



NEW BUILDINGS & MAJOR RENOVATIONS

2024 Memorandum of Understanding for Path 3: High Performance Buildings

The High-Performance Buildings Path is provided by the Sponsors of Mass Save¹ as a new construction/major renovation offering for:

- Whole building projects of any size where customers do not wish to set and pursue an EUI² target (as is necessary for Path 1 or 2 participation).
- Projects that are not whole buildings (e.g., tenant fit outs, open air parking garages).
- Projects that have heavy process loads (e.g., cannabis, industrial).
- Projects where customers have interest in discrete measures only.

The purpose of this Path is to promote building decarbonization and to reduce building electrical and thermal energy demand and consumption by incorporating cost-effective design alternatives early in the project timeline, ideally before the end of design development, when changes are least costly.

Path Eligibility:

1. Electrification Requirements

Projects participating in Path 3 must be fully electric for space heating, ventilation, air heating, domestic hot water equipment and kitchen equipment.

New buildings and additions may not have a gas meter or include any new fossil fuel equipment for any purpose unless meeting the following exceptions:

(A) Highly ventilated buildings/fit outs (as defined in Stretch Code) or hospitals (defined to include all facilities licensed by the Massachusetts Department of Public Health as a hospital under G.L. c. 111, §§ 51 through 56.) where natural gas or other fossil fuels may only be used for limited space and ventilation air heating,³ or

(B) In labs or vocational technical schools where natural gas or propane may only be used for scientific research or instructional purposes, or

(C) Diesel or propane emergency generation, or

(D) In emergency facilities, natural gas may be used for emergency generation in lieu of diesel or propane.

Major renovations will be supported by PAs even if they include new natural gas equipment or are connected to campus loops that are served by natural gas fed central plant equipment, however the new gas equipment will not be supported.

Tenant fit outs are allowed to participate if the base building has a gas connection or meter, but the tenant is not allowed to have a gas connection or meter of its own unless it's there to meet the exceptions above.

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1. The Sponsors of Mass Save are National Grid, Eversource, Unitil, Cape Light Compact, Liberty Utilities and Berkshire Gas. To determine your Mass Save Sponsors, please visit <https://www.masssave.com/en/saving/business-rebates>.
2. Site EUI is a measure of a building's gross annual site energy consumption (including all fuels) relative to its gross square footage.
3. There is no minimum electrification requirement for space heating and ventilation air heating for the highly ventilated and hospital/medical project exceptions in Path 3. However, core and shell projects that are participating in Path 3 because they are using district steam should follow the minimum electrification requirements as required by MA Stretch Code for highly ventilated buildings. In Path 3, the exception is intended to apply to fit outs.

“Emergency facilities” are defined as hospitals, police and fire stations, facilities identified as supporting Critical Transportation Needs or Emergency Shelters in a state or local Comprehensive Emergency Management Plan, acute/post-acute medical facilities with life sustaining equipment, water/sewer pump stations, and emergency communication centers that serve a life safety function (for example, 911 Centers).

“Emergency generation” is defined as equipment that is available to provide power to all or portions of a building in the event of a power outage.

1. Projects must be new buildings, building additions, or complete gut renovations of part or all of existing buildings. Qualifying gut renovations are such that occupancy is not possible during construction and where the project scope includes (A) complete removal/replacement/redesign of the entire HVAC system including distribution AND (B) complete redesign/replacement of all lighting (there might be very limited spaces where lighting could remain), AND (C) scope related to one or more of the following: DHW heating equipment, building envelope or process equipment. at least 3 of the following 5 systems: (1) HVAC, (2) DHW, (3) lighting, (4) envelope, and (5) process equipment.
2. New buildings or additions connected to campus loops that are served by natural gas fed central plant equipment may participate in this path only if they are connecting to those loops to meet the exception criteria above. Projects connected to district steam loops (MATEP or Vicinity) may participate in Path 3 for qualifying measures.
3. Major renovation projects including new natural gas equipment or connecting to campus loops that are served by natural gas fed central plant equipment may participate in this path, however new natural gas equipment itself will NOT be supported.
4. Participants must be a customer of one of the Mass Save Sponsors.
5. Multifamily projects are not eligible for this path.



Key Customer Commitments:

1. Work collaboratively with the Mass Save Sponsors, and if applicable, the Mass Save Technical Assistance (TA) vendor to maximize energy savings and carbon reduction.
2. If receiving technical assistance from a Mass Save TA vendor, customers and their design teams should participate in energy conservation and building decarbonization discussions with the Mass Save Sponsor team throughout the design period.
3. Cover 50% of the cost of Mass Save technical assistance fees that exceed \$7,000 (for engagement before 100% Design Development (DD)) or cover 50% of the cost of technical assistance fees that exceed \$4,000 (for engagement after DD but before 100% Construction Documents (CDs)). Not all projects require technical assistance. Work with your Mass Save Sponsors to determine the best fit. Mass Save Sponsors are unable to cover any technical assistance services associated with new gas equipment.
4. If a project goes on hold for longer than six months, all outstanding technical assistance fees will be invoiced by TA vendor for time spent to date.

Key Mass Save Sponsor Commitments:

1. Provide energy analysis to determine projected savings and available incentives.
2. Assist customers in making informed decisions about including energy conservation and carbon reduction strategies in the project.
3. Pay customers an incentive for each energy conservation measure (ECM) that is included in the project (see summary of incentives in step 3 below).
4. Provide and cost share the services of a technical assistance vendor, as needed. For projects greater than 10,000 sf in size, Mass Save Sponsors will:
 - Cover TA fees up to \$7,000 when customers engage with Mass Save Sponsors before the end of Design Development (DD). Customers must cover 50% of the portion of TA fees that exceed \$7,000.
 - Cover TA fees up to \$4,000 when customers engage with Mass Save Sponsors after the end of DD but before the end of Construction Documents (CDs). Customers must cover 50% of the portion of TA fees that exceed \$4,000.
 - For technical assistance that Mass Save Sponsors may offer after design completion, Mass Save Sponsors would cover 50% of fees and customers would cover the remaining 50% of fees.

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EVERSOURCE



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4. Note that projects located in the service territory of a municipal electric utility or projects that are utilizing district steam will require a different cost share arrangement. Consult your Mass Save Sponsor.



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This document outlines the roles and responsibilities of each party to set transparent expectations for all parties participating in the Program. Under no circumstances does this Memorandum require customers or design teams to incorporate any particular EUI reduction strategy, nor does this document bind customers or design teams to a particular EUI target. All assistance offered by Mass Save Sponsors through this Program is offered in an advisory capacity only and is subject to change.

THE MASS SAVE SPONSORS UNDERSTAND THAT THE FOLLOWING CUSTOMER:					
The Customer (name):					
will undertake the following (check applicable):					
<input type="checkbox"/>	new construction	<input type="checkbox"/>	major renovation	<input type="checkbox"/>	addition
Project Schedule (Dates)	100% SD	100% DDs	100% CDs	Expected Construction Completion	
Premises (address):					
Premises SF (excluding un-conditioned space):		Premises EUI Target (kBTU/SF):			
Main Project Contact:					
Email:			Phone:		
This project's design team professionals include:					
			Email:	Phone:	
• Architect:					
• Electrical Engineer:					
• Mechanical Engineer:					
• Other Contact:					
Participating Mass Save Sponsors:					
• Electric Sponsor:					
• Gas Sponsor:					

IMPORTANT:

Customers participating in this pathway may not also participate in the Mass Save midstream programs where incentives for HVAC, domestic hot water, food service and lighting equipment are offered directly to distributors. To ensure participation in only one Mass Save program pathway, designers must include language in project documents informing contractors that this project is participating in a Mass Save downstream program pathway, and that they may not pursue or accept any HVAC, domestic hot water, food service or lighting midstream incentives for this project.



Detailed Process:

Step 1 – Coordination with Mass Save Sponsors

Customers should inform Mass Save Sponsors of their new construction or major renovation project to see if the High-Performance Buildings Path is a good fit. It is highly recommended that customers reach out in the early design stages. Following an initial conversation, Mass Save Sponsors will determine if a technical assistance (TA) vendor should be engaged to provide design support and technical assistance to the project team.

Step 2 – Technical Assistance

For whole building and certain other projects that engage before 100% DDs:

In advance of any technical discussion, the customer shall provide the Mass Save Sponsors with any existing project drawings and design narratives.

First, the Mass Save Sponsors and the TA vendor will lead an Energy Charrette with the project's design team; the customer, the architect, the MEP (Mechanical, Electrical and Plumbing) Engineers, the lighting designer, the commissioning agent, and the general contractor (if available). This brainstorming session is intended to discuss, analyze, and compare potential building ECMs. Ideally, these ECMs will be incorporated into the project's design.

Second, the TA vendor will conduct a mid-design review based on the design development set. The purpose of the review is to assess progress on incorporating the strategies discussed during the charrette and to provide feedback on additional design changes that will result in further energy savings. The TA vendor will issue a report to the Mass Save Sponsors and the customer based on this mid-design review.

For projects engaged after the end of DD, but before 100% CDs (or where customers are only interested in discrete measures):

Mass Save Sponsors will determine if engaging a TA vendor will be appropriate given the project scope. If a vendor is engaged, the customer shall provide the Mass Save Sponsors with any existing project drawings and design narratives. The TA vendor will provide feedback on any ECMs that could be incorporated at this point in design. If a vendor is not engaged, the Mass Save Sponsors will handle the technical assistance internally.

Step 3 – Energy Analysis and Mass Save Incentive Pre-Approval

Where a Mass Save vendor is engaged, the TA vendor will prepare the final savings calculations and report for the Mass Save Sponsors to review based on the 100% Construction Documents (CD) set. Upon Mass Save Sponsor approval, the final report is issued to customers. If there is no TA vendor, the savings calculations will be determined by the Mass Save internal teams.

Customers are required to sign:

1. Custom application, formally requesting Mass Save incentives for approved measures.
2. The Mass Save incentive offer letter from each Mass Save Sponsor, and
3. The Mass Save Minimum Requirements Document (MRD), which lays out the energy-saving equipment and system details.



Incentive levels for each measure are determined based on predicted annual energy savings, except for heat pumps where incentives are offered based on tonnages. Note that several measures supported in this Program are “custom” measures where energy savings are calculated on a project-by-project basis. All measure incentives are capped at 100% of their incremental cost. Note that all measures must be cost effective for the customer to receive the maximum incentives and are subject to each Mass Save Sponsor’s program budget. See the following table for incentive rates:

Summary of Customer Incentives			
Incentive	Energy Conservation Measure (CM)	Rate	
Custom Incentive	Building Envelope	\$0.35/ kWh	\$2.00/ therm
	Lighting controls		
	Unitary HVAC (RTU, AC,)		
	High Efficiency Chillers		
	Energy Recovery		
	Demand Control Ventilation		
	Variable Flow Kitchen Hood		
	DHW Heaters		
	Low Flow DHW Fixtures		
Prescriptive Incentive	Variable Frequency Drives	Current program rate	
Heat Pumps*	Air Source Heat Pumps	\$800/ton	
	Variable Refrigerant Flow (VRF)	\$1200/ton	
	Ground Source Heat Pump	\$4500/ton	

* Equipment must be used as a primary heating source to qualify. The heat pump adder is only available for equipment that transfers heat from a source outside of the building (i.e. outside air or a ground loop) for space heating purposes. In order to maximize the benefits of electrification designs, supplemental electric resistance must be limited. Projects not achieving an average annual heating system performance greater than a COP of 2.0 will be considered on a case- by-case basis. The incentive calculation is based upon the nominal heating capacity (btu/h) at AHRI or ISO conditions divided by 12,000.

- Air Source Heat Pumps (ASHP): heating capacity at AHRI standard rating conditions
Air-to-Air Systems: AHRI 340/360 - OA 47°F db
Air-to-Water Systems: AHRI 550/590 - OA 17°F db, LWT 120°F
- Variable Refrigerant Flow – Air Source (VRF): heating capacity at AHRI 1230 standard rating conditions
Air-to-Refrigerant Systems: OA 47°F db
- Ground Source Heat Pumps: heating capacity at ISO 13256 or AHRI 1230 (if VRF) standard rating conditions
Ground Loop Heat Pump (GLHP): 32°F liquid entering heat exchanger
Ground Water Heat Pump (GWHP): 50°F liquid entering heat exchanger
Incentives for ground source heat pump projects will be based upon the lesser value of the peak heating load capacity of the heat pump systems or the peak heating load capacity of the ground loop/well.

Step 4 – Construction Completion, Construction Phase Incentive Payment

Customers must commit to constructing the building as it was designed and as documented in the application and MRDs (if used). Major deviations from the design could jeopardize the customer’s opportunity to obtain full incentives.

A few weeks before substantial completion, customers must provide a set of approved submittals, invoices and photographs corresponding with each approved ECM. All projects participating in the Program are subject to inspection by each participating Mass Save Sponsor.

Once Mass Save Sponsors complete their review and affirm the project is built substantially in accordance with the design, they will make their incentive payments to the customer.

Select projects are subject to 20% hold-back pending receipt of trend data or other information stipulated in the MRDs (if used).



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By signing below, customers represent that they (1) will be the lawful utility customers of the Premises and (2) have read, understand, accept, and agree to the terms and conditions for participation in the Program outlined above. The project's lead architect is required to also review and sign the MOU acknowledging that he/she has read and understands the terms and conditions for participation.

Customer Signature:		Customer Printed Name:
Date:	Phone:	Email:
Architect Signature:		Architect Printed Name and Company Affiliation:
Date:	Phone:	Email:

THIS DOCUMENT MUST BE SIGNED BEFORE ENGINEERING SERVICES APPLICATION CAN BE REVIEWED

Disclaimers

Except for payment of incentives as set forth hereunder, the Mass Save Sponsors do not make any representations, warranties, promises or guarantees in connection with the Program, energy conservation measures (ECMs), EUI reduction strategies, energy savings, benefits, adequacy or safety of ECMs or other items, or any work, services or other item performed in connection with the Program including, without limitation, the warranty of merchantability or fitness for a particular purpose. Also, other than the (i) energy cost savings realized by Customer, (ii) energy or ancillary service market revenue achieved through market sensitive dispatch, (iii) alternative energy credits, and (iv) renewable energy credits (altogether, the "Customer Credits"), the Mass Save Sponsors have unilateral rights to apply for any credits or payments resulting from the Program or ECMs (the "Sponsor Credits"). Such Sponsor Credits include but are not limited to credits and payments for: (a) ISO-NE capacity, (b) forward capacity credits, (c) other electric or natural gas capacity and avoided cost payments or credits, and (d) demand response program payments. Customer waives, and agrees not to seek, any right to any Sponsor Credit. The Mass Save Sponsors are not responsible for the payment of any taxes assessed by federal, state or local governments on either benefits conferred on the owner by the Sponsor(s) or design incentives paid to the design team.