



MASSACHUSETTS
**DEPARTMENT OF
ENERGY RESOURCES**

Approaches to Building Decarbonization

Green Communities – LBE Summit

November 18, 2025

Presented by
Morgan Bowler



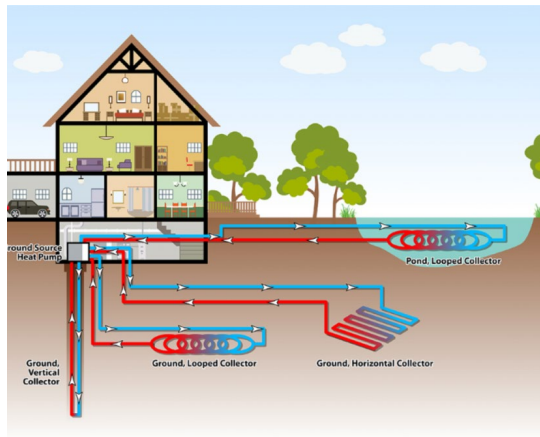
Decarbonizing Across the State

What is decarbonization?

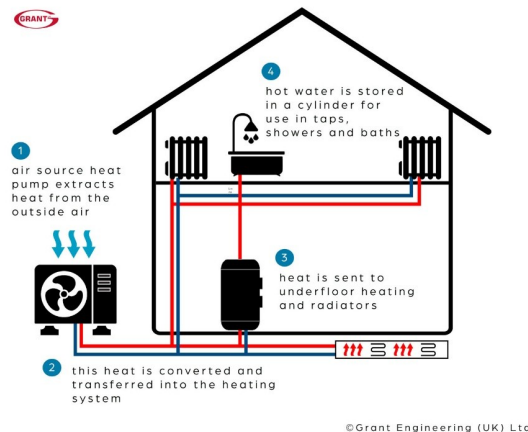
The elimination of greenhouse gas emissions from the operation of buildings and vehicles

The State has a variety of public entities within it, including municipalities, executive branch agencies, colleges or universities, or a quasi-public authorities. With a range of entities comes a range of building types, sizes, uses, and operations. All of which provide opportunities for decarbonization.

From Heat Pumps



Source: [Consolidate Electric](#)



Source: [Grant Engineering](#)

To Fleet Electrification



To Landscaping Equipment



The Green Communities Division and the Leading by Example Division aim to provide funding and resources for these various decarbonization projects that range in scale and scope.

The Importance of Decarbonization Roadmaps

Because of the variety of state entities with complex buildings with an assortment of use cases, decarbonization roadmaps can be helpful to provide a clear understanding of the technologies, investments, strategies, and timelines required for these long-term goals.

Decarbonization Roadmaps can answer questions and provide personalized plans:

- What is the current state of the campus or facility?
- What will demand look like by 2050?
- What are the options to reduce that demand?
- What will be required to make those changes?

The Leading by Example Division has helped support decarbonization roadmaps at several institutions and Green Communities new Climate Leaders Program requires certified municipalities develop a decarbonization roadmap of their own.

	UMA	UMD	UML	SSU North Campus
Impacted Area	280 buildings, 12.8m sq ft	71 buildings, 2.5m sq ft	50 buildings, 3.4m sq ft	10 buildings, 690k sq ft
Study Timeframe	Jan 2020-Feb 2021	Jan-Dec 2020	Oct 2020-July 2021	Oct 2020-Aug 2021
Goals/Targets	100% renewable electricity, heating, cooling by 2032	Carbon neutrality by 2040	Carbon neutrality by 2050	Fossil fuel-free heating/cooling for North Campus
Study cost	~250,000	~\$200,000	\$97,000	\$100,000
LBE Grant ¹	n/a	\$100,000	\$97,000	\$100,000
Consultant	MEP Associates, Brailsford & Dunlavey, CES, Greener U	Ramboll	BR+A	MEP Associates

Benefits of small projects

The Leading by Example Division has an [Equipment Decarbonization Grant Program](#)* and the Green Communities Division has a [Regional School District Decarbonization Grant Program](#)** that both offer funding for air source heat pumps, heat pump water heaters, battery electric commercial kitchen, and battery electric landscaping, or operations & maintenance equipment.

Small projects can have various benefits:

Benefits	In the context of LBE Equipment Decarb Grant
Make staff familiar with technology	<ul style="list-style-type: none">• ASHP and Heat Pump Water Heaters as one-off projects prepares folks for sitewide adoption
Grow the state workforce in their skills	<ul style="list-style-type: none">• Skills learned with the state can be brought to other positions
Get buy-in from staff	<ul style="list-style-type: none">• Familiarity and comfort leads to support for future projects• Health benefits to employees that are using this equipment
Facilitate future transition to electric	<ul style="list-style-type: none">• Electrify site so that when grid is fossil fuel free so is the site
See immediate emissions reductions	<ul style="list-style-type: none">• Not just small, low-hanging fruit projects; can have significant emissions benefits as well
Provide community benefits	<ul style="list-style-type: none">• Award adders in disadvantaged communities• Create pollinator habitat and increase green space

*Eligible entities include executive branch agencies, public institutions of higher education, and quasi-public authorities.

**Eligible entities include regional school districts.

Phase in Large Decarbonization Projects

After having the opportunity to gain experience with decarbonization efforts through these smaller projects, entities can feel more confident in phasing in larger decarbonization projects.

The Leading by Example Division aims to support larger projects through our [Decarbonization Implementation Grant \(DIG\) Program*](#).

This Program offers funding between 40% - 50%** of eligible project costs and a base funding maximum of \$3M to \$7M for existing facility decarbonization. For new construction and major renovation projects, this Program offers funding between 20%-30%** of eligible project costs and base maximum funding of \$2.5 million.

LBE has received Round 1 applications that propose innovative projects, like whole-building retrofits, decarbonizing CHP systems, and geothermal heating and cooling systems and more.

*Eligible entities include executive branch agencies, public institutions of higher education, and quasi-public authorities. Municipalities are not eligible.

**Varies depending on if project is located in investor owned utility or municipal light plant.

Today's Speakers

1. Ryan Kingston – Decarbonization Planning Manager, Department of Conservation and Recreation
2. Victoria Masone – Energy Manager, Towns of Hamilton and Wenham
3. David Gingerella – Vice Chancellor of Administration & Facilities, University of Massachusetts Dartmouth
4. Cricket Vlass – Park & Tree Superintendent, Town of Wellesley
Tim Bania – Park & Tree General Foreman, Town of Wellesley
Dan Smith – Park & Tree Groundskeeping Foreman, Town of Wellesley



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Thank You!