

## Green Communities Annual Report Summary FY2025

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Title of Preparer: Energy Conservation Coordinator

## Green Community Information

**Municipality:** Medfield

**Baseline Fiscal Year:** 2015

### Criterion 1: As-of-Right Siting

*Criterion 1 is met by a municipality passing zoning in designated locations for the as-of-right siting of renewable or alternative energy generating facilities, research and development facilities, or manufacturing facilities.*

**Type of as-of-right siting approval received:** Solar PV

**Have any significant changes been made to the zoning district(s) for which the community received Green Communities designation?** No

### Criterion 2: Expedited Permitting

*Criterion 2 is met by a municipality adopting an expedited permitting process of one year at most, under which facilities interested in locating their facility in a designated renewable zone may be sited within the municipality.*

**Type of expedited permitting approval received:** Local

### Clean Energy Project Permitting

*This table shows any changes made in FY2025 to clean energy projects on record that have been accepted for approval under the zoning for which the community received Green Community Designation.*

Name	Type	Description	Status	Decision Date
{none}				

## Criterion 3: Energy Use Baseline & Energy Use Reduction Plan

To demonstrate compliance with Criterion 3, municipalities must:

- Establish an energy use baseline inventory for municipal buildings and facilities (which can include schools, water, wastewater treatment plants and pumping stations, and open space), street and traffic lighting, and vehicles; and
- Adopt an Energy Reduction Plan (ERP) demonstrating a reduction of 20 percent of energy use after five years of implementation.

### Community Baseline Year: FY2015

#### Energy Reduction Progress

Category	Baseline (FY2015)	FY2023	FY2024	FY2025
Building	55,558	48,553	50,749	50,876
Use (MMBTU)		-12.61%	-8.66%	-8.43%
%Diff from Baseline				
Open Space	53	81	71	75
Use (MMBTU)		51.87%	33.95%	40.75%
%Diff from Baseline				
Street/Traffic Lights	390	149	149	149
Use (MMBTU)		-61.71%	-61.75%	-61.76%
%Diff from Baseline				
Vehicle	7,318	6,816	6,829	6,766
Use (MMBTU)		-6.86%	-6.67%	-7.55%
%Diff from Baseline				
Water/Sewer	3,664	3,284	3,527	3,564
Use (MMBTU)		-10.37%	-3.74%	-2.73%
%Diff from Baseline				
<b>Adjustments</b>				
Building Stock Changes	-88	-1,599	-1,512	-1,486
Regional School Districts				
<b>Totals</b>	<b>66,894</b>	<b>57,285</b>	<b>59,814</b>	<b>59,943</b>
<b>% Diff from Baseline</b>		<b>-14.4%</b>	<b>-10.6%</b>	<b>-10.4%</b>

#### Energy Conservation Measures (ECMs)

Changes made to the community's ECM record for FY2025

Location	ECM Name	Status	Start Date	End Date
Medfield	Solar Canopy	Active	6/1/2025	8/29/2025
Administration	EMS	Planned	9/1/2026	11/9/2026
Town Hall				
Town Hall	Roof repairs	Planned	10/1/2025	1/1/2026
Town Hall	Exterior Envelope Sealant Replacement	Planned	1/20/2025	11/9/2026
Town Hall	HW heater replacement	Planned	6/1/2024	9/1/2024
Town Hall	AHU (Air Handling Unity) repairs	Planned	6/1/2024	9/1/2024
Town Hall	fan coil units (repair/replace)	Planned	6/1/2024	11/1/2024

Location	ECM Name	Status	Start Date	End Date
Town Hall	Chiller Plant Recommissioning	Planned	1/20/2024	11/8/2027
Town Hall	Exhaust Fan Repair	Planned	1/20/2024	
Town Hall	Exhaust Fan Repair	Planned	12/1/2023	6/1/2024
Town Hall	Exterior Envelope Façade Repairs	Planned	6/1/2023	10/1/2024
Town Hall	study for heat pumps	Active	1/15/2023	6/1/2023
Town Hall	fan coil units (repair/replace)	Active	1/26/1900	
Council on Aging	Building Envelope Repair	Planned	1/20/2024	
Fuel	Anti-Idling Policy	Planned		
Fuel	Anti-Idling Policy	Planned		
Library	Extrior sealant repair	Planned	9/1/2027	
Library	Brick Façade Engineering/Repair	Planned	9/1/2027	
Library	ATC Controls Upgrade	Planned	9/1/2026	
Library	EPDM Roof Engineering/Repair	Planned	9/1/2025	
Library	Heat pump RTUs	Planned	10/25/2024	11/15/2024
Schools				
Blake Middle	Replace windows at curtain wall café	Planned	6/15/2027	
Blake Middle	Behavioral Based Measures	Planned	10/1/2026	
Blake Middle	brick façade repair	Planned	1/25/2026	
Blake Middle	Replace sealants at Windows/Doors	Planned	1/24/2026	
Blake Middle	Brick Façade Repair Engineering	Planned	1/20/2026	
Blake Middle	brick façade repair	Planned	1/20/2026	
Blake Middle	Replace windows at curtain wall café	Planned	1/20/2025	
Blake Middle	Roof Top Units Repair	Planned	1/20/2025	
Blake Middle	Replace Shut Off Valves	Planned	1/20/2025	
Blake Middle	VFDs	Planned	3/15/2024	6/28/2024
Blake Middle	Replace sealants at Windows/Doors	Planned	1/20/2024	
Medfield High	window weatherstripping	Planned	1/15/2027	
Medfield High	EMS	Planned	6/1/2026	
Medfield High	Brick Façade Repair	Planned	1/26/2026	
Medfield High	Remove Shower Heads	Planned	1/26/2026	
Medfield High	Window repair	Planned	1/26/2026	
Medfield High	Exterior door replacement	Planned	7/1/2025	
Medfield High	Behavioral Based Measures	Planned	1/24/2025	
Medfield High	Window sealant replacement	Planned	1/20/2025	
Medfield High	boiler replacement	Planned	1/20/2025	
Medfield High	window weatherstripping	Planned	1/20/2024	
Medfield High	Rooftop Units (RTU) Repair	Active	9/15/2023	10/30/2023
Medfield High	Replace Shut Off Valves	Active	9/15/2023	

Location	ECM Name	Status	Start Date	End Date
Medfield High	Air Handling Units (replace/repair)	Active	9/15/2023	
Medfield High	Brick Façade Repair	Planned	1/20/2023	
Medfield High	Window repair	Planned	1/20/2023	
Medfield High	Envelope sealant replacement	Planned	1/20/2023	
Medfield High	Air Handling Units (replace/repair)	Planned	1/20/2022	
Medfield High	Rooftop Units (RTU) Repair	Planned	1/20/2022	
Medfield High	Replace Shower Head	Planned	1/20/2022	
Medfield High	Exterior door replacement	Planned	1/20/2022	
Medfield High	Replace Shut Off Valves	Planned	1/20/2022	
Memorial Elementary	Solar PV canopy over the parking area	Active	6/1/2025	
Memorial Elementary	Johnson Controls BMS Upgrade	Planned	1/20/2025	
Memorial Elementary	Roof Top Units Repair	Planned	1/20/2025	
Memorial Elementary	VFDs 2 x 7.5 HP pump motors	Planned	6/1/2024	
Memorial Elementary	Roof Top Units Repair	Active	9/15/2023	
Memorial Elementary	Scoping study for electrification	Active	12/1/2022	
Memorial Elementary	low flow aerators	Planned	1/26/1900	
Memorial Elementary	Roof Top Units Repair	Active	1/26/1900	
Memorial Elementary	EMS	Planned		
Memorial Elementary	EMS	Planned		
Wheelock Elementary	electrical upgrades	Planned	1/20/2027	
Wheelock Elementary	replace pneumatic temp controls	Planned	9/1/2025	
Wheelock Elementary	Replace Shut Off Valves	Planned	1/20/2024	
Wheelock Elementary	Replace Tempering Valves	Planned	1/19/2024	
Wheelock Elementary	replace valves to FanCoils Units	Planned	1/10/2024	
Wheelock Elementary	fan coil units (repair/replace)	Active	11/1/2023	
Wheelock Elementary	Exhaust Fan Replacement	Active	11/1/2023	
Wheelock Elementary	Replace Tempering Valves	Active	1/26/1900	
Wheelock Elementary	Exhaust Fan Replacement	Active		
Wheelock Elementary	Replace Shut Off Valves	Active		

## Top 5 Buildings per Energy Use

In FY2025, municipal operations used 59,943 MMBtu of energy. The five buildings below accounted for 64% of the community's overall energy use.

Building Name	Energy Consumption MMBtu (% of overall energy use)
1. Blake Middle	12,483 (21%)
2. Medfield High	11,310 (19%)
3. Wheelock Elementary	5,523 (9%)
4. Dale Street Elementary	5,117 (9%)
5. Garage	3,881 (6%)

## Top 5 Buildings per Emissions

In FY2025, there were 3,496 MTCO2e emitted from municipal operations. The five buildings below accounted for 62% of the community's overall emissions.

Building Name	Emissions MTCO2e (% of overall emissions)
1. Blake Middle	700 (20%)
2. Medfield High	661 (19%)
3. Wheelock Elementary	305 (9%)
4. Dale Street Elementary	281 (8%)
5. Memorial Elementary	215 (6%)

## Top 5 Buildings per Energy Use Intensity (EUI)

Energy Use Intensity (EUI) is calculated by dividing the total energy consumed by the building in a year by the building's square footage. EUI is a measure of a building's energy efficiency – like miles per gallon for cars – and can be a good indicator of buildings needing efficiency upgrades.

Building Name	Size (Square Feet)	Energy Consumption MMBtu	EUI (kBtu per ft <sup>2</sup> )
1. Wastewater Treatment Plant	15,219	3,750	246
2. Dale Street Elementary	48,166	5,117	106
3. Public Safety	28,080	2,948	105
4. Garage	38,873	3,881	100
5. Blake Middle	138,926	12,483	90

## Energy Narrative:

The Town of Medfield has been a Green Community for 10 years and to date is using 10% less energy than in our baseline year, 2015. (59943 MMBTus in FY25, vs 66894 MMBTus in FY15). Buildings are by far the dominant factor in Medfield's energy efficiency, accounting for 85% of the town's energy use and Green House Gas emissions. Energy conservation measures have focused primarily on buildings in the recent past, and will continue to do so as there are plenty of good projects throughout Medfield's buildings.

The High School is a consistently high energy user, 11,310 MMBTus in FY25, accounting for 19% of the town's total energy use and GHGs. We are scoping replacing RTUs at the high school for our next Green Communities Grant project. In addition, we installed VFDs on the two 25 HP pump motors at MHS with part of our last GCGrant; the positive impact of the drives is only partially shown in the FY25 data. The full 100,000 kWh reduction should appear in our FY26 report.

The Blake Middle School is the highest energy user at 12,483 MMBTus, or 21% of the total town. A portion of the Blake's roof, having been replaced, now hosts a 122.88 kW solar array which just came on line towards the end of FY25. During FY26, a full year of solar PV production will help reduce the Blake's carbon footprint. This is indicative of a town strategy to use Solar PV where ever possible to help reduce carbon emissions - the Memorial Elementary School, with the fifth highest emissions in town (215 MTCO2) has a 374.4 kW solar parking canopy that is under construction and just coming online. As the town replaces roofs on schools, it plans to follow new roofs closely with added solar arrays.

The garage is the 5th largest energy consuming facility at 3,881 MMBTus and also has a high EUI at 100 MMBTus per square foot. The garage hosts a 216.5 kW solar array that helps offset energy use.

The Dale Elementary School, though small at 48,166 square feet, makes the list of highest energy use (5,117 MMBTus), highest emissions (281 MTCO2) and highest EUI (106). The Dale is an old, drafty building which is being redesigned. The new school will be voted on in 2027 - should it move forward, it will likely be online in about 2033. The special election

and override that will be needed to move forward with the new Dale School, is seen by the town has an opportunity to address projects from its sizable backlog of capital projects.

Medfield's Waste Water Treatment Plant has the highest EUI in town at 246 MMBTus/square foot. Several important capital improvements for the WWTP are being bundled together and included in the 2027 override vote. So estimated project completion will be later - 2029 - 2030.

The Wheelock Elementary School is the third highest energy consumer at 5523 MMBTus, or 9% - similar to the Dale. The biggest difference is the Wheelock is almost double the size of the Dale. The Wheelock now has heat pump domestic hot water and we will continue to look for opportunities to save energy there.

The Public Safety Building makes the list of top energy intensity facilities, at 105 MMBTus per square foot - we are looking into this, as it is a newer building, opened in 2017. There have been complaints about the boiler, which we are investigating. Also, it stands to reason that as a 24/7 facility, the public safety building will have a higher EUI, since there is not times when you can revert to a set back temperature to save energy. The public safety building is always on.

Last but not least, the Town of Medfield has a very active, sizable volunteer energy committee. Medfield Energy Commission or MEC, meets monthly and has an impressive roster of professionals interested in helping the town save energy. This group is working on Climate Leader status, hosts EV Ride and Drives, engages and polls the town on sustainability matters, has authored a Climate Action Plan, is helping with design for the new school to assure it is energy efficient, and more. Medfield is fortunate to have so many talented volunteers to tap. Also, the town has been awarded a MASSAVE Municipal Energy Manager grant and plans to hire someone in the near future. Additional "Boots on the Ground" will help the town pursue even more energy saving work.

One final note, the Pfaff Center, that is currently off line, is still heated at set back levels, per instructions from the town's insurer. The Rec staff is working out of rented offices in a local church for the time being, while the town considers its options.

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## Criterion 4: Fuel Efficient Vehicles

### Fleet Changes for FY2025

*Criterion 4 requires all departments within a Green Community to purchase fuel-efficient vehicles for municipal use, whenever such vehicles are commercially available and practicable.*

Status	Model Year	Make	Model	Trim
Added +		Motorcycle		
Added +		Trailer		
Added +		Unable to Decode		
Added +		Unable to Decode		
Added +		Unable to Decode		
Added +	2024	Dodge	Durango	Pursuit
Added +	2024	Ford	E-Series	E-450 SD
Added +	2024	Ford	F-350 Super Duty	
Added +	2025	Chevy	Tahoe	Pursuit

Status	Model Year	Make	Model	Trim
Removed -		Unable to Decode		
Removed -		Unable to Decode		
Removed -		Unable to Decode		
Removed -		Unable to Decode		
Removed -		Unable to Decode		
Removed -	2012	Ford	Explorer	XLT
Removed -	2012	Ford	F-250 Super Duty	
Removed -	2014	Ford	Explorer	Police Interceptor Utility
Removed -	2020	Chevrolet	Tahoe	Police

**Has the municipality transferred any vehicles from one department to another? No**

#### **Criterion 5: Stretch Code Adoption**

*Criterion 5 requires that municipalities minimize the life-cycle cost of all newly constructed homes and buildings. DOER recommends communities do this by adopting the Stretch Code (225 CMR 22 and 23).*

**Is Stretch Code still in effect? Yes**

**Has the community adopted the Specialized Opt-in Stretch Code? No**

**How many occupancy permits were issued for new commercial construction over 100,000 sq.ft.? 0**

#### **Stretch Code Narrative:**

Medfield is working on passing the Specialized Stretch code, however it is a long and difficult process educating people around town. Despite this, the town is still working to move the specialized code forward, with an eye to becoming a climate leader community.

#### **Other Notes**

#### **Additional Measures Narrative:**

Please see energy narrative for all updates.

#### **Renewable Energy Narrative:**

During FY25 Medfield generated and consumed 987,059 kWh of solar PV. This equals 6.4% of the town's total energy use. All solar is net metering. It is worth noting that there are more solar projects in the works and several came on line during 2025, so this fraction will grow in future.

The report must be signed by the community's Chief Executive Officer. The Chief Executive Officer is defined as the manager in any city having a manager and in any town having a city form of government, the mayor in any other city, and the board of selectmen in any other town unless some other officer or body is designated to perform the functions of a chief executive officer under the provisions of a local charter or laws having the force of a charter. Any signatures of designees will be considered an attestation that the signatory has been designated the designee by the municipality.

**I confirm that I have reviewed this report and verify all information is true.**

Kristine Thierweiler

Print Name

Town Administrator

Title

Beth Fink on behalf of  
(Assistant Town Administrator) Kristine Thierweiler Signature

11/04/2025

Date