May 21, 2026

mass save

Energy Efficiency and Decarbonization in K-12 Schools

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Berkshire Gas
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Cape Light Compact

EVERSOURCE

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nationalgrid

Unitil

Agenda

Mass Save Overview

Mass Save Support for Core Program Projects

Mass Save Support for Existing Schools

mass save®

Together, we make good happen for Massachusetts.

Your local electric and natural gas utilities and energy efficiency service provider are taking strides in energy efficiency: Berkshire Gas, Cape Light Compact, Eversource, Liberty, National Grid and Unitil.

As one, we form Mass Save®, with the common goal of helping residents and businesses across Massachusetts save money and energy, leading our state to a clean and energy efficient future.

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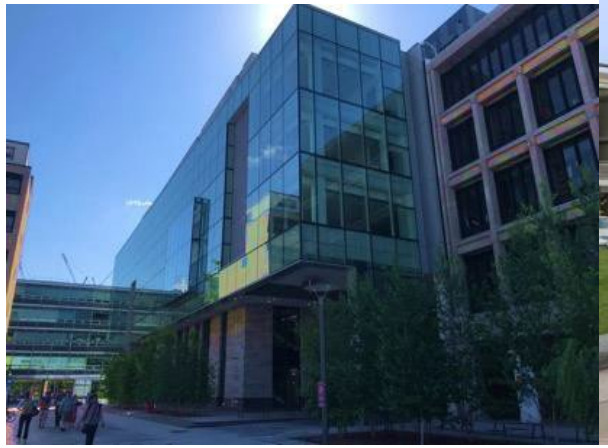
Mass Save Support for MSBA Core Program Projects

Mass Save New Building/Major Renovation Pathways

Path 1	Path 2	Path 3
Net Zero & Low EUI Buildings	Whole Building EUI Reduction	High Performance Buildings



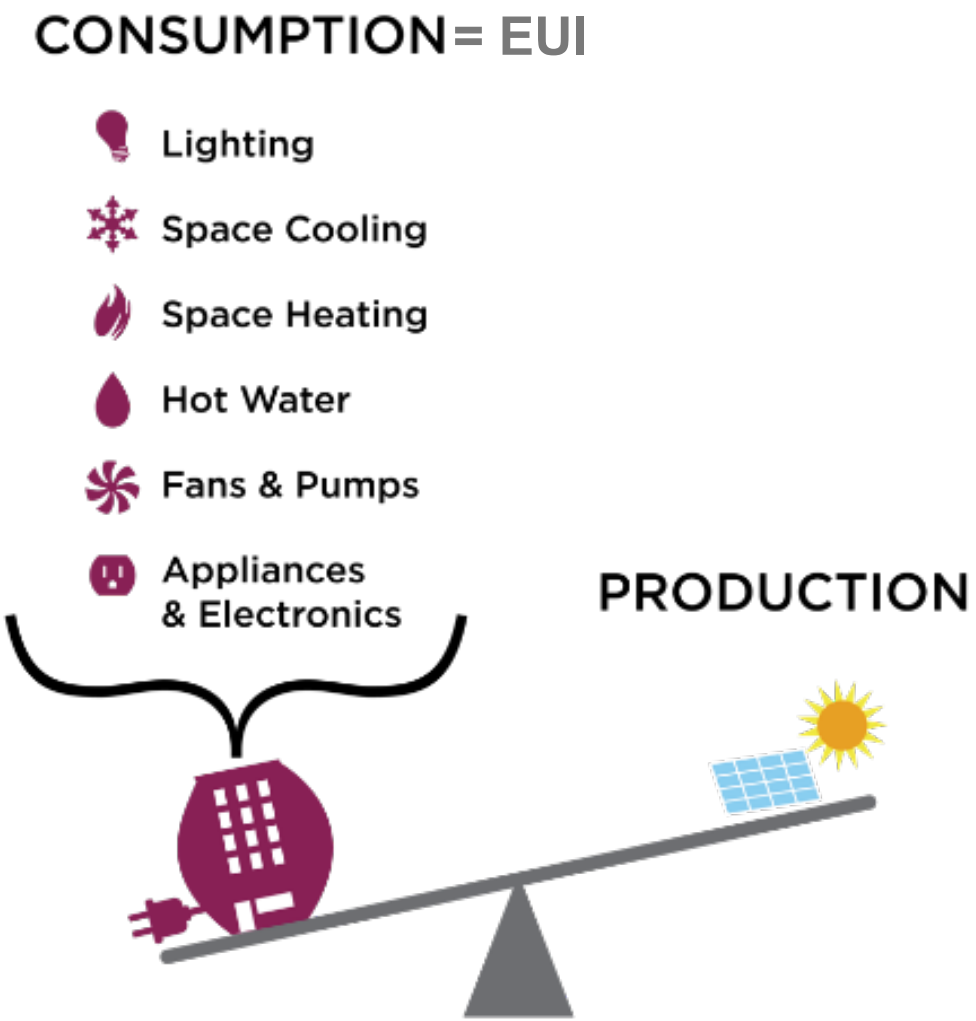
Low EUI Pathways

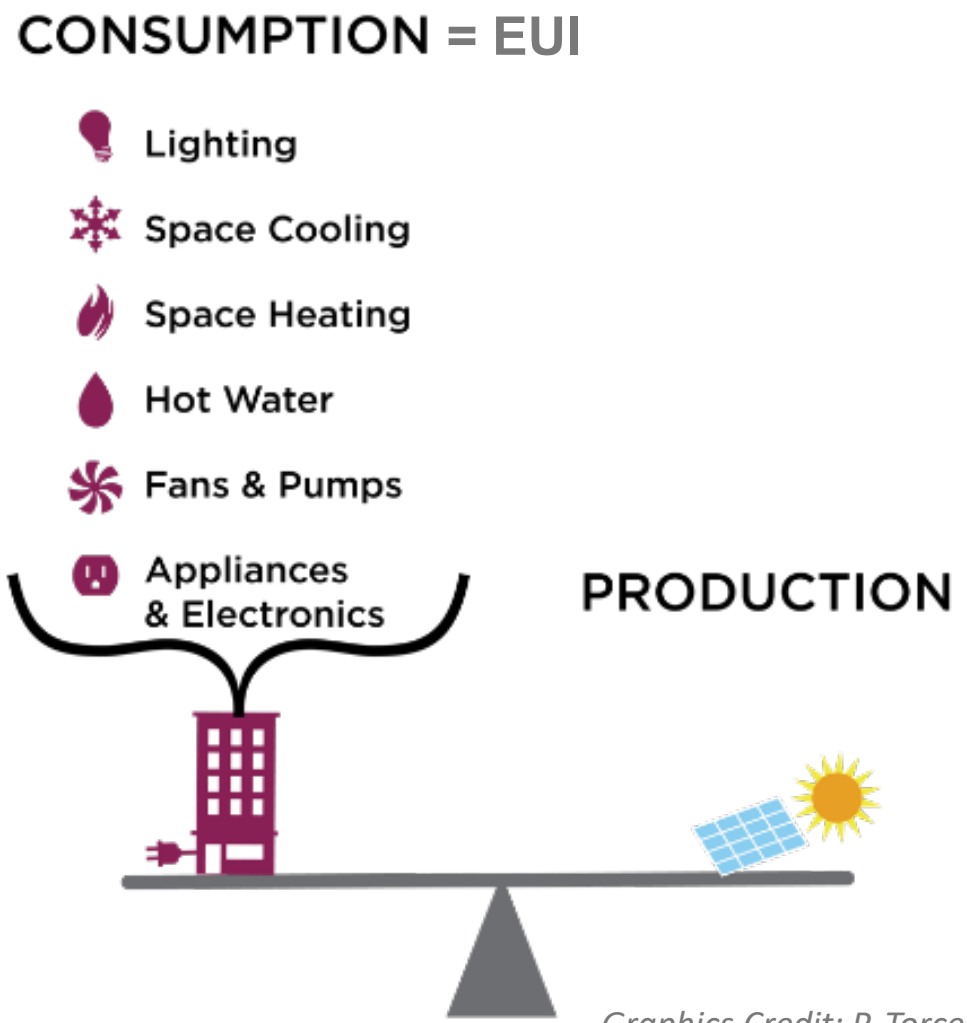
Mass Save Path 1 School Enrollments to Date

Electrification Type	Projects
Ground Source Heat Pumps	24
VRF	8
Air Source Heat Pumps	3
Hybrid Heat Pump Systems	5
Undecided	1
Total	41

Energy Use Intensity (EUI) Review

Total annual energy use (in kBtu) divided by building SF

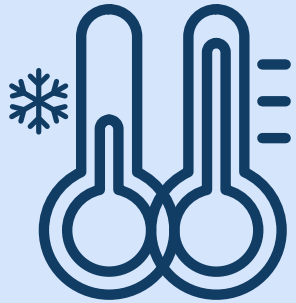




Graphics Credit: P. Torcellini, NREL

Healthy Schools = Happy Students and Staff

Six Benefits of All-Electric, High-Performance HVAC Systems



Adapts to new cooling needs

Improves air quality and eliminates combustion pollution

Enhances efficiency

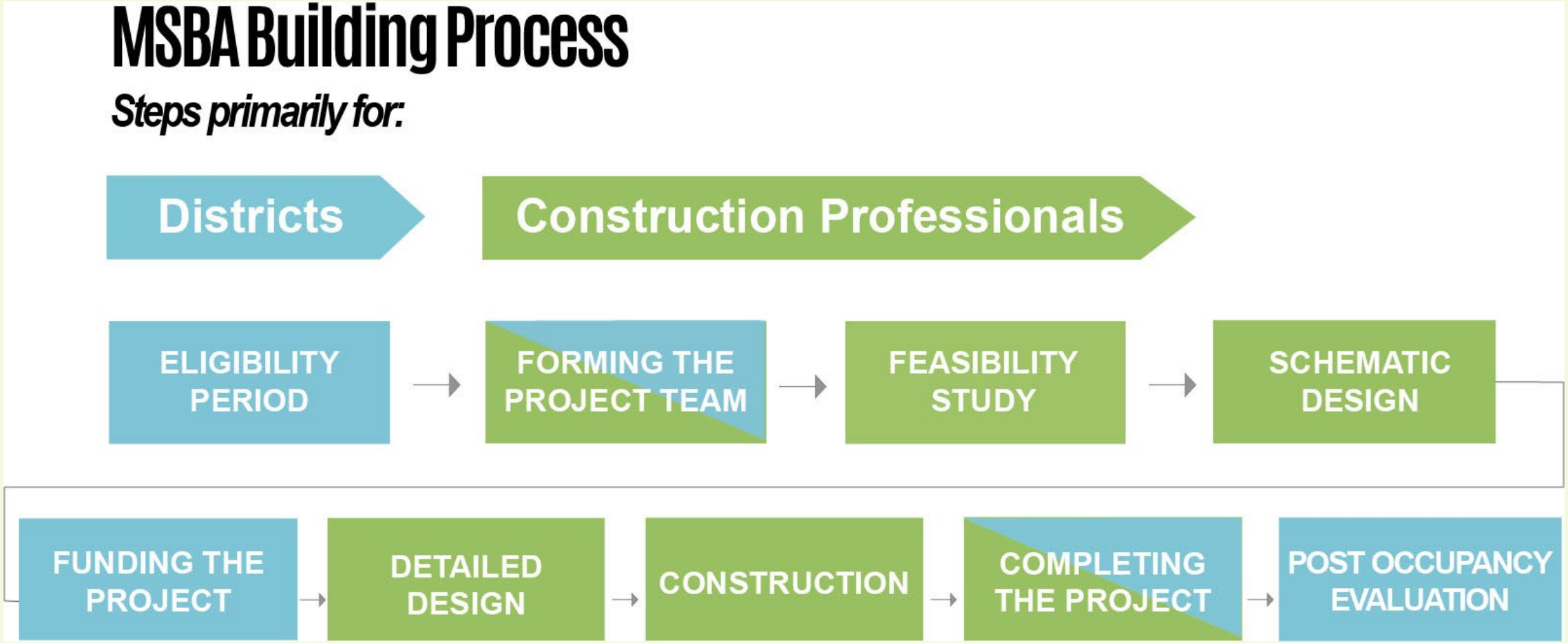
Minimizes health and safety concerns

Builds energy resilience

Mitigates climate change

Source: RMI and UndauntedK12

Our Support Fits Well within the MSBA Process



Source: massschoolbuildings.org/building

Mass Save New Buildings & Major Renovations Program Changes

Mass Save Path 1 Incentive Rates - Schools

K-12 Schools	Site EUI Range	Incentives	
		Payable at end of construction	Payable at end of 1 yr. post occupancy
		Construction Incentive $/sf	Post Occ. Inc. $/sf
Tier 2 (high schools only}	23-25	$1.00	$1.25
Tier 1 Net Zero Level (all schools)	22 or less	$1.25	$1.50

Total incentives, including construction incentives, post-occupancy incentives and adders, are capped at $3,000,000 per project.

Mass Save New Buildings & Major Renovations Program Heat Pump Incentive Rates

Heat Pump Incentive Rates ($/Ton)				
Tier	**System Size (Tons)**	**ASHP**	**VRF**	**GSHP***
1	First 300 Tons	$800	$1,200	$3,600
2	Tons 300-800	$800	$1,200	$2,700
3	Tons 800-1,600	$800	$1,200	$1,800
4	Tons 1,600 and above	$500	$500	$500

Incentives for each tonnage tier are paid at the respective rate and applied incrementally.
*Ground source heat pump incentive rates may change again in the coming weeks.

Verification Scope Now Mandatory for Path 1

Step 6 - Post occupancy incentive and verification incentive

Customers will choose a vendor to complete the **mandatory** year-long verification scope.

- The Mass Save Sponsors will pay 50% of fee for this support up to $10,000.
- Project teams may choose their own vendor.

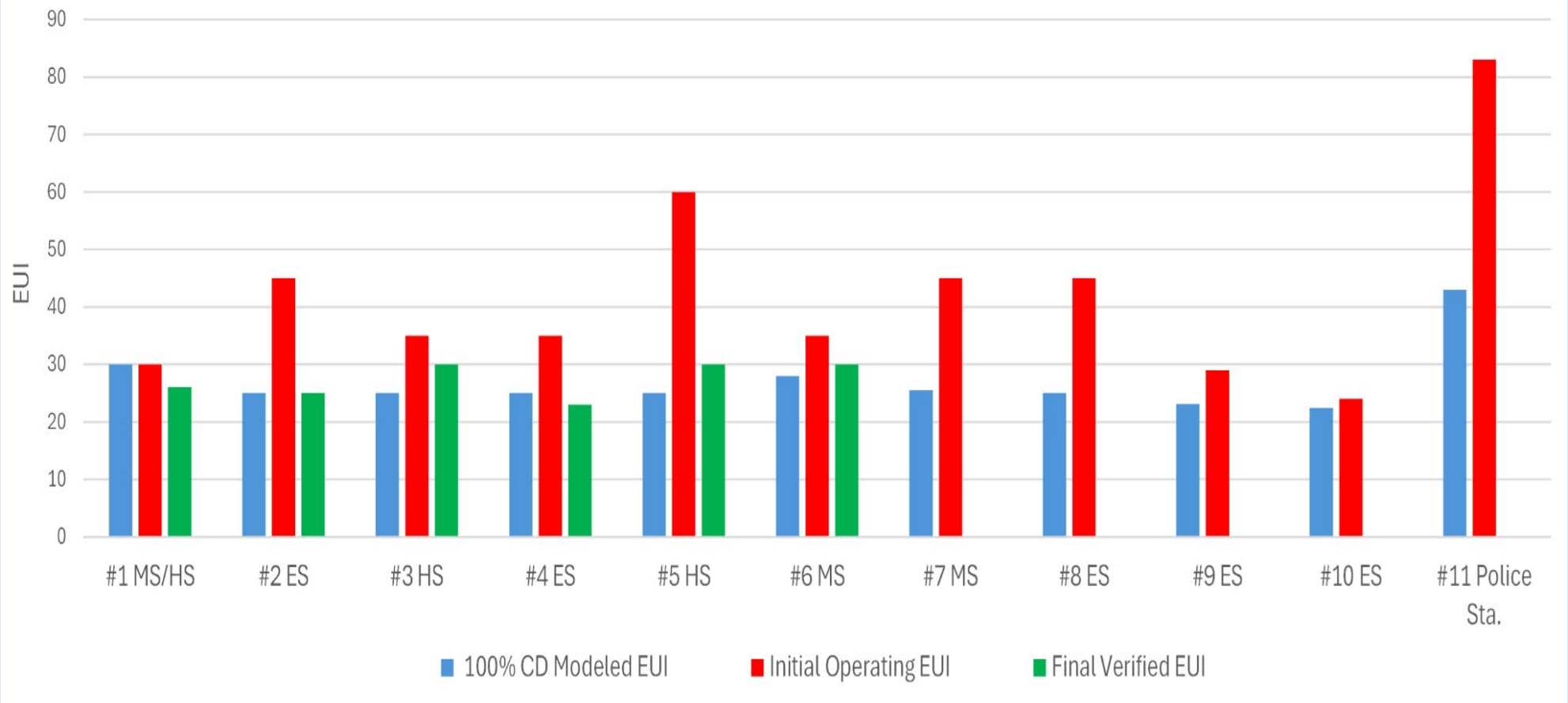
Federal Tax Credits

- The 2022 Inflation Reduction Act established “Elective Pay” provisions – non tax-paying entities can file tax returns and claim federal tax credits.
- The 2025 federal budget reconciliation act made changes to energy tax credit availability but left the substantial geothermal heat pump federal tax incentives intact.
  - Up to 50% of cost of geothermal system reimbursable through IRA energy tax credits.
  - IRA tax credits for solar and storage much more difficult to access.

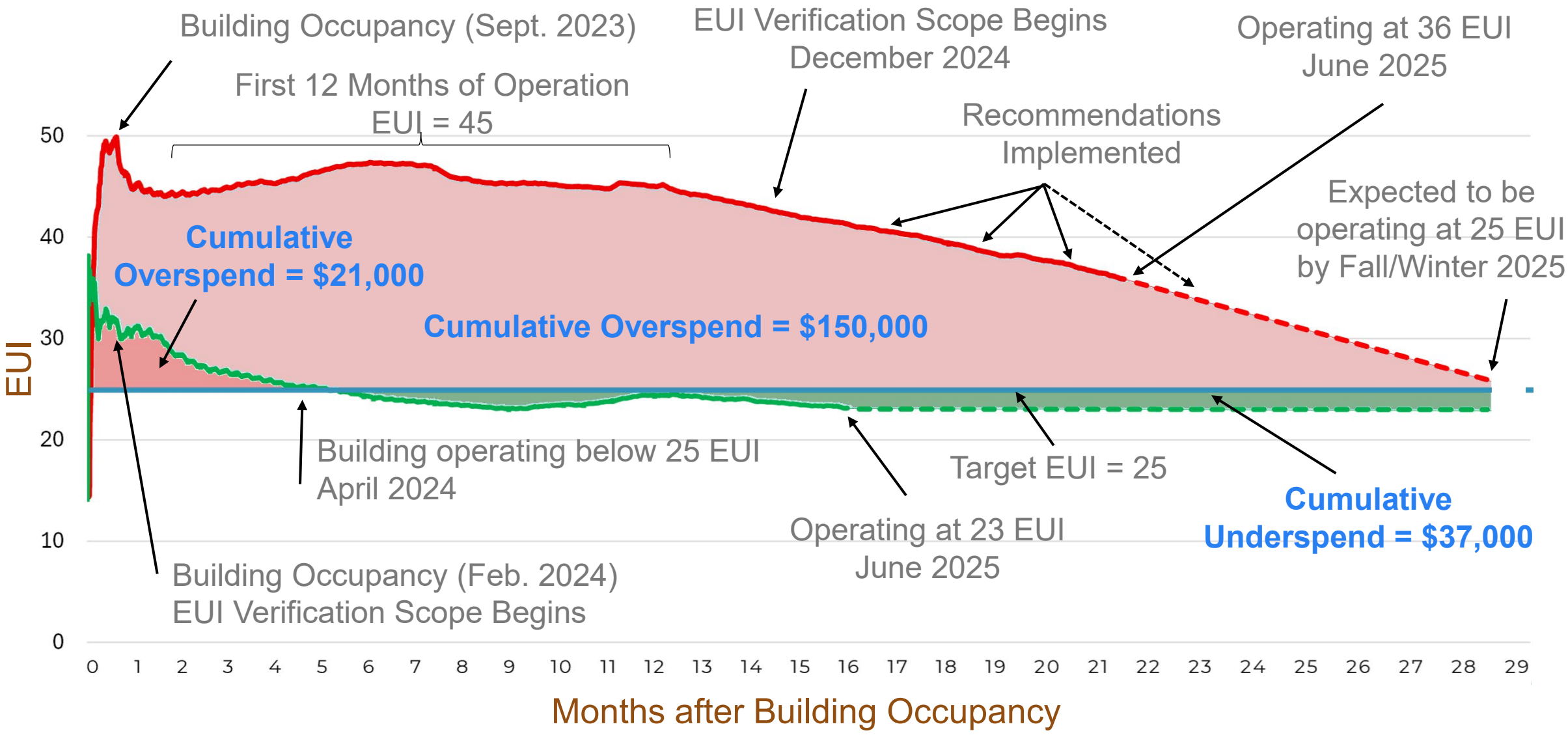
For further info and a database of schools across the country that have received their tax credit checks: https://www.undauntedk12.org/energy-tax-credits-for-schools-hub

Mass Save Path 1: Post-Occupancy EUI Verification – What We're Finding

Projects Without Monitoring Perform Worse Than Modeled



Verification Customer Benefits



Source: Interval Data Systems

Summary of Verification Vendor Findings

1. Unoccupied Operation is a major source of excess energy use
2. Rogue zones quietly drive whole-building energy use
3. Packaged HVAC systems limit visibility and control
4. Whole building utility interval data is rarely used, but extremely valuable
5. Energy models add value during building operation
6. “Optimal start” is often not optimal

Eversource Net Zero Conference June 11, 9-1 (free to all)
Register here

Mass Save Contacts for MSBA "Core Program" Projects

To identify your Sponsor, please visit www.MassSave.com/en/find-your-sponsor

More at MassSave.com

masssave.com/cincmr

K-12 School Project Teams: Contact Your Electric Mass Save Sponsor to Enroll

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Mass Save Support for Retrofits in Schools

Challenges from the Field

- Deferred maintenance
- Navigating gov’t hurdles (municipal, state, and fed)

  Ex. Procurement, City Council, Funding Cycles
- Finding a champion
- Staff knowledge to run the latest technology
- Finding money to make projects happen – this may be #1 for all of you

Getting Ready for Future MSBA Heat Pump Rounds

Benchmarking/ Prioritization

Portfolio Prioritization Plan (PPP)

Identify *buildings with greatest potential; capture building data*

Measure Identification

Comprehensive Building Assessment (CBA)

Scope *opportunities for energy efficiency + electrification*

Investment Decision

Focused Study

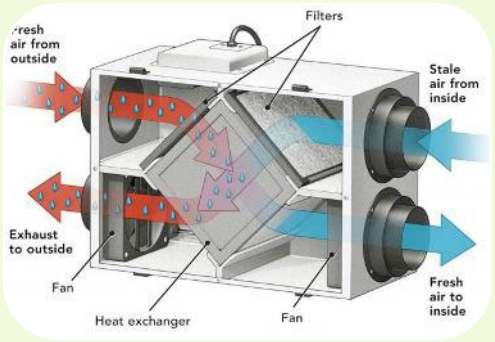
Detailed, ***actionable*** *project estimates*

Implementation

INCENTIVE OFFER

Incentives for Getting Electrification-Ready

Weatherization

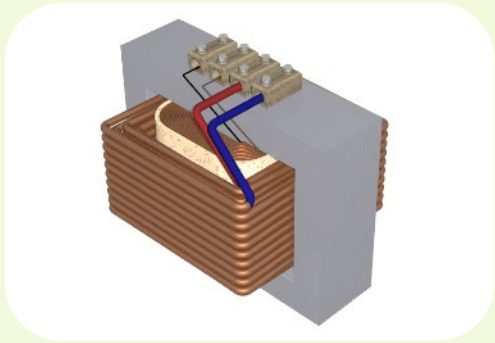


Ventilation

Controls

Hydronics

Variable Frequency Drives



Transformers

Compressed Air

Lighting Controls

https://www.masssave.com/en/business/rebates-offers-services

Weatherization Program

- Benefits include reduced heating load and improving occupant comfort
- Includes insulation, air-sealing, weatherstripping

Incentives

- Prescriptive rebate for buildings <20,000 sq ft
  - Based on R-value added per sq ft
- Custom incentive for buildings >20,000 sq ft
  - Requires a benefit cost analysis
  - Incentive based on energy savings

EXAMPLE OF SAVINGS
Proposed BMS Cost: $297,850
Utility Bill Savings: Est $29,284/yr
- 2,798 therms/yr
- 155,805 kWh/yr

Incentive Amount: $189,340

Building Controls Program

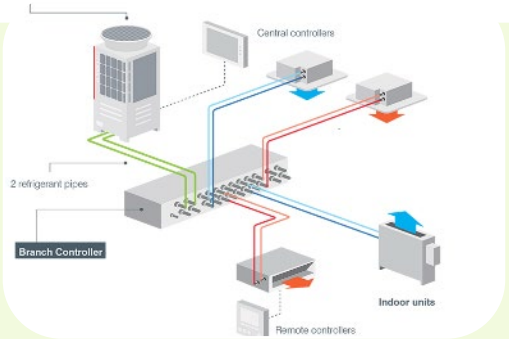
Building Management Systems (BMS)

- Incentives for:
  - first time BMS installation
  - replacement of existing BMS
  - the addition or optimization of control sequences
- Prescriptive incentives <300,000 sq ft
  - Based on # of sequences and sq ft
- Custom incentives >300,000 sq ft

Electrification of Existing Buildings

Air Source Heat Pumps

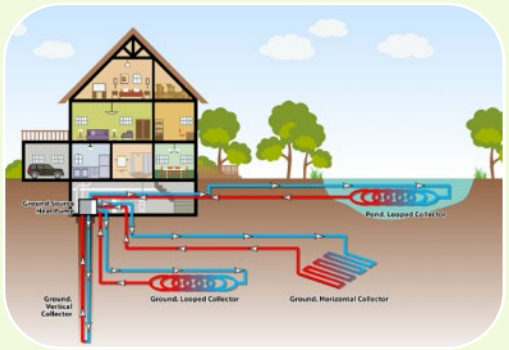
Heat Pump Rooftop Units



Variable Refrigerant Flow

LEV Kits

Heat Pump Chiller/Air to Water



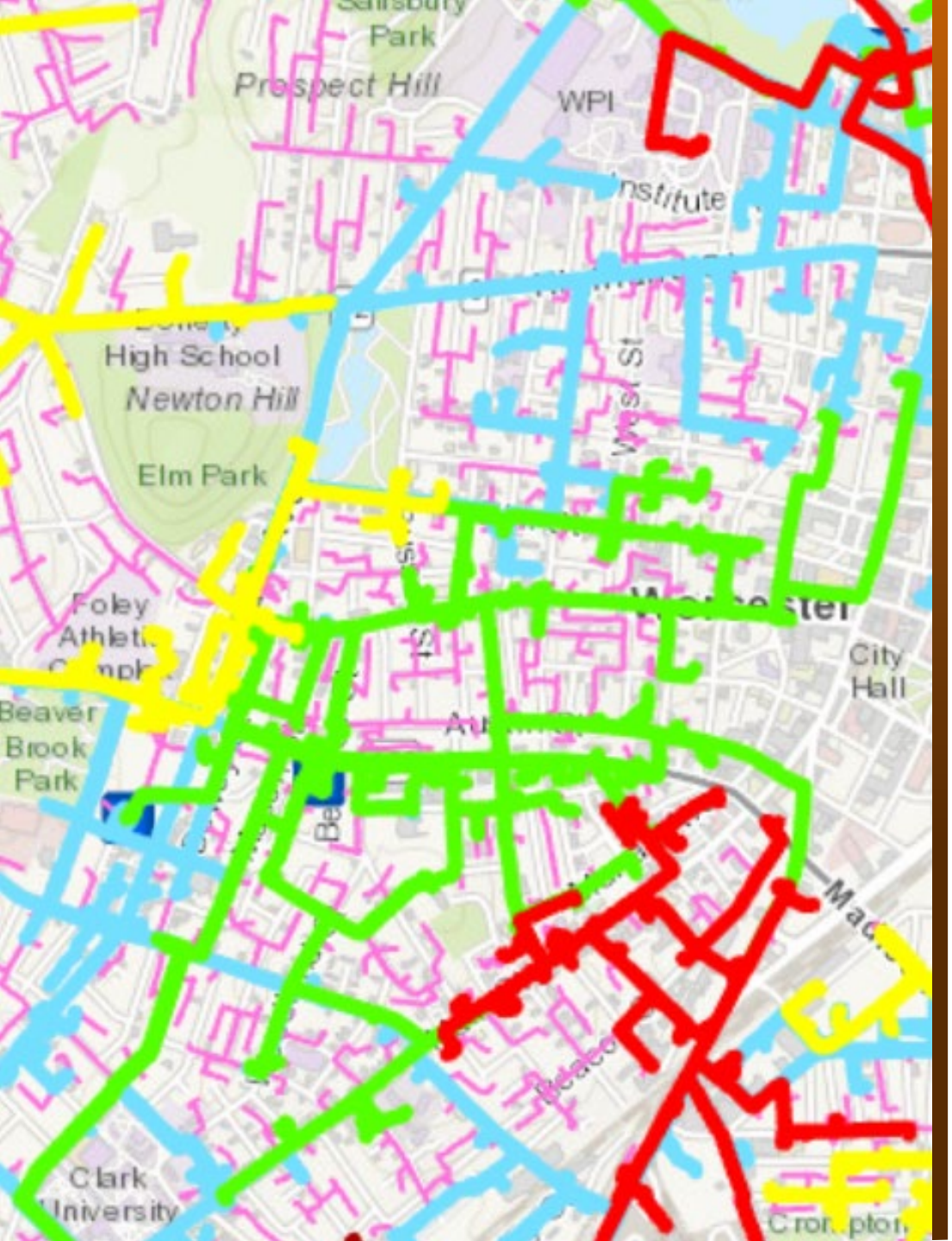
Ground Source Heat Pumps

[Qualified Products List]

Partial decarbonization is a practical solution for the moment, but full decarbonization could be done in the future with more time and money.

Middle School Electrification Example

- 104,000 sq ft building constructed in 2001
  - 4 Additional buildings with similar construction and timeline
- Completed in advance
  - Mechanical engineering study
  - Feasibility study to examine in-kind, partial vs. full, and various solutions (geothermal, A2W)
- Solution
  - Chiller with air-to-water heat pump to serve classroom unit ventilators
  - 4 air handling units with variable refrigerant flow with hot water preheat coils for backup heat
  - Replaced boilers with condensing boiler to provide hot water and supplementary heat below 15 degrees
- 39% reduction in greenhouse gas emissions (58% with fully renewable electricity)



Some of the Barriers to Electrification

- Economic viability
- Existing building electrical infrastructure
- Existing grid capacity
- Utilizing existing heating distribution systems
- Timing with other projects in this building
  - roofs, other failing equipment, etc.

Prescriptive Rebates

Eligible equipment (**must be on Qualified Products List**)

- **Air source (air-to-air) heat pumps**
- **Variable refrigerant flow air source heat pumps**
- **Ground source heat pumps (geothermal)**

Eligible Projects

- **Partial or full displacement**
- **Used for space heating and cooling**

Rebate amount

- **Rebates are based on tonnage**

Custom Path

Use custom for…

- **Equipment not covered by prescriptive offer**
- **Process heating**

Eligibility criteria

- **Must produce net MMBTU reduction**
- **Must NOT increase GHG emissions**
- **Must meet cost-effectiveness criteria**

Incentive amount

- **Incentives vary based on scope and cost**

Help with Overcoming Challenges

- Studies
- Incentive funding
- Electrification engineers
- Project expeditors
  - Chapter 25a
- Mass Save incentives for training
  - Building Operator Certification (BOC)

Talk to us *early*, talk to us *often*

The Biggest Challenge – Finding Additional Funds

[MA Department of Energy Resources (DOER) Green Communities]

[Commercial Tax Credits for Geothermal Heat Pumps]

[MA Clean Energy Center (MassCEC) Green School Works program]

[MA School Building Authority (MSBA) heat pump program]

From the field: How can we help customers braid funding sources together when possible?

Main Message:
Talk to us *early*, talk to us *often*.

Projects Enrolled in MSBA Heat Pump Program Currently?

Planning for Success

- Engage with your Mass Save sponsor as soon as you hire your OPM
  - Understanding project opportunities and challenges
  - Help optimize energy and carbon savings
  - Incentives estimates for your project
  - Later – incentive offer letter based on final project drawings
- Include Mass Save sponsor in your working group as you develop your conceptual design

Main Message:
Talk to us *early*, talk to us *often*.

Any questions?

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mass save

Thank you.

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MSBA General Roundtable

May 21, 2026

Green Schools Program Update

Green Schools Program - Background

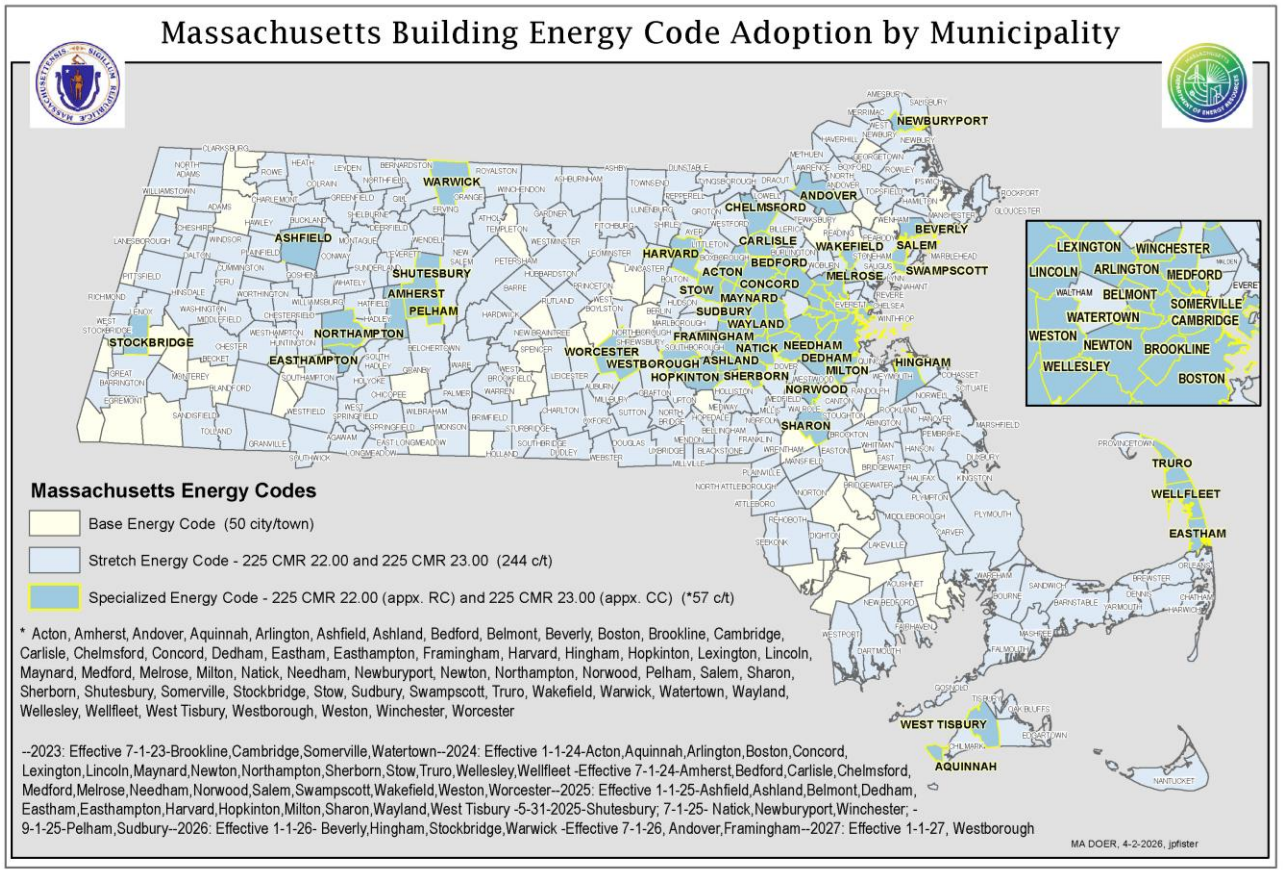
- In June 2023, MSBA updated its Green Schools Program to align with changes to the Massachusetts Energy Code:
  - New 2021 International Energy Conservation Code
  - Significant revisions to the existing "Stretch Energy Code"
  - New “Specialized Energy Code”

- Minimum standards and incentives were increased within the Green School Program to require certain minimum levels of achievement using either LEED or NE-CHPS, including Indoor Air Quality points, and compliance with either the Stretch Energy Code or the new Specialized Energy Code

- Additional reimbursement incentives were increased to a maximum of 4%, including 3% for energy efficiency and 1% for Indoor Air Quality

Green Schools Program - Background

As of April 2026, **244** of the **351** communities in Massachusetts have adopted the Massachusetts “Stretch" Energy Code as their basis of energy code standards, while **57** communities have adopted the “Specialized" Energy Code. The remaining **50** communities use the "Base" energy code.



Green Schools Program - Update

The 2026 Green Schools Program Policy update, approved at the April 29, 2026 Board of Directors meeting, is a modification to the current policy to adjust to outside changes in CHPS and LEED:

- CHPS is no longer accepting projects for registration
- All current active CHPS projects must be completed before June 30, 2027
- LEED Version 5 has been available for use since April 28, 2025
- LEED Version 4/4.1 anticipated to close registration June 30, 2026

How this impacts the MSBA Green Schools Program:

- All new Core Program projects will use LEED
- All Core Program projects will still be required to achieve LEED Silver, meet the Massachusetts Stretch Energy Code, and achieve minimum Indoor Air Quality standards for no additional reimbursement
- Additional reimbursement for energy efficiency (3%) and for Indoor Air Quality (1%) will still be available, although the Indoor Air Quality requirements will be updated to align with LEED version 5

Green Schools Program - Update

USGBC / LEED:

- Project registration with USGBC LEED v4/4.1 is currently scheduled to end on June 30, 2026. The new LEED version 5 has been open for registration since April 28, 2025. After LEED version 4/4.1 ends, all Core Projects will register with LEED version 5.

- Districts and their design teams have been asked to review their Core Program project schedules to determine which version of LEED is most appropriate for the district's project.

- Most notably, the LEED version 5 update will affect the Material Resources and Indoor Air Quality components of the MSBA Green Schools Program.

Green Schools Program - Update

USGBC / LEED Material Resources and Indoor Air Quality:

- Using Version 4/4.1:

  For no additional reimbursement, achieve a minimum of "Silver, "including a minimum total of three points (from seven points available) from the following three categories:

  - - MR Building Product Disclosure and Optimization - Material Ingredients (1-2 points)
  - - IEQ - Low Emitting Materials (1-3 points)
  - - IEQ - Indoor Air Quality Assessment (1-2 points)

  For an additional 1% reimbursement, projects must achieve a minimum total of 5 points (out of 7 available) in the LEED Indoor Air Quality points noted above.

Green Schools Program - Update

USGBC / LEED Material Resources and Indoor Air Quality:

- Using Version 5:

  For no additional reimbursement, achieve a minimum of "Silver," including a minimum total of three points (from ten points available) from the following four categories:

  - - MRc3 - Low Emitting Materials (1-2 points)
  - - MRc4 - Building Product Selection and Procurement (1-5 points)
  - - EQc1 - Enhanced Air Quality (1 point)
  - - EQc5 - Air Quality Testing and Monitoring (1-2 points)

  For 1% additional reimbursement point, projects must achieve a minimum total of five points (from ten points available) in the LEED indoor categories noted above.

Green Schools Program - Update

Minimum Requirements	
Current / 2023 Policy	**Proposed / 2026 Policy**
Using LEED-S, for no additional reimbursement, achieve a minimum of “Silver,” including a minimum total of three points (from seven points available) from the following three categories: • MR Building Product Disclosure and Optimization - Material Ingredients • IEQ - Low Emitting Materials • IEQ – Indoor Air Quality Assessment OR; Using NE-CHPS, for no additional reimbursement, achieve a minimum of “Verified”, including a minimum total of five points (from ten points available) from the following four categories: • EQ 5.1.3 Indoor Air Quality Management – Building Flush Out • EQ 7.0 Low Emitting Materials • EQ 7.1 Additional Low Emitting Materials • MW 10.1 Health Product Information Reporting AND; Meet the minimum energy efficiency requirements described in the MA DOER “Stretch” energy code standards.	Using LEED v4/4.1, for no additional reimbursement, achieve a minimum of “Silver,” including a minimum total of three points (from seven points available) from the following three categories: • MR Building Product Disclosure and Optimization - Material Ingredients • IEQ - Low Emitting Materials • IEQ – Indoor Air Quality Assessment OR; Using LEED v5 for no additional reimbursement, achieve a minimum of “Silver,” including a minimum total of three points (from ten points available) from the following four categories: • MRc3 – Low-Emitting Materials • MRc4 – Building Product Selection and Procurement • EQc1 – Enhanced Air Quality • EQc5 – Air Quality Testing and Monitoring AND; Meet the minimum energy efficiency requirements described in the MA DOER “Stretch” energy code standards.

Green Schools Program - Update

Additional Reimbursement	
Current / 2023 Policy	**Proposed / 2026 Policy**
For an additional reimbursement of 3% of the Estimated Basis of Total Facilities Grant, and in addition to the minimum requirements described above, projects must meet the minimum energy efficiency requirements described in the MA DOER “Specialized” energy code standards. For an additional reimbursement of 1% of the Estimated Basis of Total Facilities Grant, and in addition to the minimum requirements described above, projects must achieve a minimum total of five points (from seven points available) in the LEED indoor air quality points noted above, or a minimum total of eight points (from ten points available) in the NE-CHPS indoor air quality points noted above.	For an additional reimbursement of 3% of the Estimated Basis of Total Facilities Grant, and in addition to the minimum requirements described above, projects must meet the minimum energy efficiency requirements described in the MA DOER “Specialized” energy code standards. For an additional reimbursement of 1% of the Estimated Basis of Total Facilities Grant, and in addition to the minimum requirements described above, projects must achieve a minimum total of five points (from seven points available) in the LEED v4/4.1 indoor air quality points noted above OR; a minimum total of five points (from ten points available) in the LEED v5 indoor air quality points noted above.

Green Schools Program - Implementation

- A staff presentation to the MSBA Board of Directors at this past April meeting is complete.

- School districts may continue to register projects under LEED v4 or LEED v4.1 until that option is no longer available (currently scheduled for June 30, 2026). After that date, all projects will register using LEED v5.

- The requirement to comply with the current / 2023 policy remains in effect for all Core Program projects that requested Preferred Schematic approval after the June 21, 2023 MSBA Board meeting. For projects that predate 2023, the Green Schools Program policy in place at the time applies.

Green Schools Program - Implementation

- For projects that have a budget and scope of work limited to repairs, minor renovations, or small additions relative to the size of the overall existing building, the MSBA recognizes that meeting energy efficiency standards intended for major renovation and replacement projects may not be feasible. Therefore, the MSBA may allow a Core Program project to proceed without meeting the requirements of the MSBA Green Schools Program.

- As with previous MSBA Green Schools Program policies, incentive points provided by the MSBA are provisional, subject to the district meeting certain sustainability requirements for the project. If the district does not meet the energy-efficiency requirements, the district will not qualify for these incentive points, and the MSBA will adjust the reimbursement rate accordingly.

Questions