

# **ACTON**

# **DECARBONIZATION**

# **ROADMAP**

**Town of Acton and Acton-Boxborough Regional School District**

December 2024

# Table of Contents

<b>I. Purpose and Acknowledgements.....</b>	<b>3</b>
A. Letters from both general government and school district verifying adoption of the roadmap.....	3
B. List of contributors that participated in the baseline and roadmap process.....	3
C. Purpose of Decarbonization Roadmap.....	3
<b>II. Executive Summary.....</b>	<b>4</b>
A. Narrative Summary of the Town.....	4
Table 1: Summary of Metric Tons of CO2 Equivalent Emissions for FY 2022 (MTCO2e).....	6
Data pulled from MassEnergyInsight.....	6
B. Summary of Municipal Emissions.....	6
Table 2: Summary of Municipal Emissions Reductions.....	7
<b>III. Municipal Emission Baseline.....</b>	<b>8</b>
A. Identification of the Inventory Tool Used.....	8
B. Municipal Emissions for Baseline Year.....	8
Table 3: Summary of metric tons of CO2 equivalent emissions for FY 2022 (MTCO2e) by Facility and Fuel Type.....	8
<b>IV. Decarbonization Roadmap Narrative.....</b>	<b>9</b>
A. Summary.....	9
1. Overview of Goals for Implementation to 2027 and 2030.....	9
2. Overview of Goals for Calendar Years 2040 and 2050.....	14
3. Identify Areas of Highest Emissions and Greatest Opportunities for Impact.....	16
B. Achieving Elimination of Onsite Fossil Fuel Use by 2050.....	16
1. Program Management Plan for Implementation, Monitoring and Oversight.....	16
2. Update Roadmap every 3 years.....	17
<b>V. Appendix.....</b>	<b>18</b>
Appendix A: Letter from Town of Acton Select Board.....	18
Appendix B: Letter from ABRSD Superintendent.....	18
Appendix C: Table 3.....	18
Appendix D: Electrification Roadmap: Town of Acton and Acton-Boxborough Regional School District (2022).....	18
Appendix E: Acton Town Wide Facility & Electrification Study.....	18
Appendix F: Acton Priority Facility Electrification Timeline Part 1.....	18
Appendix G: Acton Priority Facility Electrification Timeline Part 2.....	19

# I. Purpose and Acknowledgements

## A. Letters from both general government and school district verifying adoption of the roadmap

The Town of Acton

- See Appendix A for a letter from Acton's Select Board

Acton-Boxborough Regional School District

- See Appendix B for a letter from the District's Superintendent

## B. List of contributors that participated in the baseline and roadmap process

- Andrea Becerra, Town of Acton Sustainability Office's Sustainability Director
- Lauren West, Town of Acton Sustainability Office's Environmental Analyst
- Kate Crosby, ABRSD Energy Manager
- Marc Hamel, ABRSD Facilities Coordinator
- Brendan Hearn, ABRSD Capital Infrastructure Project Manager

## C. Purpose of Decarbonization Roadmap

This Decarbonization Roadmap for the Town of Acton and Acton-Boxborough Regional School District (ABRSD) serves as a strategic guide to lower emissions and achieve the community's Net Zero goal to lower emissions as quickly as possible, with a target date of 2030. This roadmap outlines specific actions, timelines, and measurable milestones for reducing carbon emissions across municipal operations. It is built on existing studies and plans such as the *Town of Acton Climate Action Plan* (2022), *Electrification Roadmap: Town of Acton and Acton-Boxborough Regional School District* (2022), and *Acton Town Wide Facility & Electrification Study* (2023). By referencing and regularly updating this Climate Leader Decarbonization Roadmap, the Town and the District can ensure that initiatives remain aligned with the Net Zero target, track progress, and adjust strategies as needed to stay on course toward a sustainable, low-carbon future.

## II. Executive Summary

### A. Narrative Summary of the Town

Acton is located in Middlesex County and has a population of around 24,021 (Census, 2020). Acton has a long history of sustainability, with a passionate and engaged community that continues to push for actions that protect and preserve the Town's rich natural resources and also speed the shift towards cleaner and greener technology and development in response to climate change. In 2008, a Town Green Advisory Board was established to investigate how Acton can improve our energy efficiency and use of renewable energy sources by prioritizing significant energy initiatives for the Town and schools. In 2010, Acton was designated a DOER Green Community. The Town then developed its first solar projects in 2014 with a Solar PV landfill (1.59 MW) and solar at the DPW roof (100 kw). In 2016, the Town achieved its first energy reduction milestone of 20% energy reduction in municipal and school operations. In 2019, the Town voted to construct two net-zero buildings, received funding to install electric vehicle (EV) chargers in Town Hall, and published its first Greenhouse Gas Inventory. At a Special Town Meeting in 2020, residents voted, nearly unanimously, to declare a Climate Emergency which explicitly states that "members of Acton Town Meeting call on Town government and staff, and all Acton civic groups, businesses, and residents to commit to a climate mobilization effort, with appropriate support from the state and federal governments, to bring net Town-wide carbon emissions to zero as quickly as possible, with a target date of 2030." Following this Climate Emergency Declaration, the Town hired its first Sustainability Director in 2021. Within the same year, the Town received the Leading By Example Award, an award administered by the Department of Energy Resources and given to communities that have spearheaded initiatives to reduce the environmental impacts and associated energy costs of government operations. In 2022, the Town released its [Climate Action Plan](#) which defines strategies and actions for rapidly addressing climate change and working towards achieving its net-zero emissions goal. Acton's Climate Action Plan is a living document that is consistently used to guide Town decisions and encourage greater state and federal incentives. That

same year, the Town completed the construction of the net-zero Fire Station heated and cooled with geothermal. In 2023, the Town released its [Climate Action Tracker](#) to record progress that has been made on the Climate Action Plan so far and to provide more information on Town climate initiatives. Future plans for electrification and promotion of clean technologies are described in both the Climate Action Plan and Climate Action Tracker.

**ABRSD:** The District has aggressively managed for energy efficiency and conservation for many years, and has been gaining increasing experience with electrification strategies since 2019. Highlights include:

- 2010: Energy Manager hired
- 2010: Collaboration with Town of Acton on Green Communities designation. Ongoing annual collaboration as part of Green Communities program, including annual energy usage reporting, shaping grant applications & reporting.
- 2010: Rooftop solar (HS, JH).
- 2016: Milestone of 20% energy use reduction reached in joint Town/ABRSD portfolio
- 2017: \$1.25 million grant award from MA CEC for installation of 2MW/4MWh BESS on ABRSD main campus.
- 2019: All-electric geothermal design approved for Boardwalk Campus by Building Committee
- 2021: Campus BESS begins commercial operation.
- 2022: All-electric geothermal Boardwalk Campus building opens for students.
- 2024: Electric school bus funding awarded by US EPA and MA CEC
- 2024: AB Regional School Committee adopts plan for decarbonization by 2050
- 2024: ABRSD receives “Mass Save Climate Leader” award in recognition of the Boardwalk Campus

#### **Works Cited**

[https://data.census.gov/profile/Acton\\_town,\\_Middlesex\\_County,\\_Massachusetts?g=060XX00US2501700380](https://data.census.gov/profile/Acton_town,_Middlesex_County,_Massachusetts?g=060XX00US2501700380)

**Table 1: Summary of Metric Tons of CO2 Equivalent Emissions for FY 2022 (MTC02e)**

Category	FY2022	Ownership
<b>Buildings</b>		
	718	Town of Acton
	3032	ABRSD (Blanchard excluded)
<b>Street/Traffic Lights</b>		
	9	Town of Acton
<b>Vehicle</b>		
	864	Town of Acton
	544	ABRSD
<b>Water/Sewer</b>		
	280	Town of Acton
<b>Total Emissions</b>		
	1872	Town of Acton
	3576	ABRSD (Blanchard excluded)

*Data pulled from MassEnergyInsight*

## **B. Summary of Municipal Emissions**

- New Construction Planned: The Town of Acton will be presenting a design for a new fully electric net-zero DPW building at the next Town meeting. If approved, the construction of this new building will begin within the next few years.

**Table 2: Summary of Municipal Emissions Reductions**

Targets	2027	2030	2040	2050
Reduce emissions from building onsite fossil fuels via electrification	-25%	-34%	-72%	<b>-100%</b>
Zero emission vehicles (ZEVs) in light-duty fleet adoption (% of fleet)	30%	100%	100%	<b>100%</b>
Zero emission vehicles (ZEVs) in medium-/heavy-duty fleet adoption (% of fleet)	7%	45%	100%	<b>100%</b>
Energy Use Intensity reduction (deep energy retrofits/retro commissioning)	-5%	-15%	-20%	<b>-30%</b>
<b>Total Emissions Reduction Goals (% of 2022 emissions)</b>	<b>24%</b>	<b>43%</b>	<b>77%</b>	<b>100%</b>

## III. Municipal Emission Baseline

### A. Identification of the Inventory Tool Used

MassEnergyInsight was used to create the emissions inventory.

### B. Municipal Emissions for Baseline Year

**Table 3: Summary of metric tons of CO2 equivalent emissions for FY 2022 (MTCO2e) by Facility and Fuel Type**

- See Appendix C for Table 3
- ABRSD diesel usage for the school bus fleet is reported via MEI, and also included in the data reported in this application. The District's bus fleet is leased, and thus these vehicles fall outside the Climate Leaders program. However, the District has been pursuing funding for school bus electrification, and is grateful to have recently received sufficient financial support from both US EPA and MA CEC to move forward with purchasing and operating three electric school buses in order to begin fleet conversion. Additional electrification will require addressing depot constraints and identifying additional funding - the District is actively working on both.

## IV. Decarbonization Roadmap Narrative

### A. Summary

#### 1. Overview of Goals for Implementation to 2027 and 2030

Town of Acton and ABRSD collaborated on a joint decarbonization roadmap study in 2022 (*Electrification Roadmap: Town of Acton and Acton-Boxborough Regional School District* (Appendix D)), which was funded by a state MVP Action Grant. In addition, the Town of Acton completed the *Acton Town Wide Facility & Electrification Study* in 2023 (Appendix E). ABRSD and Town of Acton will draw from these reports to estimate emissions reductions resulting from electrifying these priority facilities, informing the electrification timeline included in Appendix F and Appendix G.

In line with the Town of Acton's goal to reach net-zero emissions as quickly as possible, with a target date of 2030, all of the Town's priority facilities (facilities responsible for the highest amount of municipal emissions) are planned for electrification by 2030.

The District is committed to achieving net-zero emissions by 2050, in line with the State's decarbonization goals. ABRSD successfully opened an all-electric geothermal building in September 2022, which replaced two gas-fired elementary school buildings. Target dates for building conversions going forward are generally linked to the projected dates for boilers aging out (as per 2022 *Electrification Roadmap: Town of Acton and Acton-Boxborough Regional School District* study report).

#### Town of Acton Buildings by 2027

##### Fire Station 4

- The North Fire Station #4 was recently constructed and opened in 2022. The building was constructed as a fully electric building with a geothermal heat pump system for heating and cooling. All appliances are electric. The Town is monitoring data since occupancy to identify areas for further efficiency upgrades and to ensure the building is functioning within the anticipated EUI.

##### 468 Main Street

- 468 Main Street, also known as “The Red House”, is a small home turned into a municipal building right next to Town Hall. The building acts as an office space for three Town staff members, including the Sustainability Department. This building is planned to be fully electrified in 2025. Because it is built more like a home than a typical municipal office space, the electrification process should be relatively simple and will be eligible for Mass Save’s residential incentives. As outlined in Appendix E, 468 Main Street will undergo a complete electrification. Suggested upgrades include replacing existing oil fired boiler, oil tank, oil piping, hot water piping, pumps, terminal heating equipment, DX cooling fan coil unit, AC condenser unit, refrigeration piping and all accessories and controls. Replace existing heating and cooling system with a new air source to air heat pump HVAC system. Replace existing exhaust fan system and replace with a new energy recovery ventilation system. Provide new ATC/BMS controls for the new HVAC system and integrate into Town Wide EMS. Both the mechanical systems and the roof are nearing the end of their useful life. A comprehensive envelope and mechanical system project should be completed together. While the electrical service is not in need of immediate action it will need to be done at the time of mechanical system replacement as that replacement should be an electrified system.

### **Town Hall**

- The Town Hall is a 24,144 Square Ft. building in the center of Acton. It houses many Town staff members and is heated with natural gas. The Town Hall is also planned for total electrification in 2025. The facilities report in Appendix E recommends that this building be electrified by 2028 between the Public Safety Facility and Memorial Library. Based on issues with the mechanical system and current fresh air and air quality issues, it is recommended that these buildings be reversed in their prioritization. It is recommended that Town Hall’s renovation & electrification be approached as a comprehensive project that studies the envelope, programmatic needs, mechanical issues, and accessibility as a whole.

### **Public Safety Facility**

- The Public Safety Facility is also planned for total electrification in 2025. It was built in 2005 and is currently heated by natural gas. The study in Appendix E recommends that this building be electrified by 2025 ahead of both the Town Hall and Memorial Library. This recommendation was based on the Acton Facilities team's indication that the mechanical systems may be nearing the end of their life due to an increased need for maintenance. In 2025, the boiler will be 21 years old and the roof will be 20 years old. However, based on the issues with the mechanical system present at Town Hall, it is recommended that Town Hall takes priority, if they can't be done at the same time, as the systems at the Public Safety Facility appear to be in working condition with no health concerns.

### **DPW Building**

- The DPW building, also known as the “Highway Garage” is planned for total reconstruction in 2027. The current building is heated with natural gas. There is also a behind the meter solar array on the DPW building. The Town has hired engineers and designers who have created a design for a new building that is fully electric. The construction of this new building is pending approval of capital funds to be designated at Town Meeting in May 2025. Because of the Town's participation in the Fossil Fuel Free Demonstration Program and adoption of the Specialized Stretch Energy Code, it will be required that this new building is electric upon construction.

### **ABRSD Buildings by 2027**

#### **The Boardwalk Campus**

- The Boardwalk Campus was opened as an all-electric geothermal building in FY2023 (Fall 2022). The building is operating successfully, and using even less energy than projected. It is home to 2 elementary schools and AB's preschool, and replaces 2 gas-fired elementary schools (which were demolished). Between now and 2050, the District will continue to focus closely on performance at this building, including regular retrocommissioning and optimization of system controls.

### **Town of Acton Buildings by 2030**

## **50 Audubon Drive**

- 50 Audubon Drive, also known as “The Recreation Center”, is planned for complete electrification in 2028. The study in Appendix E noted that the architectural condition of the building would drive the need to further invest in the building prior to the anticipated end of life of the mechanical system. The Town completed weatherization measures as recommended by a Mass Save audit in this building during the summer of 2024. The roof and windows are 30 years old and are in need of replacement. The mechanical systems should have approximately 4-9 years of life left, however, barriers to accessing the furnace units in the attic space may discourage regular maintenance and shorten their lifespan. In addition, their end of life is within the 2030 goal for electrification. The recommended system for electrification is a VRF system.

## **Cemetery Office**

- The Cemetery Office, also known as the “Kennedy Service Building”, is planned for complete electrification in 2029. The study in Appendix E notes that this building has undergone a relatively recent refresh of the interior. However, the mechanical system is still fossil fuel based, and therefore additional investment will be necessary to achieve the goal of electrification by 2030. The study recommends replacing the existing oil-fired furnace, unit heater, fuel oil tank, and fuel oil lines with air source to air heat pump units. The two existing split system heat pump units can remain to provide cooling and supplemental heating.

## **Fire Station 1**

- Fire Station #1 is located in Central Acton. It is planned for total electrification in 2029. The study in Appendix E notes that architectural conditions and programmatic upgrades are likely going to drive the need to further invest in the building prior to the anticipated end of life of the mechanical system. The roof is 26 years old and windows are past their useful life. Both are in need of replacement within the immediate future. The interiors of the building are in generally good condition, although asbestos has not been abated and the restroom is in need of a gut renovation. Accommodating new gendered code compliant restrooms with new showers may be challenging in the given footprint.

The mechanical systems should have approximately 20+ years of life on the lower level system and 9 years of life on the upper level system left. This would put them being replaced after the 2030 goal for complete electrification. Therefore, it is recommended that electrification be accelerated to when architectural and programmatic priorities are addressed.

### **Fire Station 2**

- Fire Station #2 is located in South Acton. The study in Appendix E notes that architectural conditions and programmatic upgrades are likely going to drive the need to further invest in the building prior to the anticipated end of life of the mechanical system. The roof is 26 years old and windows are original to the building - 62 years old. Both are in need of replacement within the immediate future. The study recommends removing existing hot water boiler, pumps, older terminal heating equipment and associated hot water piping and controls and replacing them with a new air source to hot water heating heat pump.

### **Fire Station 3**

- Fire Station #3 which is located in West Acton is planned for total electrification in 2029. Similarly to Fire Station #2, the study in Appendix E notes that architectural conditions and programmatic upgrades are likely going to drive the need to further invest in the building prior to the anticipated end of life of the mechanical system. The study recommends removing existing hot water boiler, pumps, older terminal heating equipment and associated hot water piping and controls and replacing them with a new air source to hot water heating heat pump.

### **West Acton Citizens Library**

- The West Acton Citizens Library is a small building in West Acton. This building is planned to be electrified in 2029. The study in Appendix E notes that the mechanical systems were replaced in FY 2023 on an emergency in-kind basis, however a roof replacement is needed in the near future. Electrification work could be done in two phases, the first being the new roof and exterior improvements, such as new windows and resolving accessibility barriers. Then a second phase for interior renovations and mechanical systems could follow. The plan includes replacing the existing first floor gas-fired furnace with a new air to

air heat pump system including indoor air handling unit, outdoor heat pump unit, associated insulated refrigerant piping, and controls.

#### **ABRSD Buildings by 2030**

*(No ABRSD building electrifications planned for 2027-2030)*

## 2. Overview of Goals for Calendar Years 2040 and 2050

#### **Town of Acton Buildings by 2040 & 2050**

The Town of Acton plans to have all priority facilities fully electrified by 2030. Between 2030 and 2050, the Town will continue to pursue weatherization and other energy efficiency projects to improve EUI of existing buildings and reduce energy demand. Additionally, the Town will focus on electrifying buildings not included in the priority list. Electrifying heavy duty vehicles will also be pursued during this period as the electric heavy duty vehicle market is expected to improve, making these vehicles and associated incentives more accessible. The Town will continue to work with residents and local business owners to encourage decarbonization throughout the community.

#### **ABRSD Buildings by 2040**

##### **Conant ES (55,000 sf)**

- Conant ES was constructed in 1970, and current planning anticipates either all-electric major renovation or all-electric replacement by 2032. The building is a sister to Douglas ES and Gates ES buildings replaced in 2022 by the new all-electric Boardwalk campus. Conant was included in the 2016 study assessing all three buildings, and is under consideration for potential MSBA funding. Condensing gas-fired boiler (2008), limited cooling.

##### **Acton-Boxborough Regional High School (386,000 sf)**

- ABRHS was built in 1965, major renovation 2005. Non-condensing gas-fired boiler (2005). Cooling in most interior spaces (except gyms, most of caf, kitchen) via chiller and RTUs. Pool. Comprehensive weatherization measures recently completed. 2033 pegged as target for electrification due to boiler aging out - see timeline in 2022 *Electrification Roadmap* study. Electrification measures include a solar thermal heating system to address the pool, a 420 Ton ASHP system, a

2,200 MBH electric boiler system, a 190 Ton air-cooled chiller system, and pumps, as well as building conversion work (replacement of terminal equipment).

#### **Maintenance Shed (2,500 sf)**

- Built in 1969. Oil-fired forced hot air, no cooling. Building is too small to enclose a bus; as a result, school bus repair work requires garage doors to remain open during winter weather. As part of developing an electrified depot, the District intends to include a shop that will accommodate a vehicle. Heating oil will then be eliminated at the Maintenance Shed facility. Heating needs will be dramatically reduced and met with small ASHP split.

#### **ABRSD Buildings by 2050**

##### **RJ Grey Junior High School (143,000 sf)**

- Built in 1955, major renovation 2003. Condensing gas-fired boilers (2014). Limited cooling (window units, ASHP splits). Comprehensive weatherization measures recently completed. 2044 pegged as target for electrification due to boiler aging out - see timeline in 2022 *Electrification Roadmap* study. Electrification measures include installation of a 140 Ton ASHP system, a 1,250 MBH electric boiler system, and pumps, as well as building conversion work (replacement of terminal equipment).

##### **Parker Damon Building (142,000 sf)**

- Built in 2002. Twin elementary school. Condensing gas-fired boilers (2019). Cooling throughout (chiller, RTU). Comprehensive weatherization measures recently completed. 2049 pegged as target for electrification due to boiler aging out - see timeline in 2022 *Electrification Roadmap* study. Electrification measures include installation of a 150 Ton ASHP system, a 1,000 MBH electric boiler system, like-for-like chiller replacement, and pumps, as well as building conversion work (replacement of terminal equipment).

##### **Administration Building (36,000 sf)**

- Built in 1959. Condensing gas-fired boilers (2013, 2019). Partial cooling (ASHP splits, window units). Comprehensive weatherization measures recently completed. 2049 pegged as target for electrification due to boiler aging out - see timeline in 2022 *Electrification Roadmap* study. Electrification measures include

installation of a 150 Ton ASHP system, and pumps, as well as building conversion work (replacement of terminal equipment).

### 3. Identify Areas of Highest Emissions and Greatest Opportunities for Impact.

#### **Town of Acton**

The Town's four highest emitting buildings are Acton Memorial Library, Public Safety Facility, the Highway Garage, and Town Hall. All four of these buildings are prioritized for electrification by 2030 as identified in the study in Appendix E. These buildings currently make up 78% of stationary emissions as reported in Table 3.

#### **ABRSD**

At 386,000 square feet, **Acton-Boxborough Regional High School** electrification represents the most important opportunity for impact. It is the largest source of carbon emissions in the Acton/ABRSD portfolios. It is also one of the Commonwealth's flagship public high schools and is home to 2,000 high school students on a daily basis.

Identifying a successful pathway to electrification will be challenging due to the scale and complexity of the project, as well as the significant financial investment required.

The operational challenges of completing a building conversion to Low Temp Hot Water (LTHW) (with attendant repiping, and replacement of terminal equipment) will be significant when considered alongside the requirement to deliver a high quality educational environment for all students on a daily basis. In addition, the target date for electrification is 2033 (due to boiler aging out), which is close at hand given the scale of the project. The District will seek significant support and guidance in how to best complete this project, and appreciates any and all state assistance in a successful conversion.

## **B. Achieving Elimination of Onsite Fossil Fuel Use by 2050**

1. Program Management Plan for Implementation, Monitoring and Oversight
  - Town of Acton: Town of Acton personnel responsible for roadmap implementation, monitoring, and oversight include the following:

- Andrea Becerra, Sustainability Director
- Lauren West, Environmental Analyst
- John Mangiaratti, Town Manager
- Thomas Begin, Assistant Town Manager
- Matt Frost, Chief Technology Officer
- ABRSD: District personnel responsible for roadmap implementation, monitoring and oversight include the following:
  - Peter Light, Superintendent of Schools
  - Sheri Matthews, Director of Finance and Operations
  - Kate Crosby, Energy Manager
  - Marc Hamel, Facilities Coordinator
  - Brendan Hearn, Capital Infrastructure Project Manager

2. Update Roadmap every 3 years

Given the dynamic landscape of decarbonization, it is essential to continuously refresh a roadmap document in order to have it serve as a reliable guide moving forward. Both ABRSD and the Town of Acton commit to a roadmap update every three years, as an important part of participating in the Climate Leaders program.

## V. Appendix

**Appendix A:** Letter from Town of Acton Select Board



## TOWN OF ACTON

472 Main Street  
Acton, Massachusetts 01720  
(978) 929-6611  
[www.actonma.gov](http://www.actonma.gov)  
manager@actonma.gov

### *Office of the Town Manager*

December 16<sup>th</sup>, 2024

To Whom It May Concern:

Please be advised that on December 16<sup>th</sup>, 2024, Acton's Select Board met at a duly noticed and regularly scheduled meeting and voted to approve the decarbonization roadmap of the Green Communities Division's Climate Leaders Application for Certification. The Select Board was given copies of the plan for review prior to the meeting.

The Select Board voted unanimously to adopt the plan and the minutes of that meeting include the vote.

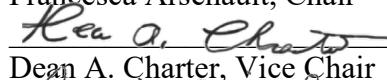
Sincerely,



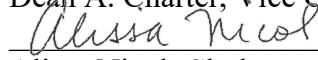
Francesca Arsenault, Chair

DATE:

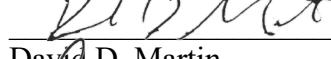
12/16/2024



Dean A. Charter, Vice Chair



Alissa Nicol, Clerk



David D. Martin



Jim Snyder-Grant

## **Appendix B: Letter from ABRSD Superintendent**

To develop engaged, well-balanced learners through collaborative, caring relationships.

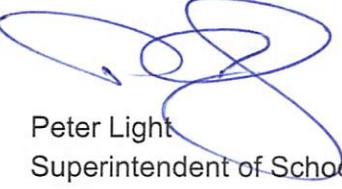
June 26, 2024

MA Department of Energy Resources  
Green Communities Division  
100 Cambridge Street, Suite 1040  
Boston, MA 02114

To Whom It May Concern:

Please be advised that Acton-Boxborough Regional School District (ABRSD) has adopted the portion of the Town of Acton's decarbonization roadmap encompassing ABRSD operations. The ABRSD portion of the roadmap was adopted by the Acton-Boxborough Regional School Committee on June 24, 2024. The ABRSD portion of the decarbonization roadmap will be included within the Town of Acton's application to DOER for Climate Leaders Certification.

Sincerely,

  
Peter Light  
Superintendent of Schools

## **Appendix C: Table 3**

**Table 3: Summary of metric tons of CO2 equivalent emissions for FY 2022 (MTCO2e) by Facility and Fuel Type**

	Propane Emissions (MTCO2e)	Electricity Emissions (MTCO2e)	Oil Emissions (MTCO2e)	Diesel Emissions (MTCO2e)	Gasoline Emissions (MTCO2e)	Natural Gas Emissions (MTCO2e)
<b>Buildings</b>						
<b>Town of Acton</b>						
468 Main Street		3.18	9.76			0.3
50 Audubon Drive		5.31				15.93
Cemetery Office		2.02	6.69			
116 Concord Road / Morrison		0.04				
18 Windsor Buidling		0.33				0
Town Hall		32.64				47.8
Memorial Library		92.68				104.08
Transfer Station		7.74				
West Acton Citizens Library		1.54				3.73
21 Maple Street Front		0.37				2.1
21 Maple Street Rear		2.58				3.41
Cemetery Chapel		0.25	6.64			
Civil Defense Building		0.44				
Fire Station 1		9.28				14.64
Fire Station 2		8.69				10.51
Fire Station 3		9.32				14.37
Fire Station 4		18.41				
Public Safety Facility		99.03				81.35
Highway Garage		10.68				92.63
<b>Acton-Boxborough Regional School District</b>						
Douglas ES		68.59				
Gates ES		71.95				196.9
Boardwalk Campus		27.25				
Conant ES		88.18				171.26
Main Campus ABRHS		940.59	17.92			1222.31
Main Campus Parker Damon Building						245.02
<b>Vehicles</b>						
ABRSD Fleet				543.52	15.68	
Municipal Fleet				338.21	526.06	
<b>Street/Traffic Lights</b>						
Street/Traffic Lights		9.42				
<b>Water &amp; Sewer</b>						
Water & Sewer		246.02	21.42			12.25
<b>Total</b>		<b>1756.53</b>	<b>44.51</b>	<b>881.73</b>	<b>526.06</b>	<b>2238.59</b>

**Appendix D: Electrification Roadmap: Town of Acton and Acton-Boxborough Regional School District (2022)**

- Available at  
<https://www.acton-ma.gov/DocumentCenter/View/8089/Acton-Electrification-Roadmap-Final-Report-and-Appendices>

**Appendix E: Acton Town Wide Facility & Electrification Study**

- Available at  
<https://doc.actonma.gov/dsweb/Get/Document-89405/230705%20Acton%20Facilities%20Report%20FINAL.pdf>

## **Appendix F: Acton Priority Facility Electrification Timeline Part 1**

Acton Priority Facility Electrification Timeline Part 1									
Building Name	2022	2023	2024	2025	2026	2027	2028	2029	2030
Town of Acton									
468 Main Street				- ⚡ -					
50 Audubon Drive (Recreation Center)						- ⚡ -			
Acton Memorial Library							- ⚡ -		
Cemetery Office (Kennedy Building)							- ⚡ -		
Fire Station 1							- ⚡ -		
Fire Station 2							- ⚡ -		
Fire Station 3							- ⚡ -		
Fire Station 4	- ⚡ -								
Highway Garage (DPW)					- ⚡ -				
Public Safety Facility				- ⚡ -					
Town Hall				- ⚡ -					
West Acton Citizens Library							- ⚡ -		
Acton-Boxborough Regional School District									
Acton-Boxborough RHS									
Administration Building									
Boardwalk Building	- ⚡ -								
Conant ES									
Maintenance Shed									
Parker Damon Building									
RJ Grey Junior HS									

## **Appendix G: Acton Priority Facility Electrification Timeline Part 2**

Acton Priority Facility Electrification Timeline Part 2		2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Town of Acton																					
468 Main Street																					
50 Audubon Drive (Recreation Center)																					
Acton Memorial Library																					
Cemetery Office (Kennedy Building)																					
Fire Station 1																					
Fire Station 2																					
Fire Station 3																					
Fire Station 4																					
Highway Garage (DPW)																					
Public Safety Facility																					
Town Hall																					
West Acton Citizens Library																					
Acton-Boxborough Regional School District																					
Acton-Boxborough RHS																					
Administration Building																					
Boardwalk Building																					
Conant ES																					
Maintenance Shed																					
Parker Damon Building																					
RJ Grey Junior HS																					