



# NEW CONSTRUCTION & MAJOR RENOVATIONS

## Memorandum of Understanding for Path 3: Whole Building Streamlined Path

The Whole Building Streamlined Path (“Program”) is provided by the Sponsors of Mass Save as a comprehensive new construction offering for buildings between 20,000 and 100,000 square feet (sf) when the Sponsors of Mass Save are engaged early in the project’s design process. The purpose of the Program is to reduce building electrical and thermal energy demand and consumption by implementing cost-effective design alternatives early, before the end of design development, when changes are still feasible.

### Project Eligibility

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1. Customer should engage Mass Save Sponsors before the end of design development.
2. Projects must be new buildings, building additions, or complete renovations of existing buildings. Qualifying major renovations are such that occupancy is not possible during construction and where the project scope includes at least 3 of the following systems: (1) HVAC, (2) DHW, (3) lighting, (4) envelope, and (5) process equipment.
3. Participants must be a customer of one of the Mass Save Sponsors.
4. Lab buildings, grocery stores, industrial projects (including data centers) and multifamily projects are not eligible for this Program. The Sponsors of Mass Save offer a different program for new and renovated multifamily buildings. Lab buildings, grocery stores and industrial projects may be able to participate in the Whole Building Energy Use Intensity (EUI) Reduction Path.

### Key Customer Commitments:

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1. Engage Mass Save Sponsor(s) between pre-schematic design and the completion of the projects design development phase
2. Work collaboratively with each other and with the Mass Save Sponsors’ technical assistance (TA) vendor to maximize energy savings
3. Participate in an energy efficiency charrette before the end of design development
4. Provide design drawings through 90% Construction Documents

### Key Mass Save Sponsor Commitments:

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1. Assign a pre-qualified technical assistance TA vendor to lead an Energy Charrette and provide technical assistance throughout design (TA vendor participation in charrette and all design assistance is funded 100% by the Sponsors of Mass Save)
2. Provide energy analysis to determine savings and incentives
3. Assist customer in making informed decisions about including energy conservation strategies in the project
4. Pay customers an incentive for each energy conservation measure (ECM) that is included in the project (see summary of incentives in step 5 below)
5. Offer an optional Verification Incentive to help customers and their teams achieve the predicted EUI once the building is operating (see Table 1 that follows)

WE ARE MASS SAVE®:





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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 energy conservation measure or group of measures into a project. Building designs proceed at the direction of customers and their design teams. All assistance offered by the Sponsors of Mass Save through this Program is offered in an advisory capacity only.

The Mass Save Sponsors understand that the following customer:		
<b>The Customer</b>		
will undertake the following (check one)		
<input type="checkbox"/>	new construction	<input type="checkbox"/>
<input type="checkbox"/>	major renovation	<input type="checkbox"/>
<input type="checkbox"/>	addition	
<b>Premises Address</b>		
This project is being designed by the following design professionals (collectively, the "Design Team"):		
Architect		
Electrical Engineer		
Mechanical Engineer		
<b>Participating Mass Save Sponsors</b>		
Electric Sponsor		
Gas Sponsor		

**IMPORTANT:**

Customers participating in this pathway may not also participate in the Mass Save upstream programs where incentives for HVAC, domestic hot water 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 or lighting upstream incentives for this project. Customers can and should participate in upstream offerings for food service equipment only.



## Detailed Process:

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### Step 1 – Coordination with Mass Save Sponsor(s)

During schematic design or in pre schematic design, inform your Mass Save Sponsor(s) of your new construction project to see if the Whole Building Streamlined Path is a good fit. The Whole Building Streamlined Path is only available when the Mass Save Sponsor(s) are engaged early in design and an Energy Charrette (see Step 2) can be scheduled during schematic design or design development. The earlier you contact your Mass Save Sponsor(s), the better the opportunity for energy savings and incentives. Following your initial conversation with your Mass Save Sponsor(s), they will identify a TA vendor who will provide design support and technical assistance to the project team at no cost to the customer, starting with an Energy Charrette.

All customers and architects must sign this Memorandum of Understanding (MOU) and agree to the following steps.

### Step 2 – Energy Charrette

During the schematic design or design development phase of the project, the TA vendor provided by your Mass Save Sponsor(s) 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 (if there is one), the commissioning agent (if there is one) and the general contractor (if selected) together with the Mass Save Sponsor(s) should participate in this brainstorming session intended to identify, discuss/analyze and compare potential building ECMs. The charrette, which can be part of a larger green building/LEED charrette, or a separate meeting, should be long enough to enable a full discussion of each energy system in the building and a wide range of energy conservation measures for each of these systems (2 hours is usually sufficient).

In advance of the Energy Charrette, the customer shall provide the Mass Save Sponsor(s) with any existing project drawings and design narratives.

The outcome of the Energy Charrette shall be a report that identifies the ECMs that the team agreed to pursue further, and ideally include in the building design.

### Step 3 – Interim Report and Consultation

After the charrette, the TA vendor will be available as needed to answer questions and otherwise consult with the design team on the best way to include the efficiency measures discussed in the charrette into the design.

The TA vendor will conduct a mid-design review based on the 50% or 100% design development set, depending on the project, to assess progress on incorporating the strategies agreed upon during the charrette into the design. At this time, the TV vendor will provide feedback on additional changes to the design that will result in further energy savings. The TA vendor will issue a report to the Mass Save Sponsor(s) and the customer based on this mid-design review.

### Step 4 – Energy Analysis

The TA vendor will review the design drawings to assess the energy conservation measures (ECM) identified in the project and recommend additional ECMs for consideration. The TA vendor will calculate the potential energy savings and incentive amounts of the ECMs using incremental construction cost and comparing the energy savings against the Mass Save program baseline.

### Step 5 – Mass Save Incentive Pre-Approval

The TA vendor will prepare the draft final savings calculations and report for the Mass Save Sponsor(s) to review based on the 90% Construction Documents (CD) set. The TA vendor will prepare these draft final documents for Sponsor review within 4 weeks of receipt of the 90% Construction documents set.

The Mass Save Sponsor(s) will review the draft final savings calculations and report and may issue comments to the TA vendor for incorporation, and will then request the final calculations and report from the TA vendor. A completed Custom application including the Minimum Requirements Documents (MRDs) which describe in detail the ECMs that are contributing to the project's energy savings will accompany the final calculations and report. The customer must review and sign both the Custom Application and the MRDs to receive incentive offer letters from participating Sponsor(s).

Custom measure incentives are capped at 100% of the combined incremental cost of the energy conservation measures (ECMs) the project includes. Mass Save Sponsor(s) will screen the ECMs through their benefit cost tool that is in the worksheet. 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.

Incentive levels for each measure are determined by Mass Save Sponsors based on predicted annual energy savings. Note that several measures supported in this Program are "custom" measures where energy savings are calculated on a project-by-project basis: See the following page for incentive rates.



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Select projects are subject to 20% hold-back pending receipt of trend data or other information stipulated in the Minimum Requirements Document (MRD) that Mass Save Sponsors will prepare and provide for customers.

Upon acceptance of the final analysis and report, the signed Custom Application and MRDs, each Mass Save Sponsor will issue a formal letter offering an incentive to the customer.

Summary of Customer Incentives			
Incentive	Energy Conservation Measure (ECM)	Rate	
Custom Incentive	Building Envelope	\$0.35/ kWh	\$2.00/ therm
	Unitary HVAC (RTU, AC, HP, VRF)		
	High Efficiency Chillers		
	Energy Recovery		
	Demand Control Ventilation		
	Variable Flow Kitchen Hood		
	DHW Heaters		
	Low Flow DHW Fixtures		
Prescriptive Incentive	Lighting	Current program rate	
	Variable Frequency Drives		
	Condensing Boilers		

### Design Team Incentives

Calculated at \$0.07 kWh or \$0.34/therm (as applicable) and capped at \$10,000

#### Step 6 – Construction Completion, Construction Phase Incentive Payment, Design Team Incentive Payment

The customer and design team must keep the list of final ECMs in mind during construction administration so that ECMs for which incentives are being offered are not substituted or removed during construction.

A few weeks before substantial completion, the Mass Save Sponsor(s) may request a set of the approved submittals, invoices and photographs associated with all of the ECMs being supported with incentives, including controls submittals. The Sponsor(s) may also request a copy of the project's payments.

All projects participating in the Program are subject to inspection by each participating Mass Save Sponsor(s). Customers may be asked to arrange for these post inspections to take place once all ECMs are installed and functioning.

Upon Mass Save Sponsor(s) review of submittals and invoice documents, and upon completion of the post inspection, each Sponsor will provide the incentive payment to the customer and will provide 100% design team incentive payment (an invoice is required).

Design team incentives are paid to the design team lead, which may disperse to other team members as appropriate. The full design team incentive will be paid at the conclusion of construction.

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

#### 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.



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By signing below, the owner represents that he/she (1) shall be the sole and lawful owner of the Premises and (2) has read, understands, accepts and agrees to the terms and conditions for participation in the Program outlined above.

<b>Owner Signature:</b>		<b>Owner Printed Name:</b>
<b>Date:</b>	<b>Phone:</b>	<b>Email:</b>
<b>Architect Signature:</b>		<b>Architect Printed Name and Company Affiliation:</b>
<b>Date:</b>	<b>Phone:</b>	<b>Email:</b>
THIS DOCUMENT MUST BE SIGNED BEFORE ENGINEERING SERVICES APPLICATION CAN BE REVIEWED		



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PROCESS CHECKLIST	
<b>Whole Building EUI Reduction Program</b>	
<b>Pre-Design Phase</b>	
	Engage Mass Save Sponsor(s) early about the project
	Incorporate commitment to work with Mass Save and to achieve or exceed program energy goals in the request for proposal (RFP) and Owners Project Requirements (OPR) documents
<b>Schematic Design and Design Development Phases</b>	
	Sign a Memorandum of Understanding (MOU)
	Provide early design drawings/narratives
	Participate in brainstorming charrette
	Confirm the list of Energy Conservation Measures (ECM) included in project
	Provide 100% Design Development (DD) drawings for Mid-Design Review Report
	Review/discuss the Mid-Design Review Report provided at 100% DD
<b>Construction Document Phase</b>	
	Provide following language to the purchasing agent: <b>“This project will be receiving incentives through a Mass Save energy efficiency program directly. Equipment Distributors: Please Do Not include an upstream program incentive in the bid response, as this project can’t be reported through the Commercial Upstream Program.”</b>
	Provide 50% Construction Documents (CD) and discuss and value engineering changes
	Provide 90%/100% CD for final report
	Review/discuss the Final Report including ECM, energy savings and incentives at 90% or 100% CD
	Sign the customer application and Minimum Requirements Documents (MRD)
<b>Construction Phase</b>	
	Keep the final ECMs in mind during construction
<b>Post Construction</b>	
	Sponsor(s) may request submittals, photographs, invoices and possibility schedule of values to support the ECMs
	A post inspection may be scheduled to validate equipment installation and operation
	Sign the post-inspection customer application and MRD
	Customer incentives will be paid upon ECM validation
	Design team incentives will be paid upon ECM validation and receipt of invoice