

Town of Holliston  
Project 1 – Holliston Town Hall  
Stand-Alone Programmable Thermostat

#### Current Consumption

In 2016, according to MassEnergyInsight.net, the Town of Holliston consumed 48,486 MMBTUs of energy of which 31,823 MMBTUs came from buildings. The Town Hall contributed 1,035 MMBTUs of that total (337 MMBTUs in electricity and 698 MMBTUs in gas).

#### Purpose

It is the intention of the Town, during the competitive grant period, to purchase and install an Energy Management System throughout the Town Hall. During the energy audit, there was one location in the upstairs kitchen that has an electric baseboard controlled by an old mercury thermostat. This baseboard cannot be added into the Energy Management system, so it is World's Energy recommendation to replace the manual thermostat with a programmable thermostat to make the electric baseboard more efficient by reducing the human element of reducing energy by automatically controlling the adjustment of the baseboard heater.

The purpose of this request is to remove and install one new programmable thermostat in the upstairs kitchen of Town Hall. Once installed, a scheduled program will be configured so that the heat will only turn on during weekends when the kitchen is in use. In addition, instructions will be developed and explained to renters using the kitchen on how to temporarily override the heat when needed. The thermostat will then be programmed to revert back to the schedule after a few hours. Numerous times throughout the winter, renters will turn the heat up and forget to turn it down after the events, resulting in the electric heat running all weekend long until Monday. A programmable thermostat will be scheduled to automatically turn down the heat after 11PM on the weekends.

#### Timeline

If approved, the thermostat would be purchased and installed in July or August of 2017, and should take about an hour to install. The project will be purchased through MGL C. 30B Procurement Laws as well as MGL C. 25A, s. 14 with contractors from World Energy performing the installation.

#### Cost

The total project cost is estimated to be \$131.15 with an estimated incentive from Eversource of \$12.06 resulting in a request of \$119.09 from the Green Community Grant. World Energy is estimating a savings of 77kWh (.26 MMBTUs) a year with a ROI of 10% and a simple payback of 10.21 years. As a small project, the Town is not expecting any additional costs or administrative fees for this project.

A licensed electrician will be required to install the thermostat and an electrical permit will need to be filed. The Green Community Team will request a waiver from the Building Department for the cost of the permit and inspection.

The project will be overseen by the Green Community Team of Town Administrator, Jeff Ritter, Fire Chief, Michael Cassidy, Assistant to the Town Administrator, Andrea Minihan, and Technology Director, Christopher Meo.

Town of Holliston  
Project 2 – Holliston Town Hall  
Boiler and Pump Replacement

#### Current Consumption

In 2016, according to MassEnergyInsight.net, the Town of Holliston consumed 48,486 MMBTUs of energy of which 31,823 MMBTUs came from buildings. The Town Hall contributed 1,035 MMBTUs of that total (337 MMBTU's in electricity and 698 MMBTUs in gas).

#### Purpose

The purpose of replacing the Town Hall Heating System is to replace the inefficient (80%) three boiler system that is close to end of life and a stand-alone water heater with 2 Lochinvar KBN501 High Efficiency Boilers, a SIT030 Lochinvar indirect water heater, and 5 circulator pumps. The new pumps would be Variable Frequency Drives which automatically adjust speeds and energy usage depending on demand. These pumps also reduce airflow noise and reduces the wear and tear on the heating system. Due to budget constraints in the Town Hall Facilities budget, the Town does not have the funds to perform this replacement on our own.

#### Cost

The total project cost is estimated to be \$75,041.59, with an estimated incentive from Eversource of \$1,399.78 resulting in a request of \$73,641.81 from the Green Community Grant. World Energy is estimating an electrical savings of 4,174kWh (14.19 MMBTUs) as well as a savings of 3,251 therms (325.1 MMBTUs) a year with a ROI of 6% and a simple payback of 18 years. If this project is approved, it will continue the process of reducing the Town's gas and electrical consumption and will help to achieve the goal of attaining a reduction of 10,267 MMBTUs in five years. Due to the size of this project, the Town is asking for a 10% administrative and contingency fee. The administrative portion will be used to offset the cost of drafting up a RFP and time spent on overseeing the installation and functionality of the new heating system. The Town is asking for an additional \$7,364 bringing the total Green Community net cost of the project to \$81,005.81

A licensed electrician and plumber will be required to install the heating system and both electrical, plumbing, and gas permits will need to be applied for. The Green Community Team will request waivers from the Building Department for the cost of all three permits and all inspections.

Due to the nature and size of this project, an RFP will be created and posted both to COMMBUYS and the Town's Website requesting proposals to install 2 Lochinvar 95% High Efficient Boilers, an SIT030 Lochinvar indirect water heater, along with the 5 circulator pumps.

#### Benefits

The benefit of installing new heating equipment is to increase the efficiency of the heating and hot water systems and to lower the gas and electric consumption. Another benefit is to make the environment a better place to work and function in. The current system requires extensive maintenance each year to continue to function and 2 of the current circulation pumps have failed this winter.

If approved, the goal of the Town is to issue a RFP by August 2017 with installation before the winter of 2017-2018.

The project will be overseen by the Green Community Team of Town Administrator, Jeff Ritter, Fire Chief, Michael Cassidy, Assistant to the Town Administrator, Andrea Minihan, and Technology Director, Christopher Meo who successfully completed seven projects along this same scope in the non-competitive round. In addition to the winning bid contractor, the Building Inspector, Peter Tartakoff will play an integral role in the project.

As with past projects, the Town Administrator Jeff Ritter would continue to update the Board of Selectmen every Wednesday night about the status of this Green Community project. This meeting is broadcast on the local Public Access Cable to all town residents, as well as detailed in the minutes for the meeting for all the public to view. In addition, once a project is completed a Press Release will be issued and posted to the Town's website.

Town of Holliston  
Project 3 – Holliston  
Energy Management System

In 2016, according to MassEnergyInsight.net, the Town of Holliston consumed 48,486 MMBTUs of energy. The Town Hall contributed 1,035 MMBTUs of that total (337 MMBTUs in electricity and 698 MMBTUs in gas). The Library contributed 671 MMBTUs of that total (249 MMBTUs in electricity and 423 MMBTUs in gas) while the Senior Center contributed 590 MMBTUs (123 MMBTU's in electricity and 467 MMBTUs in gas).

#### Purpose

The purpose of this project would be to install an Energy Management System (EMS) to control the HVAC equipment at all three buildings (Town Hall, Library, and the Senior Center). At the Town Hall, there are currently over 23 separate thermostats that need to be individually programmed to run the HVAC system, with settings left up to the individual person in the room. There are an additional four thermostats at the Senior Center and another seven at the Library. By installing BACnet thermostats in place of the existing thermostats, as well as a central control panel, a single person can monitor and adjust the temperatures in the buildings as well as schedule the HVAC system for after hour functions when needed. Due to budget constraints in the Town Hall, Library, and Senior Center Facilities budget, the Town does not have the funds to perform an installation of a system-wide EMS system on our own.

The total project cost at the Town Hall is estimated to be \$42,700.00, with an estimated incentive from Eversource of \$14,093.46, resulting in a request of \$28,606.54 from the Green Community Grant. World Energy is estimating an electrical savings of 8,420kWh (28.70 MMBTUs), as well as a savings of 1,389 therms (138.9 MMBTUs) a year with a ROI of 14% and a simple payback of 7 years. If this project is approved, it will continue the process of reducing the Town's gas and electrical consumption and will help to achieve the goal of attaining a reduction of 10,267 MMBTUs in five years.

The total project cost at the Senior Center is estimated to be \$15,860.00, with an estimated incentive from Eversource of \$3,464.50, resulting in a request of \$12,395.50 from the Green Community Grant. World Energy is estimating an electrical savings of 2,175kWh (7.41 MMBTUs), as well as a savings of 1,669 therms (166.9 MMBTUs) a year with a ROI of 15% and a simple payback of 6.7 years. If this project is approved, it will continue the process of reducing the Town's gas and electrical consumption and will help to achieve the goal of attaining a reduction of 10,267 MMBTUs in five years.

The total project cost at the Library is estimated to be \$20,740.00 with an estimated incentive from Eversource of \$4,147.00, resulting in a request of \$16,593.00 from the Green Community Grant. World Energy is estimating an electrical savings of 10,078kWh (34.2 MMBTUs), as well as a savings of 930 therms (93.0 MMBTUs) a year with a ROI of 17% and a simple payback of 6 years. If this project is approved, it will continue the process of reducing the Town's gas and electrical consumption and will help to achieve the goal of attaining a reduction of 10,267 MMBTUs in five years.

If the Town Energy Management System is approved, the Town plans to install this system in conjunction with the boiler project, to leverage the efficiency of the new boiler system. A licensed electrician and HVAC contractor will need to be hired and work together to integrate the EMS and Boiler systems together at all three

buildings. Electrical permits will need to be applied for and the Green Community Team will request waivers from the Building Department for the cost of the permit and inspections.

To facilitate training and consistency, the Town is looking at combining all three Energy Management Systems into one project, so the same equipment can be purchased and installed in all three building. This will streamline the training and operational knowledge needed at all three locations and allow for a few employees being cross trained on the HVAC system at all three buildings.

The total Energy Management System for all three buildings would cost an estimated \$79,300 with an anticipated electrical incentive of \$21,704.96, for a net cost of \$57,595.04. In addition, the Town is requesting a 10% administrative fee for this project, bringing the total cost to \$63,335.04. The administrative fee will be used for training 1 or 2 staff members at each building on using the Energy Management System. The fee will also be used to offset the costs of an employee who will be assigned to develop an RFP for the project and work with the chosen vendor once the project starts, to make sure the project is done on time and on budget.

Currently the three buildings included in the EMS project are controlled by numerous standalone thermostats and none of the buildings currently have an EMS system in place. The Town is looking to install a total of 184 data points throughout all three buildings. A graph-table of all 184 Data Points has been included in the file titled Holliston – EMS Data Points.pdf. The EMS at the Town Hall would monitor and control the boiler plant, 27 Air Handler Units, and miscellaneous points including the outside air temperature and outside air humidity. The EMS at the Senior Center will include monitoring and controlling the four Roof Top Units and the outside air temperature. The EMS at the Library will include monitoring and controlling the chiller system, seven air handler units, as well as the outside air temperature. The current proposal includes hardware manufactured by Trend Controls and the front end JACE will also be a Trend-branded unit but developed by Tridium Niagara. The BACnet communicating thermostats would be manufactured by Viconics. All sensors will be interchangeable with other vendor controllers if they are in need of repair in the future. In addition, all DDC hardware will be BACnet compatible. This means that any contractor familiar with the Tridium Niagara platform will be able to integrate into the system. Tridium Niagara is an open-protocol format, and as part of the RFP it will be requested that all hardware and documentation be left with the Town so other vendors can support the system on an ongoing basis. Finally, the communication protocol will be BACnet compatible which is the most common open communication protocol for HVAC systems. Any BACnet compatible DDC controller should be able to be integrated into the Tridium Niagara front end. Additional information on the proposed Trend Controls Energy Management System is provided in the attached document titled, "Holliston Trend EMS Overview".

An RFP will be posted at both COMMBUYS.COM, as well as the Town's website, requesting a BACnet enabled Energy Management System supported by a JACE unit. The Town hopes to have the purchase and installation done by the summer of 2018.

The project will be overseen by the Green Community Team of Town Administrator, Jeff Ritter, Fire Chief, Michael Cassidy, Assistant to the Town Administrator, Andrea Minihan, and Technology Director, Christopher Meo who successfully completed seven projects along this same scope in the non-competitive round. In addition, a few staff from each building will need to be trained. Facilities Scheduler, Donna Muzzy, Senior

Center Coordinator, Linda Marshall, Library Director, Leslie McDonnell along with a few other will require training on how to make adjustment to the heat.

As with past projects, the Town Administrator, Jeff Ritter would continue to update the Board of Selectmen every Wednesday night about the status of this Green Community project. This meeting is broadcast on the local Public Access Cable to all town residents, as well as detailed in the minutes for the meeting for all the public to view. In addition, once a project is completed, a Press Release will be issued and posted to the Town's website.

Town of Holliston  
Project 4 – Holliston Senior Center  
Weatherization and Insulation

#### Current Consumption

In 2016, according to MassEnergyInsight.net, the Town of Holliston consumed 48,486 MMBTUs of energy of which 31,823 MMBTUs came from Buildings. The Senior Center contributed 590 MMBTUs of that total (123 MMBTUs in electricity and 467 MMBTUs in gas).

#### Purpose

One of the biggest complaints from the Senior Center employees is that during the winter, they are freezing from the drafts in the building. Under every desk there is a portable heater running in the winter. The Senior Center building is constructed of a metal exterior wall and wood framed interior, with little insulation in the ceiling space. Gaps of daylight can clearly be seen above the ceiling line where the roof line meets the metal walls. In addition, black dirt and debris can be seen on the limited amount of fiberglass insulation, a strong indicator of air flow through the walls. One of the Town goals is to solve this issue by sealing up these spaces through air-sealing the open gaps in the wall and adding insulation to the walls and ceiling. Lastly, weather-stripping will be added to the exterior doors to close gaps which is allowing air infiltration/exfiltration to occur. This work is designed to improve the heating and cooling system by keeping warm air outside and cool air inside during the summer requiring the air conditioning unit to work less using less energy, as well as, keeping warm air inside during the winter requiring the boiler system to use less gas. Due to budget constraints in the Senior Center Facilities budget, the Town does not have the funds to perform this weatherization work on our own.

Based upon the World Energy Audit, the Town expects to realize electric savings of 997 kWh (3.38 MMBTUs) per year as well as a decrease in gas usage of 679 therms (67.9 MMBTUs) per year, for a combined yearly savings of \$788.99. If this project is approved, it will continue the process of reducing our electrical and gas consumption, and will help to achieve our goal of attaining a reduction of 10,267 MMBTUs in five years as well as make the Senior Center a much more comfortable place to work in the middle of winter and heat of the summer.

The plan calls for sealing openings identified during the energy audit that air is moving through. Some of these locations include the wall space above the ceiling and in exterior walls as well as weather stripping around all exterior doors.

The total cost of the project is projected at \$13,884.82 with an Electric Utility incentive estimated at \$1,437.50. The town is asking for the remaining \$12,447.32 as part of the Green Community Grant. The ROI is estimated to be around 7.5% with a simple payback of 13 years. As a relatively small project once underway, the Town is not requesting any additional costs or administrative fees for this project.

#### Benefits

The main benefit of weatherizing the Senior Center is to minimize air exchange with the outside and therefore increase the efficiency on the heating and air conditioning equipment by keeping the conditioned air inside the building as well as to solve the biggest complaint of air drafts in the building making it a more comfortable place to work.

#### Timeline

If approved the Town plans to work with World Energy and have the weatherization accomplished in the fall of 2017. The project will be purchased through MGL C. 30B Procurement Laws as well as MGL C. 25A, s. 14.

The project will be overseen by the Green Community Team of Town Administrator, Jeff Ritter, Fire Chief, Michael Cassidy, Assistant to the Town Administrator, Andrea Minihan, and Technology Director, Christopher Meo who successfully completed seven projects along this same scope in the non-competitive round. In addition, Senior Center Coordinator, Linda Marshall will be the point of contact at the Senior Center when the project starts.

As with past projects, the Town Administrator Jeff Ritter would continue to update the Board of Selectmen every Wednesday night about the status of this Green Community project. This meeting is broadcast on the local Public Access Cable to all town residents, as well as detailed in the minutes for the meeting for all the public to view. In addition, once a project is completed, a Press Release will be issued and posted to the Town's website.



Town of Holliston Green Community Project 5  
Holliston Senior Center  
Lighting and Lighting Controls

#### Current Consumption

In 2016, according to MassEnergyInsight.net, the Town of Holliston consumed 48,486 MMBTUs of energy of which 31,823 MMBTUs came from buildings. The Senior Center contributed 590 MMBTUs of that total (123 MMBTUs in electricity and 467 MMBTUs in gas).

#### Purpose

The purpose of installing light-emitting diode (LED) bulbs, fixtures, dimmers, and occupancy sensors, is to reduce the electricity consumption of the Senior Center and adjacent garage that houses the Senior Center vans. The new equipment being proposed will automatically adjust light levels depending on outside sunlight, allow for lights to automatically power off when a room is unoccupied, as well as the new bulbs are designed to use less watts than the existing lights. Due to budget constraints in the Senior Center Facilities budget, the Town does not have the funds to perform this retrofit of lights on our own.

Based upon the World Energy Audit, the Town expects to realize electric savings of 14,432 kWh (49.06 MMBTUs) per year for a yearly electrical savings of \$3,852.08. If this project is approved, it will continue the process of reducing our electrical consumption and will help to achieve our goal of attaining a reduction of 10,267 MMBTUs in five years and lower the Town's electrical costs.

The plan calls to replace the 105 existing interior and exterior bulbs, as well as the adjacent garage with LED equivalents. In addition, 20 dimmer and occupancy sensors will be installed to better control the lighting system. The total cost of the project is projected at \$22,931.40, with an Electric Utility incentive estimated at \$3,608.00. The Town is asking for the remaining \$19,323.40 as part of the Green Community Competitive Grant. As we found out with the Police Department and Town Hall lighting projects, there is usually one or two lights that require special attention, once the project gets underway. Due to that, the Town is asking for an additional 5% contingency and administrative fee of \$966 in case there is a light fixture or two that requires additional attention, bringing the total net cost to \$20,289.40.

A licensed electrician will need to be hired and electrical permits will need to be applied for. The Green Community Team will request waivers from the Building Department for the cost of the permit and inspections.

#### Benefits

There are numerous benefits with performing the lighting project. First, the LED bulbs can last up to 100,000 hours versus the existing lights which last only 1000 hours. This will have a reduction in the time Highway staff is needed to change out light bulbs so they can concentrate on the roads. LEDs also use 60-90% less energy than the existing bulbs and run cooler which allows the air-conditioning system to run more effectively. The use of occupancy sensors and dimmers will be implemented to automatically turn off lights when a room becomes unoccupied or less light is needed.

#### Timeline

If approved, the Town plans to work with World Energy and have the Lights and Lighting Equipment (Dimmers and Sensors) installed and configured by the end of October 2017, using MGL C. 30B Procurement Laws as well as MGL C. 25A, s. 14 as a procurement policy.

The project will be overseen by the Green Community Team of Town Administrator, Jeff Ritter, Fire Chief, Michael Cassidy, Assistant to the Town Administrator, Andrea Minihan, and Technology Director, Christopher Meo who successfully completed seven projects along this same scope in the non-competitive round. Since this project is electrical, the Building Inspector, Peter Tartakoff will play an integral role in this project. In addition, Senior Center Coordinator, Linda Marshall, will be the point of contact at the Senior Center when the project starts.

As with past projects, the Town Administrator, Jeff Ritter would continue to update the Board of Selectmen every Wednesday night about the status of this Green Community project. This meeting is broadcast on the local Public Access Cable to all Town residents, as well as detailed in the minutes for the meeting for all the public to view. In addition, once a project is completed a Press Release will be issued and posted to the Town's website.

Town of Holliston  
Project 6 – Holliston Library  
Weatherization and Insulation

#### Current Consumption

In 2016, according to MassEnergyInsight.net, the Town of Holliston consumed 48,486 MMBTUs of energy of which 31,823 MMBTUs came from Buildings. The Public Library contributed 671 MMBTUs of that total (249 MMBTUs in electricity and 423 MMBTUs in gas).

#### Purpose

The purpose of accomplishing air-sealing and adding insulation to the Holliston Public Library is to improve the heating and cooling system, by keeping warm air outside and cool air inside during the summer requiring the air conditioning unit to work less using less energy, as well as, keeping the warm heated air inside and cool air outside during the winter months requiring less work on the heating system. In addition, this work will decrease the air drafts by closing gaps around windows, pipes, chimneys, and other areas found during the energy audit. Due to budget constraints in the Library Facilities budget, the Town does not have the funds to perform this weatherization work on our own.

Based upon the World Energy Audit, the Town expects to realize electric savings of 622 kWh (2.11 MMBTUs) per year, as well as, a decrease in gas usage of 336 therms (33.6 MMBTUs) per year, for a combined yearly savings of \$402.38. If this project is approved, it will continue the process of reducing our electrical and gas consumption and will help to achieve our goal of attaining a reduction of 10,267 MMBTUs in five years, as well as, make the Public Library a more comfortable place to visit in the middle of winter and heat of the summer.

The plan calls to seal openings identified during the energy audit that air is moving through. In the Public Library Building, there is a large attic bypass area with gaps in insulation as well as gaps in recessed lighting. The plan is to insulate and close the gaps found in the audit, as well as, insulate around the staircase to the attic. In addition, cracks around the windows and weather-stripping around the doors will be performed.

The total cost of the project is projected at \$6,415.98, with an Electric Utility incentive estimated at \$743.50. The Town is asking for the remaining \$5,672.48 as part of the Green Community Grant. The ROI is estimated to be around 7% with a simple payback of 14 years. As a relatively small project once underway, the Town is not requesting any additional costs or administrative fees for this project.

#### Benefits

The main benefit of weatherizing the Public Library is to minimize air exchange with the outside and therefore increase the efficiency on the heating and air conditioning equipment by keeping the conditioned air inside the building.

#### Timeline

If approved, the Town plans to work with World Energy and have the weatherization accomplished in the fall of 2017. The project will be purchased through MGL C. 30B Procurement Laws as well as MGL C. 25A, s. 14.

The project will be overseen by the Green Community Team of Town Administrator, Jeff Ritter, Fire Chief, Michael Cassidy, Assistant to the Town Administrator, Andrea Minihan, and Technology Director, Christopher Meo who successfully completed seven projects along this same scope in the non-competitive round. In addition, Library Director, Leslie McDonnell, will be the point of contact at the Library when the project starts.

As with past projects, the Town Administrator, Jeff Ritter, would continue to update the Board of Selectmen every Wednesday night about the status of this Green Community project. This meeting is broadcast on the local Public Access Cable to all town residents, as well as detailed in the minutes for the meeting for all the public to view. In addition, once a project is completed a Press Release will be issued and posted to the Town's website.

Town of Holliston Green Community Project 7  
Holliston Public Library  
Lighting and Lighting Controls

#### Current Consumption

In 2016, according to MassEnergyInsight.net, the Town of Holliston consumed 48,486 MMBTUs of energy of which 31,823 MMBTUs came from buildings. The Public Library contributed 671 MMBTUs of that total (249 MMBTUs in electricity and 423 MMBTUs in gas).

#### Purpose

The purpose of installing light-emitting diode (LED) bulbs, fixtures, dimmers, and occupancy sensors, is to reduce the electricity consumption of the Public Library and exterior lot. The new equipment being proposed will automatically adjust light levels depending on outside sunlight, allow for lights to automatically power off when a room is unoccupied, as well as the new bulbs are designed to use less watts than the existing lights. Due to budget constraints in the Library Facilities budget, the Town does not have the funds to perform this retrofit lighting project on our own.

Based upon the World Energy Audit, the Town expects to realize electric savings of 20,691 kWh (70.34 MMBTUs) per year for a yearly electrical savings of \$4,400.56. If this project is approved, it will continue the process of reducing our electrical consumption and will help to achieve our goal of attaining a reduction of 10,267 MMBTUs in five years and to lower the Town's electrical costs.

The plan calls to replace the 245 existing interior and exterior bulbs with LED equivalents. In addition, 4 dimmer and occupancy sensors will be installed to better control the lighting system. The total cost of the project is projected at \$30,590.85, with an Electric Utility incentive estimated at \$5,172.75. The Town is asking for the remaining \$25,418.10 as part of the Green Community Competitive Grant. As we found out with the Police Department and Town Hall lighting projects, there is usually one or two lights that require special attention, once the project gets underway. Due to that, the Town is asking for an additional 5% contingency and administrative fee of \$1271 in case there is a light fixture or two that requires additional attention bringing the total net cost to \$26,689.10.

A licensed electrician will need to be hired and electrical permits will need to be applied for. The Green Community Team will request waivers from the Building Department for the cost of the permit and inspections.

#### Benefits

There are numerous benefits with performing the lighting project. First, the LED bulbs can last up to 100,000 hours versus the existing lights which last only 1000 hours. This will have a reduction in the time Highway Staff is needed to change out light bulbs so they can concentrate on the roads. LEDs also use 60-90% less energy than the existing bulbs and run cooler which allows the air-conditioning system to run more effectively. The use of occupancy sensors and dimmers will be implemented to automatically turn off lights when a room becomes unoccupied or less light is needed.

#### Timeline

If approved, the Town plans to work with World Energy and have the Lights and Lighting Equipment (Dimmers and Sensors) installed and configured by the end of October 2017, using MGL C. 30B Procurement Laws as well as MGL C. 25A, s. 14 as a procurement policy.

The project will be overseen by the Green Community Team of Town Administrator, Jeff Ritter, Fire Chief, Michael Cassidy, Assistant to the Town Administrator, Andrea Minihan, and Technology Director, Christopher Meo who successfully completed seven projects along this same scope in the non-competitive round. Since this project is electrical, the Building Inspector, Peter Tartakoff will play an integral role in this project. In addition, Library Director, Leslie McDonnell, will be the point of contact at the Library when the project starts.

As with past projects, the Town Administrator, Jeff Ritter would continue to update the Board of Selectmen every Wednesday night about the status of this Green Community project. This meeting is broadcast on the local Public Access Cable to all town residents, as well as detailed in the minutes for the meeting for all the public to view. In addition, once a project is completed a Press Release will be issued and posted to the Town's website.

Town of Holliston Green Community Project 8  
Town of Holliston  
Electric Vehicle Fleet and Charging Station

Current Consumption

In 2016, according to MassEnergyInsight.net, the Town of Holliston consumed 48,486 MMBTUs of energy. The breakdown of that usage is as follows:

Category	MMBTU Usage
Buildings	31,823
Water/Sewer	4,817
Street/Traffic Lights	520
Open Space	110
Vehicle Fleet	11,217

Purpose

In an effort to begin reducing the second largest energy consumption category, the Town would like to start investing in an electric vehicle fleet. Currently, all land-use inspections (building, wiring, plumbing, assessing, and health inspections) are performed using either a 2007 Ford Five Hundred sedan or an employee's personal vehicle. The Ford Five Hundred uses an average of 294 gallons of gas a year which equates to the consumption of 25 MMBTUs of energy as well as releasing 7,059lbs of CO2 into the atmosphere and costs the town about 50 cents per mile to keep on the road. In addition, currently because there is only one vehicle, many employees utilize their own vehicle for inspections resulting in additional CO2 being released into the atmosphere and additional undocumented gasoline consumption not calculated into the fleet vehicle usage. Due to budget constraints in the Town Hall budget, the Town does not have the funds to purchase an electric vehicle fleet. The plan is to begin the conversion to electric vehicles by starting with two Nissans. The intent is once these two vehicles are deployed, this will encourage the Town to purchase future vehicles through capital appropriations at Town Meetings in the coming years.

The Town would like to purchase two (2) 2017 30 kWh Nissan Leaf SVs for a total contracted price of \$24,613.20 each or a combined price of \$49,226.40. According to the [afdc.energy.gov](http://afdc.energy.gov) calculation website, each Nissan Leaf will consume an average of 1,364 kWh of electricity and only release 1,328lbs of CO2 into the atmosphere resulting in an operational cost of only 42 cents per mile. In addition, by decreasing personal vehicle usage and the Ford Five Hundred miles, the Town expects to decrease our CO2 footprint by 11,462lbs annually based upon the current use of 5000 miles a year per vehicle.

The cars would be stored and charged over at the municipal parking lot behind the fire station located at 59 Central Street. The cars will also have the Town Seal on the door as well as wording along the lines of "Holliston Electric Vehicle Fleet" so observers will know that the Town is 100% behind the concept of Electric Vehicles.

If approved, in addition to purchasing 2 Nissan Leafs, the project would include purchasing two ruggedized ProMountDuo pedestals along with two Share2 enabled HCS-40R ruggedized bundle charging units to be installed in 4 parking spaces at the municipal lot. All 4 charging units are classified as Level 2 chargers and come with a five year warranty on the equipment. Two of these spots would be reserved for Town Vehicles at night

for charging, but available during the day for the general public while they shop or work in downtown. The other two charging stations would be available to the public 24 hours a day. This will hopefully encourage residents and visitors to Town, to spend extra time in downtown Holliston increasing the foot traffic of local businesses and restaurants.

During the implementation of this project, a few contractual agreements need to be negotiated and approved. First, since the Town intends to use a utility pole in the Municipal Lot, an agreement with Verizon will need to be signed allowing the Town to run a metered electrical supply from the Fire Station to the pole. Secondly, a licensed electrician with equipment for outside pole work will need to be vetted and hired. Electrical and structural permits will need to be applied for and the Green Community Team will request waivers from the Building Department for the cost for both permits and all required inspections.

The cost of the charging equipment is \$2,478.69, while installation and wiring of the chargers will cost \$3,800 for a total project cost of \$6,278.69. The Town has applied to the Massachusetts Electric Vehicle Incentive Program (MassEVIP) for \$6,278.69 to cover the cost of the charging stations. In addition, the Town has applied to the same program for a \$15,000 incentive for the 2 cars which brings the total cost of the vehicles and charging station to \$34,226.40.

Lastly, the Town would request an additional 10% in administrative costs and contingency fees of \$3,423 bringing the total requested amount for this project to \$37,649.40. This administrative and contingency fee would be used for the time spent negotiating right-of-way agreements with Verizon, working with an approved Nissan dealership to order the cars, as well as purchasing and affixing the Town Seal and other markings on the vehicles.

The Nissan Leafs would be purchased under the COMMBUY's VEH98 contract most likely through Milford Nissan who is a state approved vendor. Milford Nissan being only eight miles away would also allow for easy servicing of the vehicles when necessary.

The project will be overseen by the Green Community Team of Town Administrator, Jeff Ritter, Fire Chief, Michael Cassidy, Assistant to the Town Administrator, Andrea Minihan, and Technology Director, Christopher Meo.

As with past projects, the Town Administrator, Jeff Ritter would continue to update the Board of Selectmen every Wednesday night about the status of this Green Community project. This meeting is broadcast on the local Public Access Cable to all town residents, as well as detailed in the minutes for the meeting for all the public to view. In addition, once a project is completed a Press Release will be issued and posted to the Town's website.

Future Home of Holliston's Electric Vehicle Fleet

