

MEMORANDUM

TO: Gregg Tivnan, Assistant Town Manager

FROM: Lauren Sinatra, Nantucket Energy Office
George Aronson, Nantucket Energy Office

RE: Update of Nantucket Energy Office Activities:
Third Quarter of FY2014

DATE: 2 April 2014

This memorandum provides an update of the activities of the Nantucket Energy Office through the third quarter of FY2014. Descriptions of the following ongoing activities and special projects, which correspond to listings in the Energy Policy Recommendations approved by the Board of Selectmen in FY2013, are provided below:

1. Monitoring of Town energy consumption.
2. Mass Save residential energy audits.
3. Municipal facility audits.
4. General public relations.
5. Energy-efficient building operations.
6. Heating oil burner efficiency improvements.
7. LED streetlights.
8. Solar PV opportunities.
9. Geothermal energy recovery opportunities.
10. Distribution system planning and the need for a third cable.
11. Building code changes.
12. Coordination with facility managers.
13. Electricity supply agreements
14. Demand response program.
15. Wind turbine update.

Additional supplementary materials are also attached. The Energy Office will be prepared to discuss any or all of these items with the Board of Selectmen at the meeting.

Reduce energy consumption

Ongoing activities

1. Monitoring of Town energy consumption. The following table compares energy consumption by municipal facilities and equipment in the first two quarters (July 1 through December 31) of each of FY2014 and FY2013:

	FY2013 (Q1 &Q2)	FY2014 (Q1 &Q2)
Electric meters	78	86
Electricity consumption, MWh	6,145	5,723
Heating oil consumption, gallons	19,406	14,092

Source: MassEnergy Insight data. The data do not account for electricity consumed at metered accounts for which data have not been entered into the MEI database.

As shown, total electricity consumption at Town metered locations in the first half of FY2014 decreased by 422 MWh, or 6.9 percent, compared to the first half of FY2013 , even though the number of metered locations increased from 78 to 86. Over the same periods, heating oil also decreased substantially. Records on propane consumption are still being reviewed. Appendix A shows further that total electricity consumption at Town metered locations in FY2014 through March 27, 2014 decreased by 1,066 MWh, or 11.7 percent, compared to the same period in FY2013, notwithstanding the cold winter season. The Energy Office continues to maintain the MassEnergyInsight system for monitoring Town energy consumption and cost, and seeks guidance regarding the best ways to utilize the available data.

2. Mass Save residential audits. The Energy Office worked with National Grid and Mass Save to publicize, schedule and arrange free home energy assessments for 65 Nantucket households during the week of February 3 through 7, 2014, making a total of 122 provided in FY2014 to date and a total of 431 provided on Nantucket since the first audit week in January 2012 . Residents were provided with power-strips, bulbs, thermostats, shower heads and aerators, and evaluated for insulation, air sealing and other efficiency measures. Attachment B provides more information on the results of the audits.

The next audit week, which is scheduled for May 5-9, 2014, has 46 residents already scheduled for their home energy assessments. There is a April 25th deadline to sign-up, with no-cap for participation. The Energy Office continues to work with National Grid to improve communication and publicity for the audit weeks on a year-round basis. New initiatives will involve public advertising in the airport and on the ferries aimed at participation of summer residents. Attachment C provides an example of an ad being placed by National Grid.

3. Municipal facility audits. The Energy Office is working with the National Grid contractor to schedule installation of upgrade lighting for the High School, the Fire Station, the Surfside wastewater treatment facility; and the Siasconset wastewater treatment facility. In each case, the Town has entered into follow-up agreements to install the recommended lighting upgrades. Attachment D provides the results of revised lighting audits for the Fire Station, which would require a net investment by the Town (after rebates) of \$3,429 with a projected payback of 3.06 years, and the Siasconset wastewater treatment facility which would require a net investment by the Town (after rebates) of \$6,216 with a projected payback of 0.62 years (7 months).

The Town has now completed lighting audits on all of its top 20 energy-consuming facilities. Next steps will include arranging non-lighting audits of the High School; the Surfside and Siasconset wastewater treatment facilities; Our Island Home; and the Elementary School, as well as evaluation of heating system replacements or retrofits at 2FG and Town Hall.

4. General public relations. The Energy Office has held numerous informational meetings with groups of residents, businesses and local contractors and builders. The Energy Office continues to update and revise its website to reflect new activities and information and to improve the format. Also, social media are used to publicize specific programs and events.

Special projects

5. 3rd Grade Enrichment Cluster: "Energy Detectives". From March 7 until April 18, Lauren Sinatra will be leading a group of six 3rd graders in an enrichment cluster, which is when students, teachers, parents and community members learn together around a topic of interest. Activities will include energy games and other instructional sessions to learn how schools and homes use energy, and how we can work together with parents and teachers to reduce our island's energy consumption.
6. Energy-efficient building operations. The Town could benefit greatly if Town employees are encouraged to contribute to energy-efficient behavior on a voluntary basis through implementation of the See the Light program as supported by materials available through National Grid, MassEnergyInsight and the Massachusetts Division of Energy Resources (Mass DOER). The Energy Office seeks guidance on recruitment of employees to participate in these efforts.

In the long-term, one way to provide department managers with direct incentives to reduce energy costs is by incorporating energy costs as a line item in each departmental budget. The Energy Office seeks guidance regarding the next steps to take in these areas.

7. Heating oil burner efficiency improvements. The Energy Office seeks direction from the Board of Selectmen to proceed with the installation of high-pressure heating oil fuel delivery systems on heating oil burners at Our Island Home and Town Hall. After obtaining three quotes, the recommended vendor is Energy Efficiency Solutions, LLC (EES), which offers a product called the Burner Booster. EES would provide three systems at a total cost of \$24,600, with a guaranteed payback of less than 18 months, and a projected payback of less than 13 months. Information on the requested quotes for the high-pressure fuel oil delivery systems is provided in Attachment E.

Note that the heating system at Our Island Home was examined by an independent evaluator, who found that the burners and boilers themselves do not require replacement. Although the future of Our Island Home is uncertain, the product would pay for itself in such a short time that installation is recommended. If the installations at Our Island Home and Town Hall are successful, then the Energy Office would seek direction to procure similar systems for all Town buildings that burn heating oil in their boilers.

8. LED streetlights. The Town Facility Manager is working to gather data on LED ownership, conversion costs, and maintenance costs, as well as the availability of spare parts in inventory and the accuracy of the lamp and light labelling system. The Energy Office is monitoring potential changes in National Grid's rates, which might provide the basis for a Town decision to invest in conversion to LEDs and/or purchase of the National Grid streetlights at some future point. At this time, the Energy Office recommends that actions be deferred pending further collection of data on the streetlights and streetlamps.

Support development of solar energy and geothermal energy recovery

9. Solar PV opportunities. The Energy Office has identified one parcel of Town-owned land that might be suitable for development of a solar PV system – in the area of the Polpis Water Tower. The parcel includes an area of two to three acres of disturbed land that has very low public visibility, has no present plans for alternative use, and has no need for further review of potential impacts on water resources or on protected species. The area suitable for development is small and could likely host less than 300 kW of solar PV panels, which might be too small to attract much interest from commercial developers. On the other hand, it might be feasible to have a solar PV facility of this magnitude developed in conjunction with the energy-service company procurement that is being implemented by the Nantucket Airport as part of the Carbon Neutral Airport Program (CNP) (see Items 9 and 12 below). In this context, the Energy Office recommends that the Town pursue ways to implement solar PV facility at the Polpis Water Tower site in conjunction with the Nantucket Airport. If such efforts fail, then the Town can decide whether to sponsor development of a solar PV facility at the Polpis Water Tower site through procurement of a private vendor.

The Energy Office recommends that the Town defer efforts to install solar PV panels on building rooftops until there is a need to replace a roof on a candidate building. Buildings that might be candidates include the administration building at the Surfside wastewater treatment facility; Our Island Home; the roof of the middle school gym; and Town Hall.

Installation of solar PV panels on canopies at the Airport parking lots has been proposed by the respondents to the Airport RFP for an energy service company. The Energy Office recommends that the Town defer action on such facilities until more information is learned regarding the feasibility of such an installation at the Airport.

10. Geothermal energy recovery opportunities. The Energy Office worked through National Grid to arrange for third-party evaluation of the existing geothermal energy recovery systems at the Airport. The Airport is considering whether to implement the recommendations from the evaluation itself or to do so through the energy service company that is in the process of being procured.

The Energy Office is in the process of arranging for a public informational session on and tour of the geothermal energy recovery system installed recently at the Nantucket Community Music Center at 56 Center Street, which might be held in June.

Consider energy efficiency in Town planning decisions

11. Distribution system planning and the need for a third cable. On December 4, the Energy Office sponsored a public forum at which National Grid engineers and planning staff discussed the electricity distribution system on Nantucket and the need for a third cable. More than 40 members of the public attended the session. Among the points made by National Grid staff were the following:
 - The two existing cables are more than sufficient to meet Nantucket electric loads for many years into the future.
 - For reliability purposes, National Grid plans its facilities on the basis of having one cable out of service (which has never yet happened). For that contingency, National Grid evaluates whether having one cable plus the diesel mobile generators at Bunker Road would be adequate to meet Nantucket electric loads. They are adequate today, and will be for some time, since National Grid can add mobile generators as needed.
 - On July 19, 2013, Nantucket's load hit a new record -- 45 MW, which is a significant increase from the previous high of 40 MW in 2012. The big step-up apparently has National Grid concerned about the need to start planning for a third cable earlier than

expected. National Grid anticipates it will take 10 years to design, permit and construct a third cable.

- Based on the above, National Grid is interested in implementing special programs just for Nantucket to reduce peak electric loads and defer the need to plan for a third cable. National Grid is particularly interested in programs aimed at summer residents. This is an opportunity to explore creative ideas for energy efficiency and demand side management.

As a next step, National Grid is working with the Energy Office to conduct an Awareness Event targeted at summer residents and at the realtors, property managers, caretakers, architects and builders that serve the seasonal population. The event is being scheduled in late spring at the Nantucket Hotel. The Selectmen, Town Administration and all interested Town officials are invited to attend.

12. Building code changes. On November 13, 2014, the Energy Office, in cooperation with Mass DOER, sponsored an educational session with municipal employees and local contractors to review current and pending changes in energy efficiency code requirements that will be adopted statewide on July 2014. The session was attended by more than 60 local residents and participants in the local building community, including the Building Commissioner and the Building Inspector. The Energy Office continues to distribute presentation and other materials from the session in order to disseminate information on the pending building code changes.

The Energy Office is in the process of arranging for a public informational session on best practices for installing insulation on Nantucket, taking into account the Island's unique challenges. The session, which would be aimed at builders and contractors, would be scheduled for May or June.

13. Coordination with facility managers. Regarding coordination between the Energy Office and the Town's three facility managers:
 - The Airport received two comprehensive proposals in response to the RFP for an energy service company to reduce energy consumption and achieve carbon neutrality through a performance contracting approach. The Energy Office represented the Airport in the evaluation of the proposals, interviews of the proposers, and development of a recommendation for award. The Energy Office anticipates continuing to support the Airport in its efforts to implement this initiative.
 - The Energy Office is working actively with the Town's new facility manager, Larry Kester. Areas of collaboration have included conduct of heating system evaluations and efficiency upgrades; accumulation and evaluation of data on streetlights and lamps; and non-lighting audits. Areas of future collaboration include implementing

the Lead By Example program and other measures to encourage energy-efficient behavior by Town staff; installing LEDs and water-saving devices; and other programs of mutual interest.

- The Energy Office is working with the School Department on several energy-related initiatives. A program is being conducted to work with a third-grade teacher and class to address energy issues through the Energy Detectives Program. In addition, the Energy Office is working with the High School to install a TV monitor (with a rack system and security system) to provide real-time data on the output of the wind turbine in a public setting. The equipment would be funded by the ReMain Foundation.

Other

14. Electricity supply agreements. The Town's agreements for electrical energy supply from third-party competitive suppliers will expire at the end of calendar year 2014. The Energy Office advised that the extended winter weather has resulted in electricity prices that are elevated over prior expectations. The Energy Office will support procurement of a successor arrangement later in the spring when pricing is projected to be more favorable.
15. Demand response program. The Surfside wastewater treatment facility has an arrangement in place to make its diesel generator available if needed to provide capacity to the grid on a short term basis during summer peak periods. If the generator is needed and used, then the Town would be compensated for the capacity provided.
16. Wind turbine update. The wind turbine was repaired in January and is back in service. The wind turbine generated 174 MWh in calendar 2013, a decrease from 188 MWh in calendar 2012, which decrease was largely attributable to the outage for repair of the gear box in November and December. The Energy Office sold 36 MWh of Renewable Energy Certificates in the second quarter at a price of \$59.50 per MWh, which brought \$2,142.00 into the Town.

The Energy Office was selected by NStar to purchase the RECs from the wind turbine that are generated in calendar year 2014 at a price of \$61 per MWh. At that price, revenue from a projected output of 180 RECs would be \$10,980.

Attachments

- A Electricity consumption at Town metered locations
- B Residential Home Energy Assessments on Nantucket, January 2012 to Date
- C New Ad Placed by National Grid

- D Revised lighting audits for the Siasconset wastewater treatment facility and the Fire Station
- E Request for Quotes for the High-Pressure Fuel Oil Delivery Systems

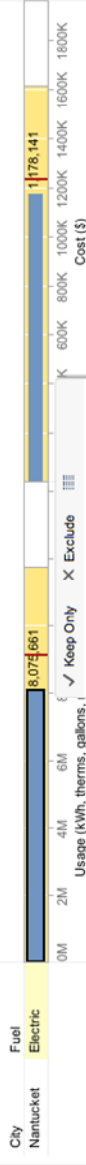


Fiscal Year Start Month
July

Fuel
 (All)
 Electric
 Oil
 Propane

Use and Cost This Year to Last

Total for Previous Year Total as of March 31, 2014 Total for Last Year as of Same Date
This chart compares your current energy use and cost, as of the date with the most complete data set (blue bar), to your energy use and cost this time last year (red line) and to last year's total energy use and cost (yellow bar). If the blue bar is past the red line, your energy use or spending is greater now than it was at the same time last year. To expand or collapse the chart, hover your pointer over the words City, Department, Building, etc., then click the plus (+) or minus (-) symbols.



City
Nantucket

Usage (kWh, therms, gallons)

Cost (\$)

As of March 31, 2014
Usage this year: 8,075,661
Usage at this time last year: 1,178,141
Cost this year: 1,237,655
Cost at this time last year: 1,237,655



ATTACHMENT B.**Residential Home Energy Assessments on Nantucket, January 2012 to Date**

Week of:	Total HEAs	Powerstrips	Bulbs	Thermostats	Showerhead	Aerators	Insulation Proposed	Insulation Installed (Signed)	Air Sealing Proposed	Air Sealing (Signed)	Roadblocks
1/16/2012	52		1052	68	19	19	27	15	25	17	
4/24/2012	47		1237	24	27	13	17	3	14	2	
11/4/2012	46		1037	54	16	18	11	2	13	6	
3/11/2013	92		2248	85	66	57	35	8	28	11	
5/13/2013	72		2232	103	73	73	25	0	10	0	
10/7/2013	57		1500	86	59	70	15	13	9	8	
2/7/2014	65	130	1544	116	68	92	14	4	15	4	15
Grand Total	431	130	10850	536	328	342	144	45	114	48	15

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HERE WITH YOU. HERE FOR YOU.

**Conserve your energy.
Preserve your community.**

Schedule your No-Cost Home Energy Assessment during the week of May 5*.

Making energy-efficiency improvements to your home is both good for you and Nantucket. We can identify smart changes that not only help you use less energy, but can also reduce the energy load on the island, minimizing the need to build additional electric infrastructure.

You could also be eligible for:

- no-cost compact fluorescent bulbs and air sealing
- 75% off insulation
- 0% interest Heat Loan and other generous rebates.

Preserve our community by conserving energy.

Schedule your home energy assessment online at ackenergy.org or call **1-800-632-8300**.

*Assessments performed during the week of May 5 are based on capacity and National Grid cannot guarantee that an assessment will be performed during that week. There will be further opportunity to participate during upcoming assessment weeks. Customers must meet eligibility requirements to participate in the home energy services program. Eligibility for rebates/incentives is based on findings from the home energy assessment. No-cost air sealing is targeted based on findings of the energy specialist. Insulation incentive covers 75% of the cost, up to \$2,000, for qualified improvements. HEAT loan financing is subject to approval from a participating lender. Energy efficiency experiences and savings may vary. Offer is subject to change by National Grid without prior notice, including rebate levels. © 2014 National Grid USA Service Company, Inc.



NORTHERN ENERGY SERVICES

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MUNICIPAL PROGRAM

CUSTOMER NAME: SCONSET WASTE WATER TREATMENT PLANT
 ADDRESS: 65 LOW BEACH ROAD
 CITY, STATE: NANTUCKET, MA 02554
 CONTACT PERSON: DAVID GRAY
 PHONE #: 401-413-8370
 EMAIL:

<u>EXISTING LIGHTING SYSTEM</u>							<u>PROPOSED LIGHTING SYSTEM</u>					
		Annual Hours	QTY	FIXTURE TYPE	CODE	WATTS PER FIXT.	Annual Hours	QTY	FIXTURE TYPE	CODE	WATTS PER FIXT.	Incentive
1	OFFICE / CONTROL ROOM	2080	6	2L4' T8/ELIG U6	2F32SSE	60	1680	6	2L2' T8/ELIG* PRIS KIT	2F17SSL	27	\$119.25
2	SENSOR							1	Wall Mount Occu Sensor	0	0	\$0.00
3	HALL	2080	5	2L4' T8/ELIG U6	2F32SSE	60	2080	5	2L2' T8/ELIG* PRIS KIT	2F17SSL	27	\$85.75
4	OFFICE	2080	4	2L4' T8/ELIG U6	2F32SSE	60	1680	4	2L2' T8/ELIG* PRIS KIT	2F17SSL	27	\$79.50
5	SENSOR							1	Ceiling Mount Sensor	0	0	\$0.00
6	LABORATORY	2080	4	2L4' T8/ELIG U6	2F32SSE	60	1680	4	2L2' T8/ELIG* PRIS KIT	2F17SSL	27	\$79.50
7	SENSOR							1	Ceiling Mount Sensor	0	0	\$0.00
8	RESTROOM	2080	2	2L4' T8/ELIG	2F32SSE	60	2080	2	2L4' T8/ELIG LOW PWR 28W	2F32SSL	42	\$18.75
9	MAIN WORK AREA	2080	18	2L4' T8/ELIG HIGH LMN	2F32SSH	78	2080	18	No Recommendation	0	78	\$0.00
10	BLOWER ROOM	2080	10	2L4' T8/ELIG HIGH LMN	2F32SSH	78	2080	10	No Recommendation	0	78	\$0.00
11	MECHANICAL ROOM	1800	3	2L4' T8/ELIG HIGH LMN	2F32SSH	78	1260	3	No Recommendation	0	78	\$31.50
12	SENSOR							1	Wall Mount Occu Sensor	0	0	\$0.00
13	GARAGE	2080	10	2L4' T8/ELIG HIGH LMN	2F32SSH	78	2080	10	No Recommendation	0	78	\$0.00
14	ELECTRICAL ROOM	1800	6	2L4' T8/ELIG HIGH LMN	2F32SSH	78	1260	6	No Recommendation	0	78	\$63.25
15	SENSOR							1	Wall Mount Occu Sensor	0	0	\$0.00
16	GENERATOR ROOM	1800	4	2L4' T8/ELIG HIGH LMN	2F32SSH	78	1260	4	No Recommendation	0	0	\$140.50
17	SENSOR							1	Wall Mount Occu Sensor	0	0	\$0.00
18	STAIRWELL	2080	4	2L4' T8/ELIG HIGH LMN	2F32SSH	78	2080	4	No Recommendation	0	78	\$0.00
19	BASEMENT	8760	28	250W METAL HALIDE	1M0250S	295	2080	28	3L4' T5 HO W / LENS	3F54HSE	177	\$15,512.25
20	SENSOR							28	HIF Fixture Sensor	0	0	\$0.00
21	EXTERIOR	4380	14	2/32W COMPACT HW	2C0032E	68	4380	14	20W XTOUR LED WALL PACK	1L020	20	\$735.75
Totals												
			118							152		

NORTHERN ENERGY SERVICES

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CUSTOMER NAME: *SCONSET WASTE WATER TREATMENT PLANT*

Lighting Systems Recommendations Summary

<u>EXISTING SYSTEM</u>		<u>PROPOSED SYSTEM</u>	
CONNECTED LOAD (WATTS):	14762	CONNECTED LOAD (WATTS):	9811
ANNUAL KWH USAGE:	87787	ANNUAL KWH USAGE:	20324
ANNUAL LIGHTING COST:	\$13,168.12	ANNUAL LIGHTING COST:	\$3,048.61
ENERGY COST (\$/KWH):	\$0.150		
<u>ESTIMATED (KWH) REDUCTION PER YEAR:</u>		<u>67,463</u>	
<u>ANNUAL COST REDUCTION:</u>		<u>76.85%</u>	
<u>TOTAL ESTIMATED SAVINGS/YR*:</u>		<u>\$10,119.51</u>	
<u>TOTAL PROJECT COST**:</u>		<u>\$23,082.08</u>	
<u>UTILITY'S INCENTIVE:</u>		<u>\$16,865.75</u>	
<u>COST AFTER INCENTIVE:</u>		<u>\$6,216.33</u>	
<u>ESTIMATED PAYBACK (YR) :</u>		<u>0.61</u>	
<u>ESTIMATED CARBON FOOTPRINT REDUCTION :</u>		<u>82710.1284</u>	<u>CO2 LBS/YR</u>

** TOTAL PROJECT COST INCLUDES LABOR AND MATERIALS.

* ESTIMATED SAVINGS PER YEAR ARE BASED ON THE CURRENT HOURS OF OPERATION AND CURRENT RATE (\$/KWH).

NORTHERN ENERGY SERVICES

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CUSTOMER NAME: NANTUCKET FIRE DEPARTMENT
 ADDRESS: 135 PLEASANT STREET
 CITY, STATE: NANTUCKET, MA 02554
 CONTACT PERSON: MARK MCDUGALL
 PHONE #:
 EMAIL:

<u>EXISTING LIGHTING SYSTEM</u>							<u>PROPOSED LIGHTING SYSTEM</u>					
LOCATION	Annual Hours	QTY	FIXTURE TYPE	CODE	WATTS	Annual Hours	QTY	FIXTURE TYPE	CODE	WATTS	Incentive	
					PER FIXT.					PER FIXT.		
1	DEPUTY CHIEF	5460	1	2L4' T8EE/ELEE 30W	2F32EEL	45	5460	1	2L4' T8EE/ELEE 25W wrap	2F25EEL	37	\$11.00
2	COPIER	5460	1	2L4' T8EE/ELEE 30W	2F32EEL	45	5460	1	2L4' T8EE/ELEE 25W wrap	2F25EEL	37	\$11.00
3	CHIEF'S OFFICE	5460	2	2L4' T8EE/ELEE 30W	2F32EEL	45	5460	2	2L4' T8EE/ELEE 25W wrap	2F25EEL	37	\$21.75
4	OFFICE ADMINISRATOR	5460	1	2L4' T8EE/ELEE 30W	2F32EEL	45	5460	1	2L4' T8EE/ELEE 25W wrap	2F25EEL	37	\$11.00
5	HALL	8760	5	2L4' T8EE/ELEE 30W	2F32EEL	45	8760	5	2L4' T8EE/ELEE 25W wrap	2F25EEL	37	\$87.50
6	RESTROOM	8760	1	2L4' T8EE/ELEE 30W	2F32EEL	45	8760	1	2L4' T8EE/ELEE 25W wrap	2F25EEL	37	\$17.50
7	RESTROOM	8760	1	65W INC	110065	65	8760	1	13W PAR 30 LED SI	1L013	13	\$114.00
8	CLOSET	5460	1	2L4' T8EE/ELEE 30W	2F32EEL	45	5460	1	2L4' T8EE/ELEE 25W wrap	2F25EEL	37	\$11.00
9	PUBLIC RESTROOM	8760	1	2L4' T8EE/ELEE 30W	2F32EEL	45	8760	1	2L4' T8EE/ELEE 25W wrap	2F25EEL	37	\$17.50
10	DAY ROOM	5460	6	4L4' T8EE/ELEE 30W	4F32EEL	89	5460	6	2L4' T8EE/ELEE 25W wrap	2F25EEL	37	\$426.00
11	DISPATCH	8760	4	2L4' T8EE/ELEE 30W	2F32EEL	45	8760	4	2L4' T8/ELIG LOW PWR 25W	2F25EEL	37	\$70.00
12	ENTRY	8760	1	2L4' T8EE/ELEE 30W	2F32EEL	45	8760	1	2L4' T8EE/ELEE 25W wrap	2F25EEL	37	\$17.50
13	BUNK ROOM	5460	2	4L4' T8EE/ELEE 30W	4F32EEL	89	5460	2	4L4'T8EE/ELEE 25W 8' wrap	4F25EEL	75	\$38.25
14	BUNK ROOM	5460	1	4L4' T8EE/ELEE 30W	4F32EEL	89	5460	1	2L4' T8EE/ELEE 25W wrap	2F25EEL	37	\$71.00
15	STAIRS	8760	1	2L4' T8EE/ELEE 30W	2F32EEL	45	8760	1	2L4' T8/ELIG LOW PWR 25W	2F25EEL	37	\$17.50
16	TRAINING ROOM	5460	2	4L4' T8/ELIG	4F32SSE	112	5460	2	4L4' T8/ELIG LOW PWR 25W	4F25EEL	75	\$101.00
17	FIRE ALARM SUPER RM	5460	1	2L8' STD/STD	2F96SSS	173	5460	1	4L4'T8EE/ELEE 25W 8' wrap	4F25EEL	75	\$133.75
18	FIRE PREVENTION OFFICER	5460	1	4L4' T8/ELIG	4F32SSE	112	5460	1	4L4'T8EE/ELEE 25W 8' wrap	4F25EEL	75	\$50.50
19	APPERATIS BAY	5460	20	2L8' T8 HO/ELIG	2F80SSE	160	5460	20	No Reccomendation	0	160	\$0.00
20	SIDE ROOMS LAMPS ONLY	2400	8	2L4' T8EE/ELEE 30W	2F32EEL	45	2400	8	2L4' T8/ELIG LOW PWR 25W	2F25EEL	37	\$38.50
21	TOOL ROOM	2400	1	2L8' T8/ELIG	2F59SSE	109	2400	1	4L4' T8EE/ELEE HL 8' industrial Kit	4F25EEL	75	\$20.50
22	ATTIC	2400	1	2L4' T8/ELIG	2F32SSE	60	2400	1	2L4' T8/ELIG LOW PWR 25W	2F25EEL	37	\$13.75
23	TOWER	2400	1	2L8' T8/ELIG	2F59SSE	109	2400	1	4L4' T8EE/ELEE HL 8' industrial Kit	4F25EEL	75	\$20.50
24	EXTERIOR BACK	4380	1	250W QUARTZ	1V0250S	290	4380	1	45W RAB LED FLOOD	FFLED39	45	\$268.25
25	EXTERIOR FRONT	4380	1	250W METAL HALIDE	1M0250S	295	4380	1	40W MAXLITE LED WALL PACK	MLLWP40LED50	40	\$279.25

Totals 66

66

NORTHERN ENERGY SERVICES

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MUNICIPAL PROGRAM

CUSTOMER NAME: NANTUCKET FIRE DEPARTMENT

Lighting Systems Recommendations Summary

<u>EXISTING SYSTEM</u>		<u>PROPOSED SYSTEM</u>	
CONNECTED LOAD (WATTS):	6653	CONNECTED LOAD (WATTS):	5193
ANNUAL KWH USAGE:	35886	ANNUAL KWH USAGE:	28414
ANNUAL LIGHTING COST:	\$5,382.95	ANNUAL LIGHTING COST:	\$4,262.13
ENERGY COST (\$/KWH):	\$0.150		
<u>ESTIMATED (KWH) REDUCTION PER YEAR:</u>		<u>7,472</u>	
<u>ANNUAL COST REDUCTION:</u>		<u>20.82%</u>	
<u>TOTAL ESTIMATED SAVINGS/YR*:</u>		<u>\$1,120.82</u>	
<u>TOTAL PROJECT COST**:</u>		<u>\$5,297.46</u>	
<u>UTILITY'S INCENTIVE:</u>		<u>\$1,868.50</u>	
<u>COST AFTER INCENTIVE:</u>		<u>\$3,428.96</u>	
<u>ESTIMATED PAYBACK (YR) :</u>		<u>3.06</u>	
<u>ESTIMATED CARBON FOOTPRINT REDUCTION :</u>		<u>9160.7946</u>	<u>CO2 LBS/YR</u>

** TOTAL PROJECT COST INCLUDES LABOR AND MATERIALS.

* ESTIMATED SAVINGS PER YEAR ARE BASED ON THE CURRENT HOURS OF OPERATION AND CURRENT RATE (\$/KWH).



**Request for Quotes
For Goods or Services
More Than \$10,000 but Less Than \$25,000**

Step 1: Specifically describe the goods or service you want to purchase. Include as part of your description a date by which the product must be delivered or service must be performed.

Step 2: Solicit a minimum of three (3) oral or written quotes (by phone, fax, letter or email). Record the names and addresses of all persons/companies that you contact. Record the amount of each quote that you receive. Be sure that the vendor giving you the quote can provide the product or service by your stated delivery date.

Step 3: Award the quote to the responsible and responsive vendor offering the lowest price.

.....

Date: 3/21/2014

Department: _____

Item or Service Description:

Ultra high-pressure fuel systems with oil heated delivery systems incorporated into the fuel feed line. System to also include a standard fuel filtering system and a final filter capable of cleaning the fuel down to less than 5 microns of impurities. Systems need to be used on the boiler equipment in Town Hall and Our Island Home located on the Island of Nantucket. Town Hall has one boiler system and our Island Home has three units for heat and two separate heaters used for domestic hot water. Vendor must guarantee a minimum fuel savings of 15%.

Town Hall: One BB-155 MC System and installation; Our Island Home: Two BB-155 LC 2 systems including installation and delivery. Warranty 2 Years

	Quote Amount
Company: <u>BURNER BOOSTE (EES, LLC)</u> Address: <u>37 Pope Road, Holliston, MA 01746</u> Contact Name: <u>BOB KETTER</u> Telephone: <u>339-206-1318</u> Comments: Email: <u>bobk@theburnerbooster.com</u>	OIH: \$17,040 Town Hall: \$7,600. Total: \$24,640.00
Company: <u>Nelson & Small/ Kleensky</u> Address: <u>19 Town Landing Road, Falmouth, Maine</u> Contact Name: <u>Steve Hayes</u> Telephone: <u>207-415-0083</u> Comments: Email: <u>steve@kleensky.com</u>	Total: \$26,640.00 \$2000 over Burner booster price due to increased travel from Maine.

Company: Gassco, Inc. (<http://www.gasscoinc.net/>)

\$34,000.00

Address: 23 River Street, Dedham, MA 02026

Contact Name: William Gass, President

Telephone: 781-407-9800

Comments:

Email: GASSCOINC@HOTMAIL.COM

***Submit this form and any pertinent attachments to the Finance Department
when you are processing your invoice.***