

NEW CONSTRUCTION

A Memorandum of Understanding for the Integrated Design Path for Large Buildings

The Integrated Design Path for Large Buildings (“Program”) is provided by the Mass Save Program Administrators (PAs)¹, as a comprehensive new construction offering for buildings over 100,000 sf (+/-) when PAs 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 in the design process when changes are feasible.

Applicability: Eligible projects are new buildings, building additions, and major renovations of existing buildings. Qualifying major renovations involve complete replacement of the existing HVAC system, replacement of the lighting system and measures that improve building envelope. Eligible projects should operate year round with the exception of some educational buildings. Core and shell projects, including multi-family, are eligible. Partially conditioned buildings such as warehouses and industrial facilities may be eligible on a case by case basis.

The PAs offer incentives to both building owners and their design teams based on expected annual site energy savings². The incentive dollars for owners are intended to cover a cost-effective portion of the incremental construction costs associated with energy efficient building measures. The incentive dollars for design teams are intended to cover a portion of extra services (e.g., additional meetings and analysis, product research, etc.) necessary to achieve deeper energy savings in large projects. In addition to the customer and design team incentives, PAs offer technical assistance and design support as well as a stipend for an energy charrette.

This document outlines the roles and responsibilities of each party in order 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 PAs through this Program is offered in an advisory capacity only.

The Mass Save PAs understand that the following customer

_____ (“the Owner”):

has undertaken the following new construction or major renovation project at the following address:

_____ (“Premises”)

This project is being designed by the following design professionals (collectively, the “Design Team”):

_____ (“Architect”)

_____ (“Electrical Engineer”)

_____ (“Mechanical Engineer”)

Participating MassSave Program Administrators:

_____ (“Electric PA”) _____ (“PA Company”)

_____ (“Gas PA”) _____ (“PA Company”)

¹ To determine your electric and/or gas provider, please visit masssave.com/en/contact.

² Neither combined heat and power (CHP) nor electricity generating renewables, such as photovoltaic (PV) or wind turbine technology contribute towards the 10% annual site energy savings target. Mass Save advises customers to select light fixtures that are either ENERGY STAR[®] certified or listed on the Design Lights Consortium (DLC) list of Qualified Products to ensure quality. Incentives for lighting savings may be limited for non ENERGY STAR/non DLC fixtures.

Requirements for Participation in the Program:

Owner or Owner's Design Team will:

- Engage PAs between pre schematic design and completion of the design development phase of the project
- Target a combined gas and electric site energy savings of at least 10% better than the Program's baseline, which generally reflects the state energy code (ask your PA for more details)
- Participate in an energy efficiency charrette before the end of design development, if desired
- Include PAs in all meetings where the identified energy conservation measures ("ECMs") are being considered for value engineering

PLEASE NOTE: Advise purchasing agents this project cannot participate in the Mass Save Upstream program with respect to HVAC and lighting equipment. For more information please contact PA.

PAs will:

- Provide a \$3,000 stipend to the design team (\$1,500 paid by each participating PA when more than one PA is involved), to support an energy design charrette, if desired, before the end of design development
- Cost share up to 75% of the design review and energy modeling support through working with one of the lead electric PA's list of preferred technical assistance (TA) vendors (up to \$20,000 available per participating PA). Should the customer wish to use its own TA vendor, PAs may support additional analysis provided by that vendor for Mass Save purposes up to 25%
- Assist customer in making informed decisions about including evaluated energy conservation measures (ECMs) in the project
- Pay a customer incentive based on annual site energy (electric and gas) savings as predicted by the energy model. Customer incentives are capped at 100% of the combined incremental cost of the ECMs the project includes. Projects must be cost effective in order to receive the full customer incentive. Payment will occur upon on site verification. Any incentive greater than \$100,000 is subject to 20% hold back pending receipt of commissioning report or trend data. See rates below:

Large Building Customer Incentives*

Savings Beyond Code	\$/kwh	\$/therm
Berkshire Gas ³ , Cape Light Compact, Columbia Gas ³ , Eversource, Unitil Service Territories		
≥30%	\$0.50	\$2.10
20-30%	\$0.40	\$2.00
10-20%	\$0.30	\$1.90
<10%	\$0.20	\$1.80
Berkshire Gas ⁴ , Columbia Gas ⁴ , Liberty Utilities, and National Grid Territories		
All Projects	\$0.35	\$1.70

*Projects must be cost effective to receive full incentive and are subject to applicable PA budget

- Pay a separate incentive to the design team⁵, capped at \$15,000 per PA, to encourage the integrated design that is necessary to achieve greater than 10% savings and to ensure that agreed upon ECMs remain in the project throughout construction. Design team incentives are available if the model shows at least 10% whole building savings. Design team incentives are paid to the design team lead, which may disperse to other team members as appropriate. Fifty percent (50%) of the design team incentives are paid once the PAs have determined the project's energy savings and have issued a customer incentive offer letter and the remaining 50% is paid at the conclusion of construction.

³ When Eversource is the lead electric utility.

⁴ When National Grid is the lead electric utility.

⁵ Where the project has a contract that may restrict payments to the design team (as can happen with some municipal projects), it is upon the design team lead to work with the customer to ensure that the design team can obtain design team incentive payments per this Program offering.

Large Building Design Team Incentives*

Savings Beyond Code	\$/kwh	\$/therm
Berkshire Gas ⁶ , Cape Light Compact, Columbia Gas ⁶ , Eversource, Unitol Service Territories		
≥30%	\$0.07	\$0.34
10-30%	\$0.04	\$0.20
Berkshire Gas ⁷ , Columbia Gas ⁷ , Liberty Utilities, and National Grid Territories		
≥10%	\$0.07	\$0.34

*Each PA capped at \$15,000

Detailed Process:

Step 1—Coordination with PA

- During schematic design or in pre schematic design, inform your PA of your new construction project. The Integrated Path for Large Buildings is only available when PAs are engaged before the end of Design Development. The earlier you contact your PA, the better the opportunity for energy savings and incentives. Following your initial conversation with your PA, your PA will identify a vendor who will provide design support and technical assistance to the project team, starting with an Energy Charrette.

Step 2—Energy Charrette

- Preferably during the schematic design phase of the project but up until the end of design development, participating PAs will provide a fixed \$3,000 stipend to bring the owner, the architect, the MEP (Mechanical, Electrical and Plumbing Engineer), the lighting designer (if there is one), the commissioning agent (if there is one) and the general contractor (if selected) together with the PAs and their technical assistance vendor to participate in an energy efficiency charrette for the purpose of identifying, discussing/analyzing and comparing potential building ECMs along with the corresponding state energy code compliant base case assumptions and standard practice considerations. 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 (2-3 hours is usually sufficient). In advance of the Energy Charrette, the owner shall ensure that the PAs are provided with any existing project drawings and design narratives.

The Energy Charrette stipend of \$3,000 is paid to the design team lead, usually the architect, who may disperse to other team members as appropriate. To make payment, the PAs will require:

- A list of charrette attendees
- Meeting minutes, prepared by a designated design team member, summarizing the charrette discussion, including references to ECMs discussed and dismissed, and including a clear list of ECMs to be pursued in an energy model/spreadsheet analysis
- Next steps and action items should be clearly outlined in the minutes
- An invoice in the amount of \$3,000 to the PA referencing the project name and noting the invoice is for the Energy Charrette associated with the project. Note: if two PAs are involved in a project, please invoice each company at \$1,500 separately.
- PAs will make charrette payment even if project does not proceed through the rest of the Integrated Design Path for Large Buildings

⁶ When Eversource is the lead electric utility.

⁷ When National Grid is the lead electric utility.

Step 3—Energy Analysis/Modeling

- The TA vendor will submit a proposal to the customer and the PAs for energy analysis services. Once approved, the TA vendor will begin an analysis of the potential energy savings and construction costs of the ECMs identified, using a building energy use simulation model (i.e., eQuest or Energy Plus if eQuest cannot adequately handle the analysis of certain ECMs). The TA Vendor will evaluate the ECMs against a state energy code compliant base case building including standard practice considerations. The base case should be clearly established during the charrette and during the TA study proposal review process. The TA vendor will ascertain annual energy savings and incremental construction costs over the base case for each identified measure and for all ECMs combined.

Step 4—Comprehensive ECM Selection and Screening

- The TA vendor will provide its first report based on the 100% design development set. This “Interim Report” will be a brief summary of each ECM, its incremental cost, associated electric and gas savings, and its simple payback. The report will also contain an evaluation of the savings and incremental costs of the combined set of ECMs. The project team can meet to review the Interim Report and assist the owner in making informed decisions about ECMs to keep in the project and those to remove.
- Once the team determines the finalized set of ECMs, the owner shall direct the design team to include them in the final project design documents.
- At the appropriate time during design, the customer will provide the following language to the purchasing agent procuring equipment: **“This project will be receiving incentives through an 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.”**
- At the conclusion of the design process, the TA vendor will prepare the draft final energy savings analysis and report for the PAs to review. The TA vendor will prepare these draft final documents for PA review within 4 weeks of issuance of the 90% construction documents set.
- PAs will review the draft final energy analysis and report, may issue comments to the TA vendor for incorporation, and will then request the final analysis and report from the TA vendor. The final analysis and report will be accompanied by a completed Custom Application, including Minimum Required Document (MRD) which describes in detail the ECMs that are contributing to the project’s energy savings. Customer must review and sign both the Custom Application and the MRDs in order to receive incentive offer letters from participating PAs.
- PAs will screen the combined set of ECMs through their benefit cost tool. Note that all projects must be cost effective in order for the customer to receive the maximum incentives. If an ECM with a very long payback causes the whole project to fail the PAs benefit cost screen, PAs may remove that ECM from the analysis for purposes of calculating the incentives.
- Upon acceptance of the final analysis and report, the signed Custom Application and MRDs, each PA will issue a formal letter offering an incentive to the customer.
- At this time, if the project savings exceed 10%, the design team lead may submit an invoice to each PA for 50% of the available design team incentive. The remaining 50% may be invoiced to each PA at the conclusion of construction. PAs pay the design team incentives to the design team lead, who may disperse to other team members as appropriate.

Step 5—Project Completion and Incentive Payment

- The owner and design team must keep the list of 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 PAs may request a set of the approved submittals and invoices associated with all of the ECMs being supported with incentives, including controls submittals. PAs may also request a copy of the project’s schedule of values.
- All projects participating in the Program are subject to inspection by each participating PA. Owners may be asked to make arrangements for these post inspections to take place once all ECMs are installed and functioning.
- Upon PA review of submittals and invoice documents, and upon completion of the post inspection, each PA will provide the incentive payment to the owner and will provide the second 50% design team incentive payment (if already invoiced in step 4 or 100% if not already invoiced in step 4) to the design team lead.

Engagement with PAs after Design Development:

Project teams and customers who engage with PAs on qualifying projects after the end of design development, may participate in Mass Save as follows:

- Engagement with PAs after the end of Design Development and before the end of Construction Documents:
Project teams may still participate in the modeling-only portion of the Large Buildings Program at up to 50% PA and 50% customer cost share. The charrette, the design team incentives, and the additional design support offered to integrated projects will not be available for project teams that engage PAs after 100% Design Development. Customer incentive rates will vary from those published in this document.
- Engagement after 100% Construction Documents:
The Large Buildings Program as described above is not available, but teams may participate with PAs by completing appropriate prescriptive and custom applications via the New Construction Systems Approach.

Disclaimers:

Except for payment of incentives as set forth hereunder, the Mass Save PAs do not make any representations, warranties, promises or guarantees in connection with the Program, ECMs, 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 energy cost savings realized by Customer, the Program Administrator is entitled to 100% of the benefits and rights associated with the ECMs, including without limitation ISO-NE products and all other attributes, credits or products associated therewith under any regional initiative or federal, state or local law, program or regulation or program, and Customer waives, and agrees not to seek, any right to the same. The Mass Save PAs 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 PAs or design incentives paid to the design team.

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.

Owner Signature: _____

Owner Printed Name: _____

Date: _____

Email: _____

Phone: _____

Architect Signature: _____

Architect Printed Name and Company Affiliation: _____

Date: _____

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