

Town of North Attleborough, Massachusetts Energy Reduction Plan

**Prepared by the Southeastern Regional Planning and Economic
Development District (SRPEDD) with support from the Town of North
Attleborough**



**In Fulfillment of the
Massachusetts Green Communities Grant Program
Criterion #3**

November 2019

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I. Purpose and Acknowledgements

A. Letter from the General Government Verifying Adoption of the Energy Reduction Plan

Michael H. Gallagher
Acting Town Manager



TOWN OF NORTH ATTLEBOROUGH
43 South Washington Street
North Attleborough MA 02760
508-699-0100

November 22, 2019

To Whom It May Concern:

Please be advised that on November 22, 2019, I, Michael H. Gallagher, Acting Town Manager of the Town of North Attleborough as the duly appointed Chief Executive Officer of the Town approved the adoption of the Energy Reduction Plan for Criterion 3 of the Green Communities Application for Designation.

Sincerely,

Michael H. Gallagher
Acting Town Manager

CC: Town Council
Lyle Pirnie, Economic Development Coordinator

B. Letter from the School District Verifying Adoption/Approval of the Energy Reduction Plan



North Attleborough Public Schools
John Woodcock Administration Building
6 Morse Street
North Attleborough, Massachusetts 02760

Scott C. Holcomb
Superintendent of Schools
508-643-2100 (phone) 508-643-2110 (fax)

November 22, 2019

To Whom It May Concern:

Please be advised that North Attleborough Public School District adopts the Energy Reduction Plan as part of the town of North Attleborough's Green Communities Application for Designation.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott C. Holcomb".

Scott C. Holcomb
Superintendent of Schools

The North Attleborough Public School System does not discriminate on the basis of race, color, religion or religious creed, ancestry, national or ethnic origin, age, gender, gender-identity, sexual orientation, military or veteran status, disability, genetic information, or any other characteristic protected under applicable federal, state or local law in admission to, access to, employment in, or treatment in its programs and activities.

C. List of Contributors

The collaborative efforts of the offices of North Attleborough Interim Town Manager Michael Gallagher, Economic Development Coordinator Lyle Pirnie, Town Planner Nancy Runkle, Planning Board Chair Marie Clarner, North Attleborough Public Schools Superintendent Scott C. Holcomb, North Attleborough Electric Department Project Manager Chris Mitchell, Liberty Utilities Manager for Efficiency and Customer Programs Stephanie Terach, as well as MA Department of Energy Resources Green Community Regional Coordinator Lisa Sullivan, were all vital in the production this Plan.

Much of the information in this Plan was derived from energy audits performed by RISE Engineering, led by Nathan Strong. Additional technical assistance was provided by the Southeastern Regional Planning and Economic Development District (SRPEDD), the author of this Plan.

II. Executive Summary

A. Narrative Summary of the Town

The Town of North Attleborough is located in southeastern Massachusetts in northwest Bristol County. It is located approximately 45 minutes away from Boston and 15 minutes away from Providence by car. The town has an approximate area of 19.4 square miles and is bordered by Plainville on the north; Mansfield on the east; Attleboro on the south; and Cumberland, Rhode Island on the west. According to the 2010 U.S. Census, North Attleborough had a population of 28,712, having experienced a 5.8% increase in population since 2000.

North Attleborough was originally settled as part of Attleboro in 1661. Shortly after its founding, settlers cleared the land for farms, which, along with a number of small grist mills and sawmills, would dominate its landscape into the early nineteenth century. The early nineteenth century also saw the rise of the textile and jewelry manufacturing industry, which saw its growth spurred by the need for buttons, badges, and medals as a result of the Civil War. The town continued to be known as jewelry manufacturing hub well into the twentieth century, with the presence of major jewelry manufacturers Jostens and Balfour.

Today, North Attleborough is a popular suburban community due to its quality school system, many parks and playgrounds, as well as its location and accessibility to the larger southeastern Massachusetts region via Interstates 95 and 295, as well as Routes 1 and 152.

B. Summary of Municipal Energy Uses

- Total Number of Municipal Buildings: 18
- Total Number of Municipal Vehicles: 145
- Total Number of Street Lights:
- Total Number of Traffic Lights:
- Water & Sewer:

Table 1: Municipal Energy Use Summary

	Number	Ownership
Buildings	18	
Oil Heat	6	Municipality
Natural Gas Heat	10	Municipality
Propane Heat	0	
Biomass Heat	0	
Electricity	2	Municipality
Other Type Heat	0	
Vehicles	145	
Non-Exempt	12	Municipality
Exempt	133	Municipality
Street Lights	0	Municipality
Traffic Lights	0	Municipality
Water & Sewer	0	Municipality

C. Summary of Energy Use Baseline and Plans for Reductions

This Energy Reduction Plan commits North Attleborough to reduce energy use in municipal facilities by at least 20% compared to Fiscal Year 2019 over five years. In the baseline year, the town used 86,101 MMBTUs of energy, which means the town must reduce usage by at least 17,220 MMBTUs over the following five-year period.

Figure 1: Municipal Energy Use Baseline Dashboard from MEI (FY2019)

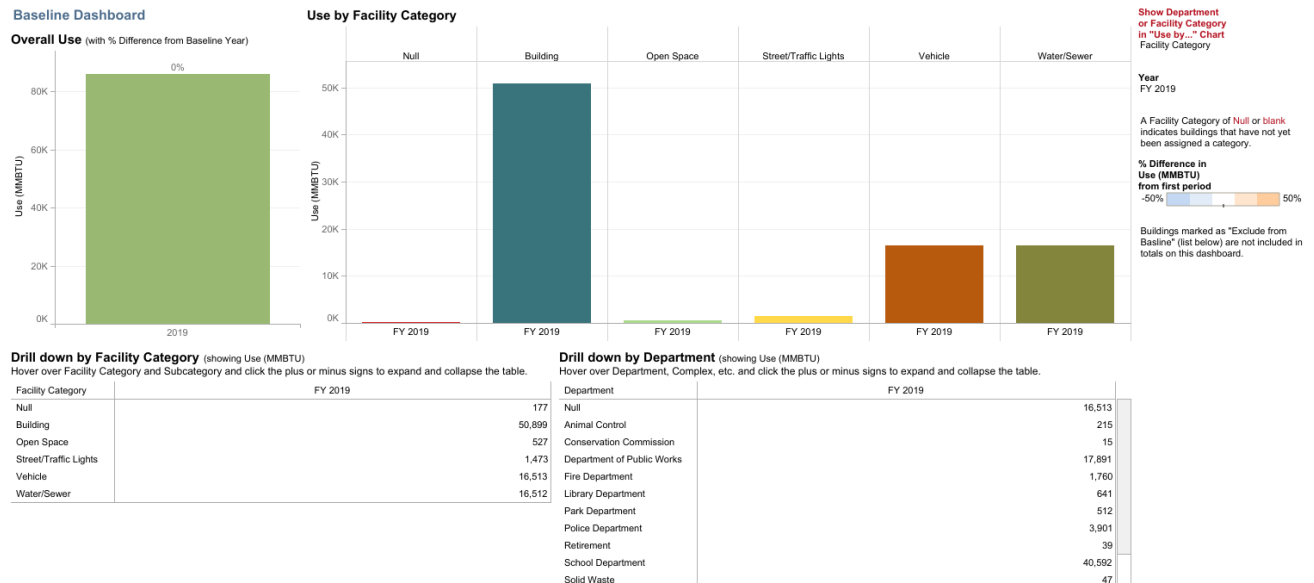


Table 2: Summary of Municipal Energy Use and Reductions

Facility Category	MMBTU Used in Baseline Year	% of Total MMBtu Baseline Energy Consumption	Projected Planned MMBtu Savings	Savings as % of Total MMBtu Baseline Energy Consumption
Buildings	50,899	59.1%	11,889	13.8%
Open Space	527	0.6%	0	0.0%
Street/Traffic Lights	1,473	1.7%	0	0.0%
Vehicle	16,513	19.2%	2,777	3.2%
Water/Sewer	16,512	19.2%	0	0.0%
Null	177	0.2%	0	0.0%
Total	86,101	100%	14,666	17.0%

III. Energy Use Baseline Inventory

A. Identification of the Inventory Tool Used: The Town of North Attleborough used the Department of Energy Resources (DOER) MassEnergyInsight (MEI) web-based energy inventory and analysis tool.

B. Identification of the Baseline Year: Fiscal Year (FY) 2019 will serve as the baseline year. FY2019 ran from July 1, 2018 to June 30, 2019. This will give the Town until June 30, 2024 (FY2020 - FY2024) to reach its 20% energy reduction goal.

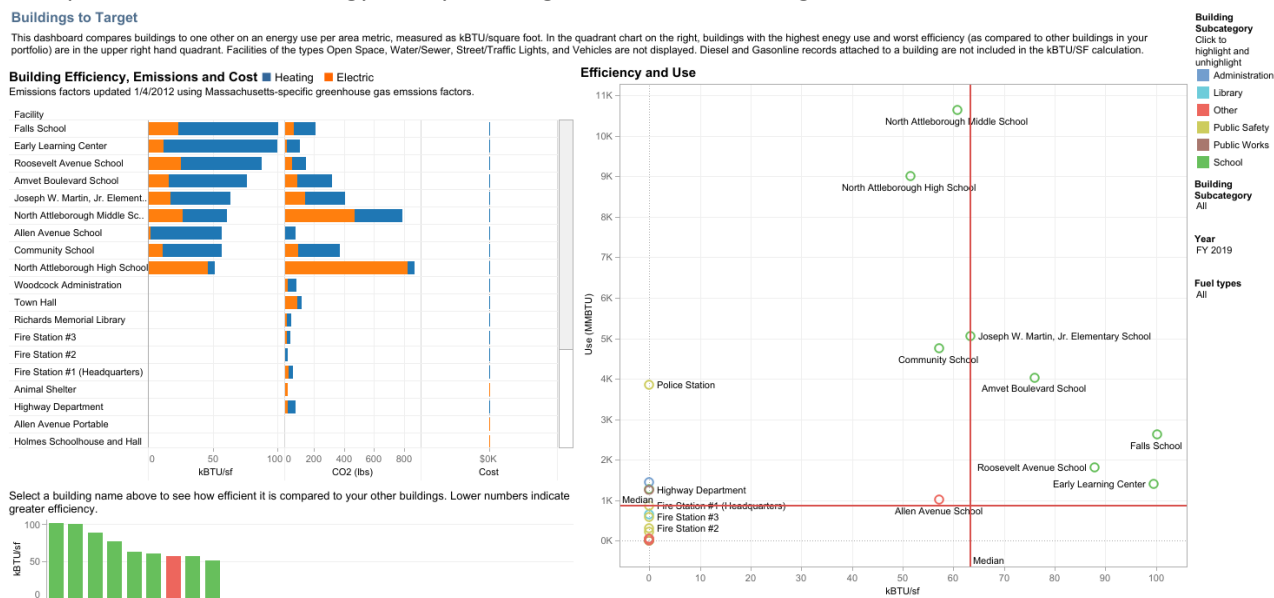
C. Municipal Energy Consumption for the Baseline Year (FY2019): In the baseline year, the town used 86,101 MMBTUs of energy. Table 3A and 3B presents energy use for each municipal facility in MMBTUs and native units.

- Buildings: North Attleborough's 18 buildings used 50,899 MMBTUs, approximately 59.1% of North Attleborough's total municipal energy use. The buildings with the largest energy use was North Attleborough Middle School (8,078 MMBTUs) as shown in Figure 2.
- Street/Traffic Lights: There are XXX municipally-owned streetlights and X municipally-owned traffic lights in North Attleborough. These streetlights and traffic lights consumed 1,473 MMBTUs, or 1.7% of the Town's energy use.
- Vehicles: North Attleborough's 145 municipal vehicles used 19.2% of the baseline total, or 16,513 MMBTUs.
- Open Space: North Attleborough's open space facilities consume 527 MMBTUs, or 0.6% of the town's energy use.

*Please note that Municipal Energy Consumption for Baseline Year FY2019 in both Native Fuel Units (Table 3A) and MMBTU (Table 3B) are located in Appendix B.

Figure 2: MEIs Buildings to Target Dashboard

In Figure 2 below, the points further to the right have a higher energy use per square foot (i.e. less energy efficient), while the points higher up use more total energy. North Attleborough Middle School, for example, uses the most energy of any building in North Attleborough.



IV. Energy Reduction Plan

A. Narrative Summary

As shown below, the town has identified energy savings measures to reduce usage from FY2019 by 11,889 MMBTUs or 17.0%. These measures are included in Table 4: Energy Conservation Measures, located in Appendix C. It is important to note that the schedule below can be modified to accommodate the changing goals and priorities of the community and that projects outside the scope of this Energy Reduction Plan may be eligible for grant funding as long as they are in a building that is listed in this Plan.

1. Overview of Plan Goals Years 1-3:

- Animal Control Facility:
 - LED Lighting Upgrades & Controls
- DPW-Highway:
 - LED Lighting Upgrades & Controls
 - Insulation & Weatherstripping
- DPW-Sewer:
 - Insulation & Weatherstripping
- DPW-Water:
 - LED Lighting Upgrades & Controls
 - Insulation & Weatherstripping
 - Condensing Unit Heaters
- Fire Headquarters:
 - LED Lighting Upgrades & Controls
 - Insulation & Weatherstripping
- Fire Station #2:
 - LED Lighting Upgrades & Controls
 - Insulation & Weatherstripping
- Fire Station #3:
 - LED Lighting Upgrades & Controls
 - Insulation & Weatherstripping
- Richards Memorial Library:
 - LED Lighting Upgrades & Controls
 - Insulation & Weatherstripping
 - Programmable Thermostats
- Police Headquarters:
 - LED Lighting Upgrades & Controls
 - Insulation & Weatherstripping
 - EC Motors with Variable Frequency Drives (VFDs) on Heating Hot Water (HHW) Circ Pumps
- Police-Radio Tower-Elmwood:
 - LED Lighting Upgrades & Controls
- Police-Storage Shed:
 - LED Lighting Upgrades & Controls
- Amvet Boulevard School:
 - LED Lighting Upgrades & Controls
 - Insulation & Weatherstripping
- Community School:

- LED Lighting Upgrades & Controls
 - Insulation & Weatherstripping
 - Steam Trap Survey
- Early Learning Center:
 - LED Lighting Upgrades & Controls
 - Insulation & Weatherstripping
- Falls School:
 - LED Lighting Upgrades & Controls
 - Insulation & Weatherstripping
 - EC Motors with Variable Frequency Drives (VFDs) on Heating Hot Water (HHW) Circ Pumps
- Joseph Martin Elementary School:
 - LED Lighting Upgrades & Controls
 - Insulation & Weatherstripping
 - EC Motors with Variable Frequency Drives (VFDs) on Heating Hot Water (HHW) Circ Pumps
- North Attleborough High School:
 - LED Lighting Upgrades & Controls
 - Insulation & Weatherstripping
 - Fuel Switching from Electric to Gas Heat
- North Attleborough Middle School:
 - LED Lighting Upgrades & Controls
 - Insulation & Weatherstripping
 - EC Motors with Variable Frequency Drives (VFDs) on Heating Hot Water (HHW) Circ Pumps
 - EC Motors with Variable Frequency Drives (VFDs) on Domestic Hot Water (DHW) Circ Pumps
- Roosevelt Avenue School:
 - LED Lighting Upgrades & Controls
 - Insulation & Weatherstripping
 - Gas-Fired Condensing Boilers
- Town Hall:
 - LED Lighting Upgrades & Controls
 - Insulation & Weatherstripping

2. Overview of Plan Goals Years 4-5:

- Building Operator Certification
- Fire Headquarters:
 - Condensing Unit Heaters
- Fire Station #3:
 - Condensing Unit Heaters
- Richards Memorial Library
 - EC Motors with Variable Frequency Drives (VFDs) on Heating Hot Water (HHW) Circ Pumps
- Police Headquarters:
 - Gas-Fired Condensing Boiler
 - Gas-Fired Domestic Hot Water Heater (DHWH)

- Retrocommissioning
- Amvet Boulevard School:
 - Gas-Fired Condensing Boilers
 - Gas-Fired Domestic Hot Water Heater (DHWH)
 - EC Motors with Variable Frequency Drives (VFDs) on Heating Hot Water (HHW) Circ Pumps
 - Retrocommissioning
- Community School:
 - Retrocommissioning
- Early Learning Center:
 - Gas-Fired Condensing Boilers
 - EC Motors with Variable Frequency Drives (VFDs) on Heating Hot Water (HHW) Circ Pumps
 - Retrocommissioning
- Falls School:
 - Gas-Fired Condensing Hydronic Boiler
 - Retrocommissioning
- Joseph Martin Elementary School:
 - Gas-Fired Condensing Boilers
 - Gas-Fired Domestic Hot Water Heater (DHWH)
 - Retrocommissioning
- North Attleborough High School:
 - Retrocommissioning
- North Attleborough Middle School:
 - Gas-Fired Condensing Boilers
 - Retrocommissioning
- Roosevelt Avenue School:
 - Retrocommissioning
- Town Hall
 - Retrocommissioning
- Allen Avenue School
 - Insulation & Weatherstripping
 - Gas-Fired Hydronic Condensing Boiler
 - EC Motors with Variable Frequency Drives (VFDs) on Heating Hot Water (HHW) Circ Pumps
- Retrocommissioning:

Retrocommissioning provides an understanding of how closely a building comes to operating as intended. It helps to identify improper equipment performance, what equipment or systems need to be replaced, opportunities for saving energy and money, and strategies for improving performance of the various building systems.¹
- Building Operator Certification:

The Town intends to have a staff person attend the Building Operator Certification (BOC) Program. Energy-savings evaluations show that an individual Certified Building Operator (CBO) can reduce energy use by more than one (1) percent of a building's building electricity demand.² By certifying

¹ https://www.energystar.gov/sites/default/files/buildings/tools/EPA_BUM_CH5_RetroComm.pdf

² Energy Savings for the Building Operator Certification (BOC®) Program. <http://www.theboc.info/wp-content/uploads/2017/02/BOC-EnergySavings-FAQ-2.0-web.pdf>

operators in building systems efficiency, the town will realize savings in energy use and related costs, improvements in comfort and safety, and may continue to experience these benefits for up to five (5) years following certification (based on program estimates).³

- **Town-Wide “Anti-Idling” Policy:**
Idling vehicles contribute significantly to air pollution and waste fuel, increasing fleet management costs. Municipalities across the commonwealth and the nation have seen significant cost and greenhouse gas emission reductions since implementing town-wide “no-idling” policies for municipal vehicles. Implementing such a policy can reduce vehicle fuel consumption by as much as 10%.⁴ Economic Development Coordinator Lyle Pirnie will be responsible for implementing this energy conservation measure.
- **Monitor Tire Air Pressure & Use Fuel Efficient Tires:**
Maintaining appropriate air pressure in vehicle tires can decrease that vehicles fuel consumption by as much as 4%.⁵ Economic Development Coordinator Lyle Pirnie will be responsible for implementing this energy conservation measure.
- **Use 100% Synthetic Oil:**
The use of 100% synthetic oils reduces fuel consumption, the number of annual oil change and labor costs. This can reduce vehicle fuel consumption by as much as 2%.⁶ Economic Development Coordinator Lyle Pirnie will be responsible for implementing this energy conservation measure.
- **Replacement of Town Hall and Health Department Automobiles⁷**
The replacement of five (5) Ford Rangers (21 mpg) in the Water Department with five (5) 2020 Chevrolet Bolt Electric Vehicle (118 mpg), would result in a savings of 196 gallons of gas per vehicle per year (980 gallons total) based on an assumption that each vehicle travels 5,000 miles annually.

B. Path to 20% Energy Use Reduction by the end of Fiscal Year 2024

1. Program Management Plan for Implementation, Monitoring, and Oversight

The Town Manager’s Office will be responsible both for oversight of the Energy Reduction Plan and for the implementation of energy conservation measures within the Town. The Town Manager’s Office will also be responsible for the annual reporting requirements to maintain designation and eligibility for annual competitive grant funding.

2. Summary of Energy Audit(s) or Other Sources for Projected Energy Savings

Building audits were conducted by RISE Engineering in 2019 and provide 9.3% energy savings. The RISE Engineering Audit is included in Appendix A. Other measure including retrocommissioning all high energy use buildings, having staff become Building Operator Certified (equates to an additional 2.5% energy savings), implementing behavioral vehicle measures (anti-idling policy, monitoring tire air pressure, and the use of 100% synthetic oil), and replacing 5 Ford Rangers in the Water Department with new 5 Chevrolet Bolt electric vehicles.

³ Building Operator Certification Program <https://www.theboc.info/certifications/>

⁴ <https://www.fueleconomy.gov/feg/pdfs/OwnerRelatedFuelEconomyImprovements.pdf>

⁵ <https://www.fueleconomy.gov/feg/pdfs/OwnerRelatedFuelEconomyImprovements.pdf>

⁶ <https://www.fueleconomy.gov/feg/pdfs/OwnerRelatedFuelEconomyImprovements.pdf>

⁷ <https://www.fueleconomy.gov/feg/pdfs/OwnerRelatedFuelEconomyImprovements.pdf>;
<https://afdc.energy.gov/fuels/>

C. Summary of Long-Term Energy Reduction Goals – Beyond 5 Years

1. Municipal Buildings (including schools)

To better strategize for the long-term maintenance and management of municipal buildings, North Attleborough will work with internal schools and town staff as well as outside consultants, when necessary, to assess and document the condition of major municipal buildings on an annual basis. In addition to exposing continuing opportunities for energy use reductions, this effort will provide the Town with a clear, long-term asset management strategy for the effective budgeting and maintenance of buildings.

2. Vehicles (including schools)

The Fuel-Efficient Vehicle policy will have become engrained within municipal purchasing practices after five years, and the Town will seek to explore even more efficient policies and tracking systems to enable more efficiency.

3. Perpetuating Energy Efficiency

Ongoing dialogue with Town and School staff can tap into the knowledge of the employees who use and maintain the buildings every day. It can empower building staff to develop a detailed repair and management schedule and collect data on problems and inefficiencies that may be missed by traditional third party audits. The use of a web-based application system like SeeClickFix creates additional real-time opportunities for efficiencies in operation and maintenance.

The Town of North Attleborough will grow its capacity to retrofit and build more efficient facilities, purchase more efficient vehicles, and illuminate the Town through more efficient lighting throughout the 5-year period. These practices will become more engrained in the culture of the Town and will provide opportunities to instill the ethos into additional policies and programs for more dedicated long-term funding streams and strategies.

V: Appendix A: Building Energy Audits – RISE Engineering

Appendix B: Municipal Energy Consumption for Baseline Year FY2019

Appendix C: Table 4: Energy Conservation Measures



**2019-2020 DOER Designation Grant Projects
Town of North Attleboro Energy Efficiency Projects
November 22, 2019**

Line Item	FACILITY LOCATION	CHAPTER 25A SECTION 3 PROCUREMENT LAW	ENERGY CONSERVATION MEASURES	PROJECT COSTS			UTILITY COSTS PER UNIT		UTILITY INCENTIVE	ENERGY SAVINGS						RETURN ON
#	FACILITY	PROJECT CATEGORY	ECM	PROJECT COST	LIBERTY GAS INCENTIVE	CUSTOMER NET COST	\$/Kwh	\$/Therm	\$/THERM SAVED	kW REDUCTION	kWh REDUCTION	Therm REDUCTION	MMBTU REDUCTION	ANNUAL SAVINGS	MAINTENANCE SAVINGS	PAYBACK IN YEARS
1	Animal Control - Shelter	Modifications of Lighting Fixtures	LED Lighting Upgrades & Controls	\$ 4,768	\$ -	\$ 4,768	\$ 0.1800	\$ 1.30	\$ 1.50	2.0	4,699	0	16	\$ 846	\$ 90	5.1
Animal Control - Shelter Totals				\$ 4,768	\$ -	\$ 4,768				2.0	4,699	0	16	\$ 846	\$ 90	5.1
2	DPW - Highway	Modifications of Lighting Fixtures	LED Lighting Upgrades & Controls	\$ 32,539	\$ -	\$ 32,539	\$ 0.1800	\$ 1.30	\$ 1.50	14.0	29,490	0	101	\$ 5,308	\$ 620	5.5
3	DPW - Highway	Insulation & Weatherstripping	Weatherization	\$ 66,700	\$ -	\$ 66,700	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	0	625	63	\$ 813	\$ -	82.1
4	DPW - Sewer	Insulation & Weatherstripping	Weatherization	\$ 51,996	\$ -	\$ 51,996	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	0	1,198	120	\$ 1,554	\$ -	33.5
5	DPW - Water	Modifications of Lighting Fixtures	LED Lighting Upgrades & Controls	\$ 51,575	\$ -	\$ 51,575	\$ 0.1800	\$ 1.30	\$ 1.50	14.6	38,311	0	131	\$ 6,896	\$ 999	6.5
6	DPW - Water	Insulation & Weatherstripping	Weatherization Existing: 2x 150 MBH gas-fired unit heaters. Proposed: 2x 150 MBH gas-fired condensing unit heaters	\$ 53,986	\$ -	\$ 53,986	\$ 0.1800	\$ 1.00	\$ 1.50	0.0	0	670	67	\$ 670	\$ -	80.6
7	DPW - Water	Unit Heaters	Unit Heaters	\$ 27,376	\$ 1,500	\$ 25,876	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	0	818	82	\$ 1,063	\$ -	24.3
DPW Totals				\$ 284,172	\$ 1,500	\$ 282,672				28.6	67,801	3,311	563	\$ 16,304	\$ 1,619	15.8
8	Fire Headquarters	Modifications of Lighting Fixtures	LED Lighting Upgrades & Controls	\$ 22,933	\$ -	\$ 22,933	\$ 0.1800	\$ 1.30	\$ 1.50	11.0	27,125	0	93	\$ 4,883	\$ 567	4.2
9	Fire Headquarters	Insulation & Weatherstripping	Weatherization Existing: 1x 200 MBH gas-fired furnace. Proposed: 1x 200 MBH gas-fired condensing furnace	\$ 12,806	\$ -	\$ 12,806	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	879	301	33	\$ 550	\$ -	23.3
10	Fire Headquarters	Heating Furnace	Heating Furnace	\$ 31,860	\$ 600	\$ 31,260	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	168	67	7	\$ 117	\$ -	266.4
Fire Headquarters Totals				\$ 67,599	\$ 600	\$ 66,999				11.0	28,172	368	133	\$ 5,549	\$ 567	11.0
11	Fire Station #2	Modifications of Lighting Fixtures	LED Lighting Upgrades & Controls	\$ 9,295	\$ -	\$ 9,295	\$ 0.1800	\$ 1.30	\$ 1.50	2.4	4,644	0	16	\$ 836	\$ 102	9.9
12	Fire Station #2	Insulation & Weatherstripping	Weatherization	\$ 43,518	\$ -	\$ 43,518	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	436	480	49	\$ 702	\$ -	61.9
Fire Station #2 Totals				\$ 52,813	\$ -	\$ 52,813				2.4	5,080	480	65	\$ 1,538	\$ 102	32.2
13	Fire Station #3	Modifications of Lighting Fixtures	LED Lighting Upgrades & Controls	\$ 16,189	\$ -	\$ 16,189	\$ 0.1800	\$ 1.30	\$ 1.50	6.2	16,257	0	55	\$ 2,926	\$ 168	5.2
14	Fire Station #3	Insulation & Weatherstripping	Weatherization Existing: 4x 100 MBH gas-fired unit heaters. Proposed: 4x 100 MBH gas-fired condensing unit heaters	\$ 18,144	\$ -	\$ 18,144	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	141	275	28	\$ 383	\$ -	47.4
15	Fire Station #3	Unit Heaters	Unit Heaters	\$ 41,300	\$ 3,000	\$ 38,300	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	0	351	35	\$ 456	\$ -	83.9
Fire Station #3 Totals				\$ 75,633	\$ 3,000	\$ 72,633				6.2	16,398	626	119	\$ 3,765	\$ 168	18.5
16	Richards Memorial Library	Modifications of Lighting Fixtures	LED Lighting Upgrades & Controls	\$ 26,198	\$ -	\$ 26,198	\$ 0.1800	\$ 1.30	\$ 1.50	6.1	17,744	0	61	\$ 2,307	\$ 602	9.0
17	Richards Memorial Library	Insulation & Weatherstripping	Weatherization Existing: 2x 3/4HP HHW Circ Pumps. Proposed: 2x 3/4HP EC Motors on HHW Circ Pumps	\$ 53,372	\$ -	\$ 53,372	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	710	726	75	\$ 1,072	\$ -	49.8
18	Richards Memorial Library	EC Motors on HHW Circ Pumps	EC Motors on HHW Circ Pumps	\$ 14,160	\$ -	\$ 14,160	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	2,318	0	8	\$ 417	\$ -	33.9
19	Richards Memorial Library	Programmable Thermostats	Existing: 7x non-programmable thermostats. Proposed: 7x programmable thermostats	\$ 1,540	\$ 175	\$ 1,365	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	0	224	22	\$ 291	\$ -	4.7



**2019-2020 DOER Designation Grant Projects
Town of North Attleboro Energy Efficiency Projects
November 22, 2019**

Line Item	FACILITY LOCATION	CHAPTER 25A SECTION 3 PROCUREMENT LAW	ENERGY CONSERVATION MEASURES	PROJECT COSTS			UTILITY COSTS PER UNIT		UTILITY INCENTIVE	ENERGY SAVINGS						RETURN ON
#	FACILITY	PROJECT CATEGORY	ECM	PROJECT COST	LIBERTY GAS INCENTIVE	CUSTOMER NET COST	\$/Kwh	\$/Therm	\$/THERM SAVED	kW REDUCTION	kWh REDUCTION	Therm REDUCTION	MMBTU REDUCTION	ANNUAL SAVINGS	MAINTENANCE SAVINGS	PAYBACK IN YEARS
Richards Memorial Library Totals				\$ 95,270	\$ 175	\$ 95,095				6.1	20,772	950	166	\$ 4,087	\$ 603	20.3
20	Police Headquarters	Modifications of Lighting Fixtures	LED Lighting Upgrades & Controls	\$ 67,091	\$ -	\$ 67,091	\$ 0.1800	\$ 1.30	\$ 1.50	23.7	83,420	0	0	\$ 15,016	\$ 1,318	4.1
21	Police Headquarters	Insulation & Weatherstripping	Weatherization Existing: 1x 1,827 MBH gas-fired hydronic boiler. Proposed: 1x 1,500 MBH gas-fired condensing boiler	\$ 12,480	\$ -	\$ 12,480	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	0	247	25	\$ 321	\$ -	38.9
22	Police Headquarters	Heating Boiler	Existing: 1x 199 MBH gas-fired DHWH. Proposed: 1x 199 MBH gas-fired condensing DHWH	\$ 94,400	\$ 7,500	\$ 86,900	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	0	2,263	226	\$ 2,942	\$ -	29.5
23	Police Headquarters	Domestic Hot Water Heater	Existing: 2x 2HP HHW Circ Pumps. Proposed: 2x 2HP EC Motors w/ VFDs on HHW Circ Pumps	\$ 23,104	\$ -	\$ 23,104	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	0	299	30	\$ 389	\$ -	59.4
24	Police Headquarters	EC Motors on HHW Circ Pumps		\$ 21,830	\$ -	\$ 21,830	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	6,041	0	21	\$ 1,087	\$ -	20.1
Police Headquarters Totals				\$ 218,905	\$ 7,500	\$ 211,405				23.7	89,461	2,809	302	\$ 19,755	\$ 1,318	10.0
25	Police - Radio Tower - Elmwood	Modifications of Lighting Fixtures	LED Lighting Upgrades & Controls	\$ 806	\$ -	\$ 806	\$ 0.1800	\$ 1.30	\$ -	0.4	1,067	0	4	\$ 192	\$ -	4.2
Police - Radio Tower - Elmwood Totals				\$ 806	\$ -	\$ 806				0.4	1,067	0	4	\$ 192	\$ -	4.2
26	Police - Storage Shed	Modifications of Lighting Fixtures	LED Lighting Upgrades & Controls	\$ 550	\$ -	\$ 550	\$ 0.1800	\$ 1.30	\$ -	0.5	550	0	2	\$ 99	\$ -	5.6
Police - Storage Shed Totals				\$ 550	\$ -	\$ 550				0.5	550	0	2	\$ 99	\$ -	5.6
27	School - Amvet Blvd Elementary	Modifications of Lighting Fixtures	LED Lighting Upgrades & Controls	\$ 48,629	\$ -	\$ 48,629	\$ 0.1800	\$ 1.30	\$ 1.50	55.9	164,378	0	561	\$ 29,588	\$ 2,664	1.5
28	School - Amvet Blvd Elementary	Insulation & Weatherstripping	Weatherization Existing: 2x 6,300 MBH oil-fired hydronic boilers. Proposed: 3x 2,000 MBH gas-fired condensing boilers	\$ 65,758	\$ -	\$ 65,758	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	0	1,681	168	\$ 2,185	\$ -	30.1
29	School - Amvet Blvd Elementary	Heating Boilers	Existing: 1x 199 MBH gas-fired DHWH w/ indirect fired storage tank. Proposed: 1x 199 MBH gas-fired condensing DHWH w/ indirect fired storage tank	\$ 566,400	\$ 30,000	\$ 536,400	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	0	2,473	247	\$ 3,215	\$ -	166.8
30	School - Amvet Blvd Elementary	Domestic Hot Water Heater	Existing: 2x 30HP HHW Circ Pumps. Proposed: 2x 30HP EC Motors w/ VFDs on HHW Circ Pumps	\$ 23,104	\$ -	\$ 23,104	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	0	161	16	\$ 209	\$ -	110.4
31	School - Amvet Blvd Elementary	EC Motors on HHW Circ Pumps		\$ 26,550	\$ -	\$ 26,550	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	1,681	0	6	\$ 303	\$ -	87.7
School - Amvet Blvd Elementary Totals				\$ 730,441	\$ 30,000	\$ 700,441				55.9	166,059	4,315	998	\$ 35,500	\$ 2,664	18.4
32	School - Community Elementary	Modifications of Lighting Fixtures	LED Lighting Upgrades & Controls	\$ 97,769	\$ -	\$ 97,769	\$ 0.1800	\$ 1.30	\$ 1.50	75.3	210,200	0	717	\$ 37,836	\$ 3,045	2.4
33	School - Community Elementary	Insulation & Weatherstripping	Weatherization Steam Trap Survey (Estimated cost and incentive is for survey only. Repair cost will depend on survey results)	\$ 193,658	\$ -	\$ 193,658	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	0	6,098	610	\$ 7,927	\$ -	24.4
34	School - Community Elementary	Steam System		\$ 2,900	\$ 2,900	\$ -	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	0	1,768	177	\$ 2,298	\$ -	0.0
School - Community Elementary Totals				\$ 294,327	\$ 2,900	\$ 291,427				75.3	210,200	7,866	1,504	\$ 48,062	\$ 3,045	5.7
35	School - Early Learning Center	Modifications of Lighting Fixtures	LED Lighting Upgrades & Controls	\$ 20,018	\$ -	\$ 20,018	\$ 0.1800	\$ 1.30	\$ 1.50	13.7	40,331	0	138	\$ 7,260	\$ 740	2.5
36	School - Early Learning Center	Insulation & Weatherstripping	Weatherization	\$ 11,566	\$ -	\$ 11,566	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	0	207	21	\$ 269	\$ -	43.0



**2019-2020 DOER Designation Grant Projects
Town of North Attleboro Energy Efficiency Projects
November 22, 2019**

Line Item	FACILITY LOCATION	CHAPTER 25A SECTION 3 PROCUREMENT LAW	ENERGY CONSERVATION MEASURES	PROJECT COSTS			UTILITY COSTS PER UNIT		UTILITY INCENTIVE	ENERGY SAVINGS						RETURN ON
#	FACILITY	PROJECT CATEGORY	ECM	PROJECT COST	LIBERTY GAS INCENTIVE	CUSTOMER NET COST	\$/Kwh	\$/Therm	\$/THERM SAVED	kW REDUCTION	kWh REDUCTION	Therm REDUCTION	MMBTU REDUCTION	ANNUAL SAVINGS	MAINTENANCE SAVINGS	PAYBACK IN YEARS
37	School - Early Learning Center	Heating Boilers	Existing: 1x 4,000 MBH oil-fired hydronic boiler. Proposed: 1x 2,000 MBH gas-fired condensing boiler	\$ 141,600	\$ 10,000	\$ 131,600	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	0	774	77	\$ 1,006	\$ -	130.8
38	School - Early Learning Center	EC Motors on HHW Circ Pumps	Existing: 2x 1.5HP HHW Circ Pumps. Proposed: 2x 1.5HP EC Motors w/ VFDs on HHW Circ Pumps	\$ 21,830	\$ -	\$ 21,830	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	4,890	0	17	\$ 880	\$ -	24.8
School - Early Learning Center Totals				\$ 195,014	\$ 10,000	\$ 185,014				13.7	45,221	981	252	\$ 9,415	\$ 740	18.2
39	School - Falls Elementary	Modifications of Lighting Fixtures	LED Lighting Upgrades & Controls	\$ 47,935	\$ -	\$ 47,935	\$ 0.1800	\$ 1.30	\$ 1.50	29.1	83,633	0	285	\$ 15,054	\$ 1,452	2.9
40	School - Falls Elementary	Insulation & Weatherstripping	Weatherization	\$ 5,380	\$ -	\$ 5,380	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	0	259	26	\$ 337	\$ -	16.0
41	School - Falls Elementary	Heating Boilers	Existing: 1x 4,206 MBH oil-fired steam boiler. Proposed: 1x 2,000 MBH gas-fired condensing hydronic boiler (remove HX and repipe system)	\$ 141,600	\$ 10,000	\$ 131,600	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	0	1,445	145	\$ 1,879	\$ -	70.1
42	School - Falls Elementary	EC Motors on HHW Circ Pumps	Existing: 2x 3HP HHW Circ Pumps. Proposed: 2x 3HP EC Motors w/ VFDs on HHW Circ Pumps	\$ 26,550	\$ -	\$ 26,550	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	8,343	0	28	\$ 1,502	\$ -	17.7
School - Falls Elementary Totals				\$ 221,465	\$ 10,000	\$ 211,465				29.1	91,976	1,704	484	\$ 18,771	\$ 1,452	10.5
43	School - Joseph W Martin Elementary	Modifications of Lighting Fixtures	LED Lighting Upgrades & Controls	\$ 74,780	\$ -	\$ 74,780	\$ 0.1800	\$ 1.30	\$ 1.50	42.3	121,118	0	413	\$ 21,801	\$ -	3.4
44	School - Joseph W Martin Elementary	Insulation & Weatherstripping	Weatherization	\$ 34,082	\$ -	\$ 34,082	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	4,354	854	100	\$ 1,894	\$ -	18.0
45	School - Joseph W Martin Elementary	Heating Boilers	Existing: 2x 4,180 MBH oil-fired hydronic boilers. Proposed: 3x 2,000 MBH gas-fired condensing boilers	\$ 566,400	\$ 30,000	\$ 536,400	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	0	3,723	372	\$ 4,840	\$ -	110.8
46	School - Joseph W Martin Elementary	Domestic Hot Water Heater	Existing: 1x 200 MBH gas-fired DHWH. Proposed: 1x 200 MBH gas-fired condensing DHWH.	\$ 23,104	\$ -	\$ 23,104	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	0	190	19	\$ 247	\$ -	93.5
47	School - Joseph W Martin Elementary	EC Motors on HHW Circ Pumps	Existing: 2x 15HP and 2x 5HP HHW Circ Pumps. Proposed: 2x 15HP and 2x 5HP EC Motors w/ VFDs on HHW Circ Pumps	\$ 80,240	\$ -	\$ 80,240	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	48,919	0	167	\$ 8,805	\$ -	9.1
School - Joseph W Martin Elementary Totals				\$ 778,606	\$ 30,000	\$ 748,606				42.3	174,391	4,767	1,072	\$ 37,587	\$ -	19.9
48	School - North Attleboro High School	Modifications of Lighting Fixtures	LED Lighting Upgrades & Controls	\$ 161,149	\$ -	\$ 161,149	\$ 0.1800	\$ 1.30	\$ 1.50	30.4	120,294	0	411	\$ 21,653	\$ 5,543	5.9
49	School - North Attleboro High School	Insulation & Weatherstripping	Weatherization	\$ 82,893	\$ -	\$ 82,893	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	115,679	155	410	\$ 21,024	\$ -	3.9
50	School - North Attleboro High School	Fuel Switching (Electric to Gas Heat)	Existing: 85% of building is heating via electric resistance FCUs. Proposed: Install 3x 2,000 MBH gas-fired condensing boilers, 3x 30HP HHW Circ Pumps, Natural Gas Line, New hydronic heating piping, new hydronic fan coil units, controls, engineering, and demolition. (HIGH LEVEL BUDGETARY ESTIMATE)	\$ 2,436,700	\$ 30,000	\$ 2,406,700	\$ 0.1800	\$ 1.30	\$ 1.50	135.3	1,185,328	-47,580	-712	\$ 151,505	\$ -	15.9
School - North Attleboro High School Totals				\$ 2,680,742	\$ 30,000	\$ 2,650,742				165.7	1,421,301	-47,425	108	\$ 194,182	\$ 5,543	13.3
51	School - North Attleboro Middle School	Modifications of Lighting Fixtures	LED Lighting Upgrades & Controls	\$ 102,976	\$ -	\$ 102,976	\$ 0.1800	\$ 1.30	\$ 1.50	7.5	44,578	0	152	\$ 8,024	\$ 1,865	10.4
52	School - North Attleboro Middle School	Insulation & Weatherstripping	Weatherization	\$ 28,230	\$ -	\$ 28,230	\$ 0.1800	\$ 1.30	\$ 1.50	0.0	63	611	61	\$ 806	\$ -	35.0

**2019-2020 DOER Designation Grant Projects
Town of North Attleboro Energy Efficiency Projects
November 22, 2019**

*Liberty Utilities Massachusetts rebates estimated are subject to review and approval and may change annually based on program offerings. *Payback is calculated prior to potential DOER Grant Funding.

ERP Guidance Table 3a - Municipal Energy Consumption for 2019 (Native Fuel Units)

		Electric (kWh)	Gas (therms)	2019 Oil (gallons)	Gasoline (gallons)	Diesel (gallons)
Null	Null	51,909				
	Community Field	0				
	Total	51,909				
Building	Allen Avenue School	11,746	11	7,000		
	Amvet Boulevard School	250,413	1,173	22,000		
	Community School	275,711	581	27,000		
	Falls School	180,174	1,267	13,500		
	Joseph W. Martin, Jr. Element..	400,123	1,376	25,600		
	North Attleborough High School	2,386,718	8,696			
	Early Learning Center	50,339		8,800		
	North Attleborough Middle Sc..	1,364,160	59,915			
	Roosevelt Avenue School	153,553	249	9,000		
	Woodcock Administration	74,890	10,147			
	Town Hall	248,017	5,973			
	Richards Memorial Library	58,571	4,416			
	Fire Station #3	53,888	4,020			
	Fire Station #2	24,762	2,287			
	Fire Station #1 (Headquarters)	90,415	5,474			
	Animal Shelter	63,123				
	Highway Department	65,303	10,183			
	Allen Avenue Portable	12,969				
	Holmes Schoolhouse and Hall	1,783				
	Police Station	460,560	22,887			
	Radio Tower-Fales Road	1,028				
	Radio Tower-Highpoint Drive	1,118				
	Radio Tower-Elmwood Street	9,522				
	Police Storage Shed	168				
	Sanitary Landfill	13,673				
	Landry Ave Repeater	1,572				
	Landry Ave Bus Lot	340				
	Total	6,254,639	138,655	112,900		
Open Space	Community Field	46,779				
	Columbia Field	278				
	Mason Field	31,668				
	Barrows Park	1,685				
	World War I Park	28,402				
	Veteran's Park	8,369				
	Lestage	17				
	Pool	25,760				
	616 Towne Street	343				
	High Street Soccer Fields	2,980				
	Simmons Park	1,512				

ERP Guidance Table 3a - Municipal Energy Consumption for 2019 (Native Fuel Units)

		2019				
		Electric (kWh)	Gas (therms)	Oil (gallons)	Gasoline (gallons)	Diesel (gallons)
Open Space	High Street Skating Rink	2,730				
	Broadway Extension	1,894				
	Columbia Field	2,023				
	Total	154,440				
Street/Traffic Lights	Streetlights	405,259				
	Traffic Lights	26,555				
	Total	431,814				
Vehicle	Vehicles				92,232	36,522
	Total				92,232	36,522
Water/Sewer	Sewer Department	2,909,363				
	Water Department	1,929,976				
	Total	4,839,339				
Grand Total		11,732,141	138,655	112,900	92,232	36,522

ERP Guidance Table 3b - Municipal Energy Consumption for 2019 (MMBTU)

Please make sure that any data submitted to DOER contains complete Data!

		2019					Total
		Diesel	Electric	Gas	Gasoline	Oil	
Null	Null		177				177
	Community Field		0				0
	Total		177				177
Building	Allen Avenue School		40	1		973	1,014
	Amvet Boulevard School		854	117		3,058	4,030
	Community School		941	58		3,753	4,752
	Falls School		615	127		1,877	2,618
	Joseph W. Martin, Jr. Element..		1,365	138		3,558	5,061
	North Attleborough High School		8,143	870			9,013
	Early Learning Center		172			1,223	1,395
	North Attleborough Middle Sc..		4,655	5,992			10,646
	Roosevelt Avenue School		524	25		1,251	1,800
	Woodcock Administration		256	1,015			1,270
	Town Hall		846	597			1,444
	Richards Memorial Library		200	442			641
	Fire Station #3		184	402			586
	Fire Station #2		84	229			313
	Fire Station #1 (Headquarters)		308	547			856
	Animal Shelter		215				215
	Highway Department		223	1,018			1,241
	Allen Avenue Portable		44				44
	Holmes Schoolhouse and Hall		6				6
	Police Station		1,571	2,289			3,860
	Radio Tower-Fales Road		4				4
	Radio Tower-Highpoint Drive		4				4
	Radio Tower-Elmwood Street		32				32
	Police Storage Shed		1				1
	Sanitary Landfill		47				47
	Landry Ave Repeater		5				5
	Landry Ave Bus Lot		1				1
	Total		21,341	13,866		15,693	50,899
Open Space	Community Field		160				160
	Columbia Field		1				1
	Mason Field		108				108
	Barrows Park		6				6
	World War I Park		97				97
	Veteran's Park		29				29
	Lestage		0				0
	Pool		88				88
	616 Towne Street		1				1
	High Street Soccer Fields		10				10
	Simmons Park		5				5

ERP Guidance Table 3b - Municipal Energy Consumption for 2019 (MMBTU)

Please make sure that any data submitted to DOER contains complete Data!

		2019					Total
		Diesel	Electric	Gas	Gasoline	Oil	
Open Space	High Street Skating Rink		9				9
	Broadway Extension		6				6
	Columbia Field		7				7
	Total		527				527
Street/Traffic Lights	Streetlights		1,383				1,383
	Traffic Lights		91				91
	Total		1,473				1,473
Vehicle	Vehicles	5,077			11,437		16,513
	Total	5,077			11,437		16,513
Water/Sewer	Sewer Department		9,927				9,927
	Water Department		6,585				6,585
	Total		16,512				16,512
Grand Total		5,077	40,030	13,866	11,437	15,693	86,102

Criterion 3 Step 4: Complete Table 4 - ECMs

[Click here to view a sample version of this table](#)

			Table 4 Energy Conservation Measures Data														
ECMs			Status		Energy Data						Financial Data					Reference Data	
Building/Site Name	Energy Conservation Measure Name	ECM Type (select one from drop-down)	Status (select one from drop-down)	Status Date (Completed with month/year or planned month/year)	Projected Annual Electricity Savings (kWh)	Projected Annual Natural Gas Savings (therms)	Projected Annual Oil Savings (gallons)	Projected Annual Propane Savings (gallons)	Projected Annual Gasoline Savings (gallons)	Projected Annual Diesel Savings (gallons)	Projected Annual Cost Savings (\$)	Total Installed Cost (\$)	Green Community Grant (\$)	Utility Incentives (\$)	Net Cost (\$)	Funding Source(s) for Net Costs	Source for Projected Savings
Animal Control	LED Lighting Upgrades & Controls	Interior Lighting	Planned	Years 1-3	4,699	0	0	0	0	0	\$846	\$4,768		\$0	\$4,768		RISE Engineering Audit
DPW-Highway	LED Lighting Upgrades & Controls	Interior Lighting	Planned	Years 1-3	29,490	0	0	0	0	0	\$5,308	\$32,539		\$0	\$32,539		RISE Engineering Audit
DPW-Highway	Weatherization	Weatherization	Planned	Years 1-3	0	625	0	0	0	0	\$813	\$66,700		\$0	\$66,700		RISE Engineering Audit
DPW-Sewer	Weatherization	Weatherization	Planned	Years 1-3	0	1,198	0	0	0	0	\$1,554	\$51,996		\$0	\$51,996		RISE Engineering Audit
DPW-Water	LED Lighting Upgrades & Controls	Interior Lighting	Planned	Years 1-3	38,311	0	0	0	0	0	\$6,896	\$51,575		\$0	\$51,575		RISE Engineering Audit
DPW-Water	Weatherization	Weatherization	Planned	Years 1-3	0	670	0	0	0	0	\$670	\$53,986		\$0	\$53,986		RISE Engineering Audit
DPW-Water	Condensing Unit Heaters	HVAC	Planned	Years 1-3	0	818	0	0	0	0	\$1,063	\$27,376		\$1,500	\$25,876		RISE Engineering Audit
Fire Headquarters	LED Lighting Upgrades & Controls	Interior Lighting	Planned	Years 1-3	27,125	0	0	0	0	0	\$4,883	\$22,933		\$0	\$22,933		RISE Engineering Audit
Fire Headquarters	Weatherization	Weatherization	Planned	Years 1-3	879	301	0	0	0	0	\$550	\$12,806		\$0	\$12,806		RISE Engineering Audit
Fire Headquarters	Condensing Unit Heaters	HVAC	Planned	Years 4-5	168	67	0	0	0	0	\$117	\$31,860		\$600	\$31,260		RISE Engineering Audit
Fire Station #2	LED Lighting Upgrades & Controls	Interior Lighting	Planned	Years 1-3	4,644	0	0	0	0	0	\$836	\$9,295		\$0	\$9,295		RISE Engineering Audit
Fire Station #2	Weatherization	Weatherization	Planned	Years 1-3	436	480	0	0	0	0	\$702	\$43,518		\$0	\$43,518		RISE Engineering Audit
Fire Station #3	LED Lighting Upgrades & Controls	HVAC	Planned	Years 1-3	16,257	0	0	0	0	0	\$2,926	\$16,189		\$0	\$16,189		RISE Engineering Audit
Fire Station #3	Weatherization	Weatherization	Planned	Years 1-3	141	275	0	0	0	0	\$383	\$18,144		\$0	\$18,144		RISE Engineering Audit
Fire Station #3	Condensing Unit Heaters	HVAC	Planned	Years 4-5	0	351	0	0	0	0	\$456	\$41,300		\$3,000	\$38,300		RISE Engineering Audit
Richards Memorial Library	LED Lighting Upgrades & Controls	Interior Lighting	Planned	Years 1-3	17,744	0	0	0	0	0	\$2,307	\$26,198		\$0	\$26,198		RISE Engineering Audit
Richards Memorial Library	Weatherization	Weatherization	Planned	Years 1-3	710	726	0	0	0	0	\$1,072	\$53,372		\$0	\$53,372		RISE Engineering Audit
Richards Memorial Library	EC Motors on HHW Circ Pumps	Pump/Motor/Drive	Planned	Years 4-5	2,318	0	0	0	0	0	\$417	\$14,160		\$0	\$14,160		RISE Engineering Audit
Richards Memorial Library	Programmable Thermostats	Building Control	Planned	Years 1-3	0	224	0	0	0	0	\$291	\$1,540		\$175	\$1,365		RISE Engineering Audit
Police Headquarters	LED Lighting Upgrades & Controls	Interior Lighting	Planned	Years 1-3	83,420	0	0	0	0	0	\$15,016	\$67,091		\$0	\$67,091		RISE Engineering Audit
Police Headquarters	Weatherization	Weatherization	Planned	Years 1-3	0	247	0	0	0	0	\$321	\$12,480		\$0	\$12,480		RISE Engineering Audit
Police Headquarters	Gas-Fired Condensing Boilers	HVAC	Planned	Years 4-5	0	2,263	0	0	0	0	\$2,942	\$94,400		\$7,500	\$86,900		RISE Engineering Audit
Police Headquarters	Gas-Fired Condensing DMHW	Hot Water	Planned	Years 4-5	0	299	0	0	0	0	\$389	\$23,104		\$0	\$23,104		RISE Engineering Audit
Police Headquarters	EC Motors w/VFDs on HHW Circ Pumps	Pump/Motor/Drive	Planned	Years 1-3	6,041	0	0	0	0	0	\$1,087	\$21,830		\$0	\$21,830		RISE Engineering Audit
Police Headquarters	Retrocommissioning	Retrocommission	Planned	Years 4-5	34,542	1,717	0	0	0	0							
Police Radio Tower-Elmwood	LED Lighting Upgrades & Controls	Exterior Lighting	Planned	Years 1-3	1,067	0	0	0	0	0	\$192	\$806		\$0	\$806		RISE Engineering Audit
Police-Storage Shed	LED Lighting Upgrades & Controls	Interior Lighting	Planned	Years 1-3	550	0	0	0	0	0	\$99	\$550		\$0	\$550		RISE Engineering Audit
Amvet Boulevard School	LED Lighting Upgrades & Controls	Interior Lighting	Planned	Years 1-3	164,378	0	0	0	0	0	\$29,588	\$48,629		\$0	\$48,629		RISE Engineering Audit
Amvet Boulevard School	Weatherization	Weatherization	Planned	Years 1-3	0	1,681	0	0	0	0	\$2,185	\$65,758		\$0	\$65,758		RISE Engineering Audit
Amvet Boulevard School	Gas-Fired Condensing Boilers	HVAC	Planned	Years 4-5	0	2,473	0	0	0	0	\$3,215	\$566,400		\$30,000	\$536,400		RISE Engineering Audit
Amvet Boulevard School	Gas-Fired Condensing DMHW w/Indirect Fired Storage Tanks	Hot Water	Planned	Years 4-5	0	161	0	0	0	0	\$209	\$23,104		\$0	\$23,104		RISE Engineering Audit
Amvet Boulevard School	EC Motors w/VFDs on HHW Circ Pumps	Pump/Motor/Drive	Planned	Years 4-5	1,681	0	0	0	0	0	\$303	\$26,550		\$0	\$26,550		RISE Engineering Audit
Amvet Boulevard School	Retrocommissioning	Retrocommission	Planned	Years 4-5	18,781	88	1,650	0	0	0							
Community School	LED Lighting Upgrades & Controls	Interior Lighting	Planned	Years 1-3	210,200	0	0	0	0	0	\$37,836	\$97,769		\$0	\$97,769		RISE Engineering Audit
Community School	Weatherization	Weatherization	Planned	Years 1-3	0	6,098	0	0	0	0	\$7,927	\$193,658		\$0	\$193,658		RISE Engineering Audit
Community School	Steam Trap Survey	HVAC	Planned	Years 1-3	0	1,768	0	0	0	0	\$2,298	\$2,900		\$2,900	\$0		RISE Engineering Audit
Community School	Retrocommissioning	Retrocommission	Planned	Years 4-5	20,678	44	2,025	0	0	0							
Early Learning Center	LED Lighting Upgrades & Controls	Interior Lighting	Planned	Years 1-3	40,331	0	0	0	0	0	\$7,260	\$20,018		\$0	\$20,018		RISE Engineering Audit
Early Learning Center	Weatherization	Weatherization	Planned	Years 1-3	0	207	0	0	0	0	\$269	\$11,566		\$0	\$11,566		RISE Engineering Audit
Early Learning Center	Gas-Fired Condensing Boilers	HVAC	Planned	Years 4-5	0	774	0	0	0	0	\$1,006	\$141,600		\$10,000	\$131,600		RISE Engineering Audit
Early Learning Center	EC Motors w/VFDs on HHW Circ Pumps	Hot Water	Planned	Years 4-5	4,890	0	0	0	0	0	\$880	\$21,830		\$0	\$21,830		RISE Engineering Audit
Early Learning Center	Retrocommissioning	Retrocommission	Planned	Years 4-5	3,775	0	660	0	0	0							
Falls School	LED Lighting Upgrades & Controls	Interior Lighting	Planned	Years 1-3	83,633	0	0	0	0	0	\$15,054	\$47,935		\$0	\$47,935		RISE Engineering Audit

Falls School	Weatherization	Weatherization	Planned	Years 1-3	0	259	0	0	0	0	\$337	\$5,380	\$0	\$5,380	RISE Engineering Audit
Falls School	Gas-Fired Condensing Hydronic Boiler	HVAC	Planned	Years 4-5	0	1,445	0	0	0	0	\$1,879	\$141,600	\$10,000	\$131,600	RISE Engineering Audit
Falls School	EC Motors w/VFDs on HHW Circ Pumps	Hot Water	Planned	Years 1-3	8,343	0	0	0	0	0	\$1,502	\$26,550	\$0	\$26,550	RISE Engineering Audit
Falls School	Retrocommissioning	Retrocommission	Planned	Years 4-5	13,513	95	1,013	0	0	0					
Joseph Martin Elementary School	LED Lighting Upgrades & Controls	Interior Lighting	Planned	Years 1-3	121,118	0	0	0	0	0	\$21,801	\$74,780	\$0	\$74,780	RISE Engineering Audit
Joseph Martin Elementary School	Weatherization	Weatherization	Planned	Years 1-3	4,354	854	0	0	0	0	\$1,894	\$34,082	\$0	\$34,082	RISE Engineering Audit
Joseph Martin Elementary School	Gas-Fired Condensing Boilers	HVAC	Planned	Years 4-5	0	3,723	0	0	0	0	\$4,840	\$566,400	\$30,000	\$536,400	RISE Engineering Audit
Joseph Martin Elementary School	Gas-Fired Condensing DMHW	Hot Water	Planned	Years 4-5	0	190	0	0	0	0	\$247	\$23,104	\$0	\$23,104	RISE Engineering Audit
Joseph Martin Elementary School	EC Motors w/VFDs on HHW Circ Pumps	Pump/Motor/Drive	Planned	Years 1-3	48,919	0	0	0	0	0	\$8,805	\$80,240	\$0	\$80,240	RISE Engineering Audit
Joseph Martin Elementary School	Retrocommissioning	Retrocommission	Planned	Years 4-5	30,009	103	1,920	0	0	0					
North Attleborough High School	LED Lighting Upgrades & Controls	Interior Lighting	Planned	Years 1-3	120,294	0	0	0	0	0	\$21,653	\$161,149	\$0	\$161,149	RISE Engineering Audit
North Attleborough High School	Weatherization	Weatherization	Planned	Years 1-3	115,679	155	0	0	0	0	\$21,024	\$82,893	\$0	\$82,893	RISE Engineering Audit
North Attleborough High School	Gas Fired Condensing Boilers, HHW Circ Pumps, Natural Gas Line, Hydronic Heat Piping, Fan Coil Units, Controls, etc.	Fuel Conversion	Planned	Years 4-5	1,185,328	-47,580	0	0	0	0	\$151,505	\$2,436,700	\$30,000	\$2,406,700	RISE Engineering Audit
North Attleborough High School	Retrocommissioning	Retrocommission	Planned	Years 4-5	179,004	652	0	0	0	0					
North Attleborough Middle School	LED Lighting Upgrades & Controls	Interior Lighting	Planned	Years 1-3	44,578	0	0	0	0	0	\$8,024	\$102,976	\$0	\$102,976	RISE Engineering Audit
North Attleborough Middle School	Weatherization	Weatherization	Planned	Years 1-3	63	611	0	0	0	0	\$806	\$28,230	\$0	\$28,230	RISE Engineering Audit
North Attleborough Middle School	Gas-Fired Condensing Boilers	HVAC	Planned	Years 4-5	0	4,203	0	0	0	0	\$5,464	\$826,000	\$40,000	\$786,000	RISE Engineering Audit
North Attleborough Middle School	EC Motors w/VFDs on HHW Circ Pumps	Pump/Motor/Drive	Planned	Years 1-3	70,507	0	0	0	0	0	\$12,691	\$70,800	\$0	\$70,800	RISE Engineering Audit
North Attleborough Middle School	EC Motors w/VFDs on DHW Circ Pumps	Pump/Motor/Drive	Planned	Years 1-3	696	0	0	0	0	0	\$125	\$3,068	\$0	\$3,068	RISE Engineering Audit
North Attleborough Middle School	Retrocommissioning	Retrocommission	Planned	Years 4-5	102,312	4,494									
Roosevelt Avenue School	LED Lighting Upgrades & Controls	Interior Lighting	Planned	Years 1-3	90,890	0	0	0	0	0	\$16,360	\$42,407	\$0	\$42,407	RISE Engineering Audit
Roosevelt Avenue School	Weatherization	Weatherization	Planned	Years 1-3	0	806	0	0	0	0	\$1,048	\$36,540	\$0	\$36,540	RISE Engineering Audit
Roosevelt Avenue School	Gas-Fired Condensing Boilers	HVAC	Planned	Years 1-3	0	3,239	0	0	0	0	\$4,211	\$94,400	\$7,500	\$86,900	RISE Engineering Audit
Roosevelt Avenue School	Retrocommissioning	Retrocommission	Planned	Years 4-5	11,516	19	675	0	0	0					
Town Hall	LED Lighting Upgrades & Controls	Interior Lighting	Planned	Years 1-3	53,920	0	0	0	0	0	\$9,706	\$74,754	\$0	\$74,754	RISE Engineering Audit
Town Hall	Weatherization	Weatherization	Planned	Years 1-3	99	396	0	0	0	0	\$533	\$35,234	\$0	\$35,234	RISE Engineering Audit
Town Hall	Retrocommissioning	Retrocommission	Planned	Years 4-5	18,601	448	0	0	0	0					
Allen Avenue School	Weatherization	Weatherization	Planned	Years 4-5	0	152	0	0	0	0	\$198	\$8,492	\$0	\$8,492	RISE Engineering Audit
Allen Avenue School	Gas-Fired Hydronic Condensing Boiler	HVAC	Planned	Years 4-5	0	763	0	0	0	0	\$992	\$146,910	\$10,000	\$136,910	RISE Engineering Audit
Allen Avenue School	EC Motors w/VFDs on HHW Circ Pumps	Pump/Motor/Drive	Planned	Years 4-5	16,686	0	0	0	0	0	\$3,003	\$39,825	\$0	\$39,825	RISE Engineering Audit
Building Operator Certification	Building Operator Certification	Behav & Training	Planned	Years 4-5	62,546	1,387	1,129	0	0	0			\$0		
Town-wide no idling policy for municipal vehicles	Anti-Idling Policy	Vehicles	Planned	Years 4-5	0	0	0	0	9,223	3,652	\$24,197		\$0		www.fueleconomy.gov
Monitor Tire Air Pressure & Use Fuel Efficient Tires in municipal vehicles	Monitor Tire Air Pressure & Use Fuel Efficient Tires	Vehicles	Planned	Years 4-5	0	0	0	0	3,689	1,461			\$0		www.fueleconomy.gov
Use 100% Synthetic Oil in municipal vehicles	Use 100% Synthetic Oil	Vehicles	Planned	Years 4-5	0	0	0	0	1,845	730			\$0		www.fueleconomy.gov
Replace 5 Ford Rangers in Water Dept. with 5 Electric Vehicles	Vehicle Replacement	Vehicles	Planned	Years 4-5	0	0	0	0	980	0					
					3,115,864	-31	9,072	0	15,737	5,843	483,011	7,210,747	0	183,175	7,027,572
TOTAL MMBtu SAVINGS				14,653	10631.32797	-3.1	1261.008	0	1951.388	812.177					