The Home Decarbonization Advisor will offer support in formatting the information for the Decarbonization Plan to be submitted to MassCEC within three (3) months of the Decarbonization Assessment.
- **NOTE:** Participants shall be solely responsible for procuring Decarbonization Measure Vendors. MassCEC will not participate in this process, and shall not have any responsibility for managing, overseeing, or otherwise working with the Decarbonization Measure Vendors, and will not provide any representations, warranties, indemnification, or underwriting for the performance of the Decarbonization Measure Vendors. It will be the responsibility of Participants to conduct their own due diligence to vet Decarbonization Measure Vendors prior to entering into contracts with such Decarbonization Measure Vendors.

Phase 3 (Implementation)

1. Phase 3 (Implementation) should be completed within one (1) year of completing the Phase 2 (Planning) and submitting a Decarbonization Plan to MassCEC.
2. Participants will sign agreements with Decarbonization Measure Vendors, if not already completed in Phase 2 (Planning). **NOTE:** please see information in Phase 2 above re: responsibilities of Participants regarding procurement of Decarbonization Measure Vendors.
 - If preferred, Participants can request incentive payments through the Participant Portal to receive 50% of the incentive for the relevant Decarbonization Measure at time of contracting, as detailed in Section 5.2.
3. Participants will purchase and install Decarbonization Measures.
 - Participants can request the remaining incentive payment for the Decarbonization Measure through Participant Portal at the time of completion, as detailed in Section 5.2
4. As needed, Participants may continue to contact the Home Decarbonization Advisor for Decision Time Support.
5. Participants will coordinate with the Home Decarbonization Advisor to set up a time for an electrical metering device (such as the Emporia Vue) to be installed on the Project Site.



6. Once all the Decarbonization Measures are installed, Participants should coordinate with the Home Decarbonization Advisor to set up a time for a final Project Site visit, which may include:
 - Collection of feedback about the Pilot experience
 - Education on how to optimize operations of the new Decarbonization Measures
 - An inspection of the installation quality of any heat pumps installed during the Pilot
 - A final blower door test (if not conducted previously)
 - Installation of the electrical metering device (such as the Emporia Vue), if not previously installed.
7. Participants will upload incentive payment requests to the Participant Portal to receive Pilot incentives if they haven't already. The deadline to submit these forms is one month after the completion of Phase 3 (Implementation).

Phase 4 (Post-Implementation)

1. Participants will provide the Home Decarbonization Advisor automated access to their energy utility bill data or upload energy utility bills to the Participants Portal every six (6) months upon request for two (2) years following Phase 3 (Implementation).
2. Participants will share feedback with the Home Decarbonization Advisor about the Pilot and the Decarbonization Measures they have implemented.
 - This will involve interviews and surveys, which will be no more frequent than every six (6) months for up to two (2) years following Phase 3 (Implementation).
3. Participants will have their electrical usage metered for up to two (2) years following Phase 3 (Implementation).

5.2 Incentive Payments

In an effort to make funding available to Participants as needed, Participants may choose to receive their Incentive Payment in one lump sum at the completion of all Decarbonization Measures installed during Phase 3 (Implementation) or else in multiple payments based on the contracting and/or completion of individual Decarbonization Measures. All requests for incentive payments should be submitted through the Participant Portal. Table 5 details the requirements for each type of incentive payment request.

Table 5. Payment Schedule Options		
Milestone for Incentive Payment Request	Required Supporting Documentation	Incentive Amount
Contracting of Decarbonization Measures	<ul style="list-style-type: none"> Signed contract or purchase receipt for Decarbonization Measure Provide all requested information about the contracted Decarbonization Measure to the Home Decarbonization Advisor (e.g., make, model, installer, cost) 	50% of the total eligible incentive for each Decarbonization Measure based on Section 3.2.
Completion of Decarbonization Measure/s	<ul style="list-style-type: none"> Paid invoice or purchase receipt for Decarbonization Measure/s Photograph of installed Decarbonization Measure/s Provide all requested information about the completed Decarbonization Measure/s to the Home Decarbonization Advisor (e.g., make, model, installer, cost) 	50% of the total incentive for each Decarbonization Measure/s based on Section 3.2 if a separate payment request was submitted and approved at the contracting of the Decarbonization Measure/s; or 100% of the total incentive for each Decarbonization Measure/s based on Section 3.2 if a separate payment request was NOT submitted and approved at the contracting of the Decarbonization Measure/s;

Participants may elect to request incentive payments at contracting for some Decarbonization Measures and not others. The payment schedule will not affect the incentive total the Participant receives.

Payment of an incentive installment is contingent upon submission of all the required supporting documentation detailed in Table 5 above to the Participant Portal, subject to the review and approval of MassCEC.

All incentive payment requests must be submitted during or within one (1) month after completion of Phase 3 (Implementation) at the latest.

5.3 Participant Documents

Below are all of the relevant documents and forms for Participants.

- Application Form
- Program Manual (this document)
- Award Letter



- Participant Agreement
- Utility Release Form

6 General Conditions

6.1 Notice of Public Disclosure

As a public entity, MassCEC is subject to Massachusetts' Public Records Law, codified at Chapter 66 of the Massachusetts General Laws. Thus, any documentary material, data, or other information received by MassCEC from an applicant is public record subject to disclosure. Applicants shall not send MassCEC any confidential or sensitive information in response to this Pilot or Program Manual.

6.2 C-THRU

System Owner agrees and acknowledges that MassCEC shall have the right to disclose the name of any grant recipient and/or Payee, the amount of the payment under the Pilot and any other information it may deem reasonably necessary on C-THRU, the Commonwealth of Massachusetts' online database of state spending, or other applicable state spending website.

6.3 Disclaimer and Waiver Authority

This solicitation does not commit MassCEC to award any funds, pay any costs incurred in preparing an application, or procure or contract for services or supplies. MassCEC reserves the right to accept or reject any or all applications received, waive minor irregularities in submittal requirements, modify the anticipated timeline, request modification of the application, negotiate with all qualified Applicants, cancel or modify the Pilot or this Program Manual in part or in their entirety, or change the application guidelines, when it is in MassCEC's best interests.

6.4 Contract Requirements

Upon MassCEC's authorization to proceed with the proposal, MassCEC and the awarded applicant(s) will execute a contract, substantially in the form of the Sample Agreement attached hereto as Exhibit 1, which will set forth the respective roles and responsibilities of the parties.

6.5 Changes/Amendments to the Program Manual

The requirements listed herein are subject to change without notice to potential Applicant Parties. This Program Manual has been distributed electronically using MassCEC's website. It is the responsibility of Applicant parties to check MassCEC's website for any addenda or modifications to the Program Manual to which they intend to respond. MassCEC, the Commonwealth of Massachusetts, and its subdivisions accept no liability and will provide no accommodation to an Applicant who submits an application based on an out-of-date Program Manual and/or related document.