TOWN OF GILL

MASSACHUSETTS

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SELECTBOARD MEETING MINUTES

September 9, 2013

Call to Order: The Selectboard meeting was called to order at 6:35 PM.

Present: John Ward, Ann Banash, and Randy Crochier, Selectboard members; Ray Purington, Admin. Assistant; Jessica Gaines, Claire Chang, Ed Wilkins, Kathleen Adams, Darcie Confar, Colleen Fissette, Mike Jackson, and Ronnie LaChance.

Paving Thank-you: John read aloud a thank-you card from Gill Elementary Principal Kathleen Adams which expressed the school's appreciation for the recent paving project for the driveway and parking areas.

Siemens Year 1 Performance Assurance Report: Colleen Fissette, a Performance Assurance Engineer for Siemens Industry, presented the Performance Assurance Report (attached) for the first year of the Town's 20-year Energy Performance Contract with Siemens. The contract applies to the new boiler, energy management system, lighting upgrades, and building envelope improvements that Siemens installed at the Gill Elementary School in 2011. The report covers July 1, 2012 to June 30, 2013 and shows that the various improvements generated cost savings of $14,711, which is more than the $11,620 guaranteed by the contract.

Ed Wilkins, the GMRSD's Energy & Facilities Manager, commented that once he receives emailed instructions from Colleen, he will be able to send the school building's trend data (data logs from the system controller) to Siemens on a monthly basis, which will save someone from driving here from the eastern part of the state.

Colleen reviewed the five facility improvement measures from the project, and discussed the baseline assumptions and measurement techniques for each. (All of this can be found in the report.) While discussing the nighttime temperature setbacks in Table 16, it was pointed out that the set point for Unit Ventilator #9 is high, and should be corrected.

Ray explained that there is an agreement between the GMRSD and the Town that the District will provide an assessment credit to the Town for each year's energy cost savings as verified by Siemens. He will prepare a letter to the Superintendent and Business Office requesting the $14,711 credit.

There was a brief discussion about how the credit will be accounted for, and how the Town might use the funds. Ray will discuss the matter further with the Town Accountant to determine our options. Colleen Fissette, Darcie Confar, Ronnie LaChance, Ed Wilkins, and Kathleen Adams left the meeting at 7:30 PM.

Four Winds School Lease: Steve Hussey, Director of the Four Winds School, was unable to attend. The discussion of the School's lease of the Riverside Municipal Building will be placed on the agenda for the next meeting.

Minutes: Ann made a motion, seconded by Randy, to accept the minutes from 8/26. The vote was unanimous in the affirmative.

Energy Audit: The Selectboard received a "Narrative Summary" outlining the findings and recommendations that will be in the energy audit for the Town Hall. Ray reported that Bart Bales expects to have the complete audit ready on Wednesday, September 11. The Selectboard asked Ray to find out when audits for the Library and Riverside Municipal Building will be ready.

Sewer I&I Study: Ray explained that after paying for the FY14 share of Tighe & Bond's Phase 1 I&I Study, there will be $1,330 left in the Sewer budget's line for repairs and maintenance. The next phase of the study will likely be a "Smoke Test", which the Tighe & Bond estimated could cost $10,600. Believing that much of the smoke test

work could be done locally, the Selectboard asked to have the Highway Superintendent investigate the possibility of doing a smoke test this fall using local resources.

Community Shared Solar: Claire Chang reported that the group that is working on a community shared solar project is focusing on sites in Deerfield and Greenfield. There may be the possibility of a Local Technical Assistance grant from the FRCOG to help Gill explore this further.

Sewer Commitment: Ann made a motion, seconded by Randy, to sign the sewer commitment with a bill date of September 10, 2013 in the amount of $21,585.75. The vote was unanimous in the affirmative.

DLTA Broadband Project: Ray reported that Gill has been accepted into a FRCOG program that will assist towns in assessing their broadband, phone, and IT needs. Based on initial quotes, the cost for broadband appears to be prohibitively expensive. However, if the Town's telephone service can be bundled into the broadband service, there may be a chance for savings.

Selectboard Essentials Training: The Selectboard reviewed the list of nine workshops being offered by the FRCOG as part of this year's training series for area Selectboards.

Law Enforcement Mutual Aid Agreement: The Selectboard tabled a Franklin County Law Enforcement Mutual Aid Agreement that was proposed by Police Chief David Hastings. The Board expressed a desire to meet with the Chief to discuss the agreement and ask questions. It will be on the agenda for the September 23rd meeting. Ray will also send the agreement to Town Counsel for her review.

Jessica Gaines and Mike Jackson left the meeting at 7:50 PM.

Warrant: The Board reviewed and signed FY 2014 warrant #6.

The meeting adjourned at 8:05 PM.

Minutes respectfully submitted by Ray Purington, Administrative Assistant.

Randy P. Crochier, Selectboard Clerk

9/5/13.

Dear Gill Selectboard,

thank you for our GORGEOUS pavement. The staff, parents + students have all commented on the space, layout + beauty. The parking lot is the biggest hit but the small details like the side door entrance also noticed + appreciated.

It means a lot to all of us to be supported by the Town of Gill + to know you have the children + staff's best interest in the forefront of your decisions.

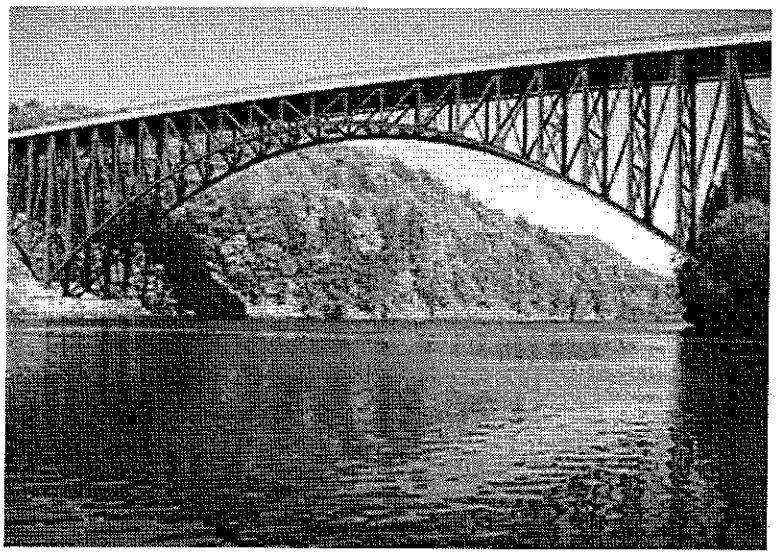
thank you for this incredible gift - your generosity is much appreciated. ♡ Kathleen Adams

SIEMENS

ENERGY PERFORMANCE CONTRACT
PERFORMANCE ASSURANCE REPORT

FOR THE

Town of Gill



Performance Year 1: July 1, 2012 – June 30, 2013

Siemens Industry, Inc.
Canton, MA

SIEMENS

PERFORMANCE SOLUTIONS AGREEMENT OVERVIEW

Client ..... Town of Gill

Effective Contract Date..... June 6, 2011

Customer Contact..... Ray Purington, Town of Gill Administrative Assistant

Siemens Contact..... Colleen Fissette, Performance Assurance Engineer

Performance Guarantee Period..... July 1, 2012 to June 30, 2032

Contract Term ..... 20 Years

Table of Contents

1. Executive Summary

Performance Year 1: July 1, 2012 – June 30, 2013

Siemens Industry (Siemens) is pleased to provide the Town of Gill with this Year-1 energy savings guarantee report. This report details the energy performance of the implemented project by comparing realized energy and cost savings for this annual period to the contract guaranteed savings. Your Energy Performance Contract with Siemens guaranteed **$11,620** in annual cost savings. Total Year-1 cost savings for this annual period amounted to **$14,711** and consisted of **$14,002** in Measured and Verified Savings and **$708** in Stipulated Energy Savings. Total Year-1 savings are **$3,091** in excess of the guaranteed savings for this performance period.

Table 1. Summary of annual guaranteed and verified savings for the Town of Gill

Annual Period	Measured and Verified Savings	Option D Stipulated Savings	Total Realized Annual Savings	Annual Guaranteed Savings	Savings Excess/ Shortfall
1	$14,002	$708	$14,711	$11,620	$3,091
2				$11,969	
3				$12,328	
4				$12,698	
5				$13,079	
6				$13,471	
7				$13,875	
8				$14,292	
9				$14,720	
10				$15,162	
11				$15,617	
12				$16,085	
13				$16,568	
14				$17,065	
15				$17,577	
16				$18,104	
17				$18,647	
18				$19,207	
19				$19,783	
20				$20,376	
TOTALS	$14,002	$708	$14,711	$312,243	$3,091

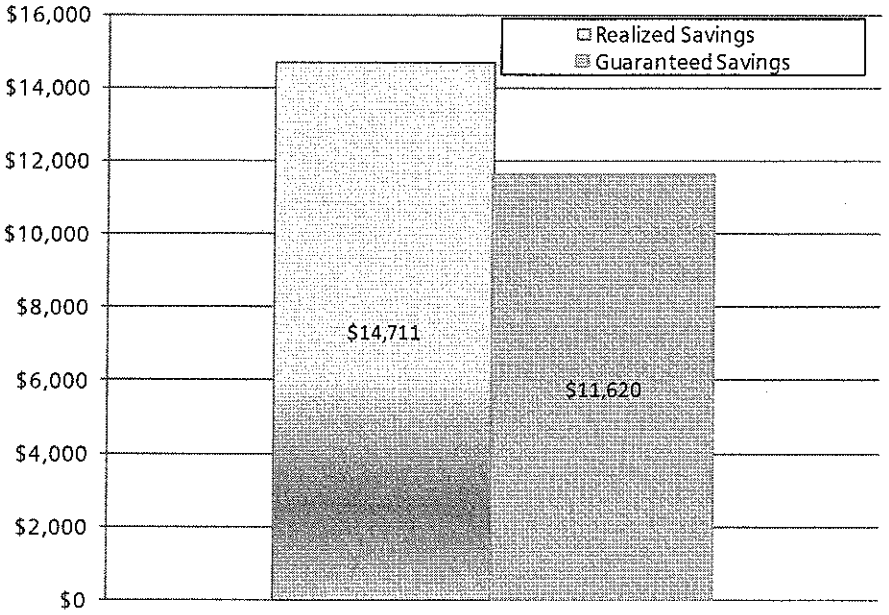


Figure 1. Year-1 Savings Comparison

Table 2. Year-to-Date Energy Savings (Units)

Energy Savings	Electric Energy Saved (kWh/yr)	#2 Fuel Oil Saved (gal/yr)
Guaranteed	24,605	3,168
Realized	**36,653**	**3,595**

Table 3. Guaranteed Energy Savings by FIM (Units)

Facility Improvement Measure	Electric Energy Saved (kWh/yr)	# 2 Fuel Oil Saved (gal/yr)
Lighting & Controls	24,605	(221)
Boiler Replacement		1,944
EMS		1,139
Domestic Hot Water Upgrade (DHW)		33
Building Envelope Improvement		274
TOTALS	**24,605**	**3,168**

Table 4. Realized Energy Savings by FIM (Units)

Facility Improvement Measure	Energy Saved (kWh/yr)	#2 Fuel Oil Saved (gal/yr)
Lighting & Controls	36,653	(329)
Boiler Replacement		2,351
EMS		1,265
Domestic Hot Water Upgrade (DHW)		33
Building Envelope Improvement		274
TOTALS	**36,653**	**3,595**

2. Performance Assurance Overview

This section of the report provides an overview of the methodology and parameters used to measure and verify savings for this report and are based on the signed contract between the Town of Gill and Siemens Industry, Inc.

2.1 Measurement and Verification Methods

Realized savings were calculated using the methodology described in Attachment F of the energy performance contract. There are four guarantee options to measure and verify savings: Option A - Measured Capacity, Option B - Measured Consumption, Option C - Main Meter Comparison, and Option D - Stipulated.

Option A - Measured Capacity. This approach is intended for Facility Improvement Measures where a one-time measurement for specific equipment or systems instantaneous baseline energy use, and a one-time measurement for specific equipment or systems instantaneous post-implementation (Post) energy use can be measured. Baseline and Post energy consumption is calculated by multiplying the measured end use instantaneous capacity (i.e. – kW, Gal/hr, BTU/hr) by stipulated hours of operation for each mode of operation (i.e. – hours, week, month). The calculations for energy consumption will be defined in the Measurement and Verification article of Attachment F. The work sequence required for data collection, evaluation, and reporting will be defined in the Measurement and Verification article of Attachment A.

Option B - Measured Consumption. This approach is intended for Facility Improvement Measures where continuous periodic measurements for specific equipment or systems baseline energy use, and continuous periodic measurements for that equipment or systems post-implementation (Post) energy use can be measured. The calculations for energy consumption will be defined in the Measurement and Verification article of Attachment F. Periodic inspections and consumption measurements of the equipment or systems will be necessary to verify the on-going efficient operation of the equipment and saving attainment. The predetermined schedule for data collection, evaluation, and reporting will be defined in the Performance Assurance Technical Support Program article of Attachment A.

Option C - Main Meter Comparison. This approach is intended for measurements of the whole-facility or specific meter baseline energy use, and measurements of whole-facility or specific meter post-implementation (Post) energy use can be measured. The methodology to establish baseline and Post parameter identification, modeling approach and baseline or model adjustments will be defined in the Measurement and Verification article of Attachment F. Periodic inspections of baseline energy usage, operating practices, and facility and equipment, and meter measurements of the will be necessary to verify the on-going efficient operation of the equipment, systems, practices and facility, and saving attainment. The predetermined schedule for data collection, evaluation, and reporting will be defined in the Performance Assurance Technical Support Program article of Attachment A.

Option D - Stipulated. This approach is intended for Facility Improvement Measures where the end use capacity or operational efficiency; demand, energy consumption or power level; or manufacturer's measurements, industry standard efficiencies or operating hours are known in advance, and used in a calculation or analysis method that will stipulate the outcome. Both CLIENT and SIEMENS agree to the stipulated inputs and outcome(s) of the analysis methodology. Based on the established analytical methodology the savings stipulated will be achieved upon completion of the Facility Improvement Measures Work and that no further measurements or calculations will need to be performed. The methodology and calculations to establish savings value will be defined in the Measurement and Verification article of Attachment A.

2.2 Guaranteed Savings

Guaranteed cost savings are shown below in Table 5.

Table 5. Realized and Guaranteed Annual Cost Savings.

Facility Improvement Measure	M&V Option	Guaranteed Savings
Lighting & Controls	A	$3,796
Boiler Replacement	B	$4,487
EMS	B	$2,629
Domestic Hot Water Upgrade (DHW)	D	$75
Building Envelope Improvement	D	$633
Totals		**$11,620**

2.3 Utility Rate Structures and Escalation Rates

Utility rates used to calculate dollar savings for this report are based on the baseline year unit rates shown in Table 6. As per contract, an escalation rate of 3% will be applied to the baseline rate for each utility.

Table 6. Summary of Contract Utility Rates for Performance Year-1

	# 2 Fuel Oil ($/gal)	Electric Consumption ($/kWh)
Gill Elementary School	$2.31	$0.1750

2.4 Baseline Utility Data

Table 7 outlines the utility consumption that occurred during the Baseline period.

Table 7. Baseline Consumption

Location	Electricity (kWH)	Fuel Oil (Gal)
Gill Elementary School	89,062	11,201

2.5 Baseline Operating Data

The operating parameters during the Baseline period are used to determine the guaranteed savings, which are based on the efficiency improvements resulting from implementation of the facility improvement measures (Table 8).

Table 8. Baseline Operating Parameters

Units	Occupied	Unoccupied	Occupied Hrs/Wk	Unoccupied Hrs/Wk
Gill Elementary School	71	68	55	113

2.6 Contracted Baseline Operating Data

The guaranteed savings from the facility improvement measures provided under this contract are based on implementation of the following schedules and set points shown in Table 9.

Table 9. Post-Implementation Parameters

Units	Occupied	Unoccupied	Occupied Hrs/Wk	Unoccupied Hrs/Wk
Gill Elementary School	70	60	55	113

3. Performance Assurance Results

3.1. Summary of Guaranteed and Verified Savings

Total realized annual energy savings for this performance year were **$14,711** and were comprised of **$5,655** of Option A, **$8,347** in Option B, **$708** in Option D savings respectively. Total realized annual savings are in excess of the annual guaranteed energy savings of **$11,620** by **$3,091.** The following sections detail the Option A, B, and D savings.

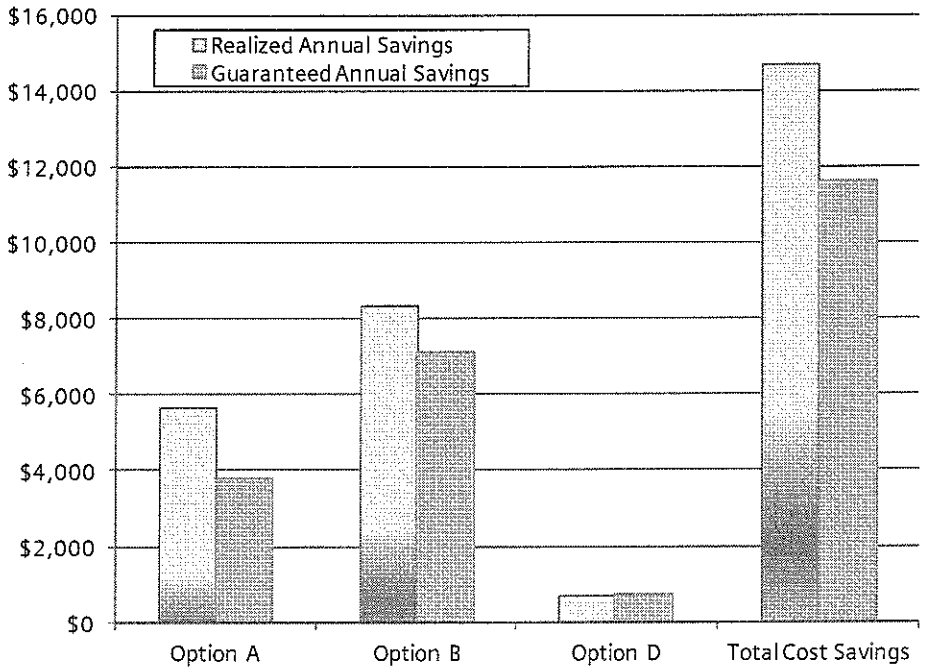


Figure 2. Realized and Guaranteed Annual Cost Savings for Year-1

3.2. Option A Savings

3.2.1. Performance Year Savings

Option A savings are verified based on one-time measurements taken after substantial completion of each facility improvement measure and the estimated savings are included as ongoing realized savings in each subsequent performance year. The table below summarizes Option A savings realized during the current performance year and shows that total Option A savings amount to **$5,655** which is **$1,859** above the guaranteed Option A savings (**$3,796**).

Table 10. Summary of Option A Savings for Performance Year-1

Facility Improvement Measure	Electric Energy Savings (kWh/yr)	#2 Fuel Oil Savings (Gal)	Verified $ Saved per year	Guaranteed $ per year	Excess/ Shortfall $
Lighting Upgrade	36,653	(329)	$5,655	$3,796	$1,859

3.2.2. Results by Measure

3.2.2.1. Lighting & Controls Retrofit

Energy savings resulting from the lighting retrofit were verified based upon a one-time measurement of the lighting power capacity under existing conditions, a one-time measurement of the lighting power capacity upon completion of the lighting retrofit project and agreed-upon annual operating hours. Table 11 details the savings results from the lighting and controls retrofit. A representative sample of each lighting-fixture type was used to determine pre-retrofit and post-retrofit kW (Table 12).

Table 11. Annual Savings Associated with the Lighting Upgrade

Lighting Upgrade	
Guaranteed Electric Savings (kWh)	24,605
Realized Electric Savings (kWh)	36,653
Cost per kWh	$0.1750
Total Electric Cost Savings	**$6,414**
Guaranteed Fuel Oil Savings (Gal)	(221)
Realized Fuel Savings (Gal)	(329)
Cost per Gal	$2.31
Total Fuel Oil Cost Savings	**($759)**
Total Guaranteed Savings	**$3,796**
Total Realized Savings	**$5,655**
Excess/Shortfall in Savings	**$1,859**

Table 12. Measured lighting fixtures by type.

Map Location/ Room Name	ECO #	Qty Metered	Expected Before Watts	Measured Before Watts	Expected After Watts	Measured After Watts
Map 21 Main Hallway	C-T8-QLSS-UNV	14	88	88	62	66
Map 21 Main Hallway	C-T8-QLSS-UNV		88	87	62	65
Map 10 Room 10	A-T8-QLSS-UNV	18	60	60	42	40
Map 10 Room 10	A-T8-QLSS-UNV		60	60	42	40
Map 6 Room 6	EDFW/N-T8-QXPS-UNV	8	109	109	55	46
Map 6 Room 6	EDFW/N-T8-QXPS-UNV		109	109	55	46
Map 5	EDFW/N-T8-QXPS-UNV	8	109	108	55	45
Map 5	EDFW/N-T8-QXPS-UNV		109	108	55	45
Map 3 Room 3	EDFW/N-T8-QXPS-UNV	8	109	107	55	40
Map 9 Room 9	A-T8-QLSS-UNV	18	60	59	42	40
Map 9 Room 9	A-T8-QLSS-UNV		60	60	42	40
Map 16 Kitchen	B-T8-QLSS-UNV	4	112	112	84	85
Map 16 Kitchen	B-T8-QLSS-UNV		112	111	84	85
Map 25 Auditorium	VDF-QXPS-UNV	8	455	455	166	160
Map 25 Auditorium	VDF-QXPS-UNV		455	453	166	164

3.3. Option B Savings

3.3.1. Performance Year Savings

Realized Option B savings amounted to **$8,347** which is **$1,231** in excess of Year-1 guaranteed Option B savings of **$7,116**. These realized savings are calculated each year based on measurements and methods outlined in Attachment F of the performance contract.

Table 13. Summary of Option B Savings for Performance Year-1

Facility Improvement Measure	#2 Fuel Oil (gal/yr)	Verified $ Saved per year	Guaranteed $ per year	Excess/ Shortfall $
Boiler Replacement	2,351	$5,426	$4,487	$939
EMS (Setback)	1,265	$2,921	$2,629	$292
Total Option B Savings	**3,616**	**$8,347**	**$7,116**	**$1,231**

3.3.2.1 Boiler Replacement

Siemens replaced the existing steam boiler at Gill Elementary with a new oil fired sectional steam boiler. Energy savings were achieved through increased combustion efficiency. Savings were verified through the results of a combustion efficiency test performed at high and low fire. The average efficiency of **88.1%** was higher than the predicted efficiency of **83%**. The results from the boiler combustion efficiency test are provided in the appendix of this document.

Table 14. Savings Associated with the Boiler Replacement

Boiler Replacement	
Guaranteed Efficiency	83.0%
Measured Efficiency	**88.1%**
Guaranteed Fuel Oil Savings (Gal)	1,944
Realized Fuel Savings (Gal)	2,351
Cost per Gal	$2.31
Total Fuel Oil Cost Savings	$5,426
Total Guaranteed Savings	**$4,487**
Total Realized Savings	**$5,426**
Excess/Shortfall in Savings	**$939**

3.3.2.2 Energy Management System (EMS)

Siemens furnished and installed a Siemens APOGEE Building Automation System at the Gill Elementary School. The following control strategies were implemented.

Night Setback:
Conditioned spaces in Gill Elementary School are automatically "setback" during unoccupied periods by the EMS. The setbacks reduce electrical energy consumption by reducing or eliminating operation of the applicable supply and return fans and setting "up" space temperatures to reduce the cooling load when areas are unoccupied. Thermal heating savings were also achieved during the setback periods, when space temperatures are automatically lowered during the heating season to reduce the heat transfer losses through the building envelope. Savings for night setback were determined through trending space temperature set points and schedules, the results are shown in Table 16. Temperature set points were found to be as contracted, 60°F during unoccupied hours and 70°F during occupied hours, with only minor deviations.

Table 15. Savings Associated with the EMS.

Energy Management System	
Guaranteed Fuel Oil Savings (Gal)	1,139
Realized Fuel Savings (Gal)	1,265
Cost per Gal	$2.31
Total Fuel Oil Cost Savings	$2,921
Total Guaranteed Savings	**$2,629**
Total Realized Savings	**$2,921**
Excess/Shortfall in Savings	**$292**

Table 16. Results of Night Setback trend reports, December 2012

Unit	Occupied Temperature	Occupied Set point	Unoccupied Temperature	Unoccupied Set point
FCU 4	70	70	68	60
RAD 1	69	69	66	60
RAD 2	69	70	66	60
RAD 3	67	70	64	60
RAD 7	68	70	67	60
RAD 10	68	70	66	60
RAD 18	70	70	67	60
UV 5	69	70	65	60
UV 6	70	70	65	60
UV 9	71	70	69	70
UV 11	71	71	67	60
UV 12	70	70	66	60
UV 13	70	70	65	60
UV 14	70	70	67	60
UV 15	69	69	65	60
UV 16	69	70	64	60
Average	**69**	**70**	**66**	**61**

3.4. Option D Stipulated Savings

Realized Option D savings amounted to **$708** and are based on the predicted savings calculated in the detailed energy audit as agreed upon in the performance contract.

3.4.1. Performance Year Savings

Table 17. Summary of Option D Stipulated Savings.

Facility Improvement Measure	Fuel Oil (gallons/yr)	Verified $ Saved per year	Guaranteed $ per year	Excess/ Shortfall $
Domestic Hot Water Upgrade	33	$75	$75	$0
Building Envelope Improvements	274	$633	$633	$0
Total Option D Savings	**307**	**$708**	**$708**	**$0**

3.4.2.1 Building Envelope

To control air leakage Siemens' sealed gaps, cracks, and holes using appropriate materials and systems in sixteen exterior door sweeps and unit ventilator wall gaps.

3.4.2.2. Domestic Hot Water Upgrade

Siemens installed a new domestic hot water heater with an efficiency of 83%.

4. Construction Savings

Construction savings is calculated by prorating the Year-1 realized savings by the number of days between when Substantial completion and Final completion were signed. Total construction savings amount to **$7,990**. The construction savings are presented here for informational purposes only and do not contribute to the realized savings to meet the guarantee.

Table 18. Construction Savings by FIM

FIM Name	FIM Substantial Completion	Start of Performance Period 1	Days	Annual energy savings	Construction Period Savings ($)
Lighting & Controls	12/1/2011	6/26/2012	208	$5,655	$3,223
Boiler Replacement	1/1/2012	6/26/2012	177	$5,426	$2,631
EMS	11/15/2011	6/26/2012	224	$2,921	$1,792
Domestic Hot Water Upgrade (DHW)	1/1/2012	6/26/2012	177	$75	$36
Building Envelope Improvement	1/1/2012	6/26/2012	177	$633	$307
TOTAL					$7,990

5. Emissions Reduction

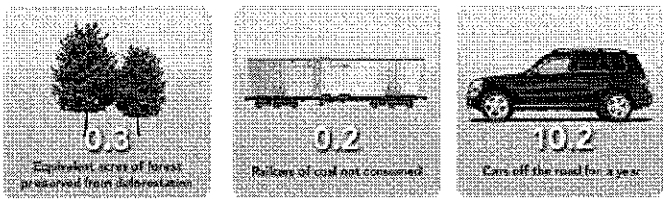
The following table converts the energy savings (electric, fuel oil, propane, etc.) into pounds of carbon dioxide that would have been released into the atmosphere if this project was not performed. These values are then converted into everyday examples to illustrate how this performance contract has decreased the carbon footprint of the Town of Gill. For example, from the table below, the realized energy savings avoided the equivalent of the **carbon dioxide emission of 10.2 cars in Year 1**.

Annual Reduction

CO2e Reductions	
Electricity	42,635.1
Natural Gas	0.0
#1, #2, #4 Fuel Oil	80,470.4
#5, #6 Fuel Oil	0.0
Total	123,105.6
in pounds	

Other Pollutants	
NOx	95.8
SO2	103.7
in pounds	

Equivalencies

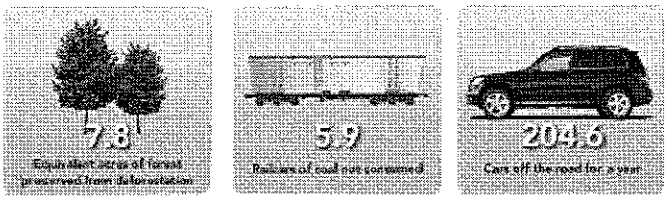


Project Term Reduction

CO2e Reductions	
Electricity	852,702.7
Natural Gas	0.0
#1, #2, #4 Fuel Oil	1,609,409.5
#5, #6 Fuel Oil	0.0
Total	2,462,112.3
in pounds	

Other Pollutants	
NOx	1,917.1
SO2	2,074.3
in pounds	

Equivalencies



6. Appendices

6.1 Combustion Efficiency Results

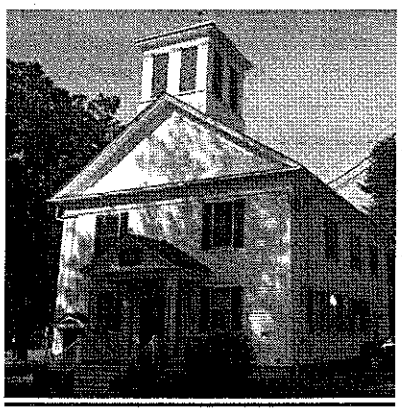
COMBUSTION TEST:		
	LOW FIRE	**HIGH FIRE**
CO2:	11.4	12.11
Smoke:	13 ppm	2 ppm
Stack:	282.9	365.5
Dr.(Brch):	-.04	
Dr.(OF):	+0	
Effy:	88.8%	87.4%

BALES ENERGY ASSOCIATES

Date: September 9,2013

NARRATIVE SUMMARY-
ENERGY STUDY
FOR
GILL TOWN HALL

325 Main Road
Gill, MA 01354



Completed By:

Bales Energy Associates
www.balesenergy.com
50 Miles Street
Greenfield, MA 01301
413-863-5020

Consulting Energy Engineer:
Bart Bales, PE, MSME
bart.bales@balesenergy.com

Introduction

Bales Energy Associates, an energy efficiency engineering firm, was contracted to provide an ASHRAE Level 2 energy audit for Gill Town Hall located at 325 Main Road in Gill , Massachusetts.

Bart Bales, PE, MSME, senior engineer at Bales Energy Associates, visited the site, reviewed energy usage & billing information, examined relevant equipment and systems, and developed energy analyses and recommendations with regard to building's energy related systems.

Executive Summary

Energy Conservation Opportunities Evaluated

Bales Energy Associates has approached the Gill Town Hall in terms of the whole system. Improvements in various systems have interactive impacts with other systems. Key conclusions are the following:

1. **Enclosure Improvements** can substantially reduce the building's heat loss characteristics. Recommendations include:
   a. **Increase the attic floor assembly R-value by R40.** Install subflooring and an air barrier across the top floor ceiling joists to provide a structure to support cellulose insulation. Add cellulose insulation sufficient to achieve the desired attic floor assembly R-value. Retain the existing fiberglass insulation in place as is. Air seal bypasses and penetrations in the attic. Provide floored pathway to the cupola ladder. (Install proper venting for the attic space.
   b. For long-term capital improvement, consider replacing the building's windows and framing to reduce air leakage and conduction heat losses.
2. **Heating Systems Observations and Recommendations**

   Recommendations
   a. **Replace the existing oil-fired hydronic boiler with a sealed combustion, propane-fired condensing hydronic boiler with a turndown ratio of 5:1 or greater.**
   b. **Install a 500-gallon propane tank. Town ownership of the storage tank will allow the Town for competitive bids for propane from multiple suppliers.**
   a. **Install an electronic timeclock and two temperature sensors.**
   Install an outdoor air temperature sensor and one space temperature sensors. Use space temperature and outside air sensor inputs sensors to determine when boiler and circulator shall run for daytime temperature maintenance and unoccupied temperature setback. Include a timed override capability on the timelcok.

3. **Domestic Hot Water System Observations and Recommendations**
   Observations:
   a. Domestic hot water use is very limited in the building; there are two hand-washing sinks and one small kitchenette sink.
   b. The existing tank-less coil water heater leads to undesirable boiler stand-by heating losses during the non-heating season.

   Recommendations
   a. To reduce stand-by heat losses, **install an 8-gallon electric mini-tank to provide hot water for hand-washing.** Locate one unit in the women's lavatory to serve the women's and men's lavatory sinks. Modify piping so that this unit can also serve the kitchenette sink.

The costs, savings, and economic payback for these energy conservation measures will be presented in the following Executive Summary Chart. The values to be shown in the Executive Summary Table will represent the savings with measures taken in the order of economic feasibility shown.

The calculations supporting each measure will be included in the appendices.

Executive Summary Chart here:

Existing Conditions

Facility Description

The Gill Town Hall is a moderate sized wood-framed, sloped-roofed building located at 325 Main Road Gill, Massachusetts. The building comprises a basement and first floor of town offices and a second floor meeting hall.

Utility Energy Use

Utility data was collected and is tabulated below. Western Massachusetts Electric Company provides electricity. For heating, the Town Hall uses #2 fuel oil. (Note: WMECO (and its parent company Northeast Utilities, recently merged with NSTAR. As a result, changes in procedures and personnel in charge of related utility programs are in transition.)

Jul 2012-June 2013		Billed Energy Use Table for Electricity & Fuel					
Building Name		Gill Town Hall					
Owner		Town Of Gill, MA					
Account #							
		Electricity	Electricity	Electricity	Oil	Oil	Energy $
Month		KWH	KW	Total $	Gallons	$	Totals
Jul	7/16/2012	1440	5.0	$226			$226
Aug	8/14/2012	1500	4.5	$209			$209
Sept	9/13/2012	600	4.0	$94.33	66.3	$197	$292
Oct	10/12/2012	660	4.0	$121			$121
Nov	11/9/2012	780	4.5	$140	126.3	$376	$516
Dec	12/12/2012	900	5.5	$144	227.4	$677	$822
Jan	1/14/2013	1140	5.5	$191	215.0	$640	$831
Feb	2/12/2013	1080	4.5	$176	96.7	$288	$464
Mar	3/13/2013	1080	4.0	$171	114.9	$342	$513
Apr	4/12/2013	1080	4.5	$179	153.0	$456	$634
May	5/14/2013	840	5.5	$146			$146
Jun	6/14/2013	1320	5.5	$213			$213
Annual (Units)		12,420		$2,011	999.6	$2,977	$4,988
Heating Season (Units)		6,720		$1,122	933.3	$2,780	$3,902
						Energy Use Totals (Mbtu)	
Annual (Mbtu)		42,377			138,644.5	181,022	Energy $
Heating Season (Mbtu)		22,929			129,448.7	152,377	Totals
$/Energy Unit		$0.16				$2.98	
$/Energy Unit						Totals (Mbtu/sf)	($/sf)
Annual (Mbtu/sf)		8.3			27.2	35.5	$0.98
Heating Season (Mbtu/sf)		4.5			25.4	29.9	$0.77
Building Name		Gill Town Hall			Heated Square Footage		5,100

Prescriptive and custom utility incentives are available for some of the measures described. When the report's contents are accepted by the client, the report may be presented to the utilities for review and determination of levels of custom incentives the utilities will offer, if any.

Western Massachusetts Electric Company contacts are: Lynn Ditullio (ditullb@nu.com) and Robert Dvorchik (dvorcrs@nu.com).

Heating, Ventilating & Air Conditioning Systems

Boiler

The building is served by a five-section, oil-fired non-condensing boiler (HB Smith, 8 Series, S/W-5) installed in 1999. This boiler can fire at two levels, high and low, with a maximum output rating of 175,000 Btu/hr. The boiler has a combustion efficiency of approximately 83%.

The design heat load for the building is approximately 80,000 Btu/hr.

Evaluated Boiler Improvement Measures

At the request of the energy committee, three boiler replacement options are evaluated in this study. Energy and dollar savings are evaluated for each option. The three replacement options are:

1. **Installation of a propane-fired, premium efficiency condensing boiler with a propane storage tank.**
2. **Installation of an oil-fired boiler with an integrated condensing economizer.**
3. **Installation of a wood pellet-fired boiler with a pellet storage silo.**

These measures are discussed in detail later in the report.

Boiler Water Temperature Controls

The boiler system provides hot water at a constant temperature (180 F) and has no outside temperature sensor. The operating temperature of the water circulated through the boiler is not reset based upon the outside air temperature.

Heating Distribution Systems

The building is a (hot-water based) hydronic heating system comprising three circulation. One loop serves the second floor meeting hall; the other two serves the town offices on the first floor and in the basement. Terminal heating is provided by baseboard convectors.

Building Temperature & Scheduling Controls

Temperatures in the three zones are controlled by manual thermostats located in each zone.

As part of the boiler replacement measure, Bales Energy Associates **recommends Installation of an electronic programmable timeclock and an outdoor air sensor and an indoor space sensor.**

Cooling Systems

Window air conditioning units are used to cool the spaces in the building.

TOWN OF GILL

MASSACHUSETTS

www.gillmass.org

OFFICE OF THE BOARD OF SEWER COMMISSIONERS
Sewer Use Charges and Inspection Fees

To: Town Accountant

You are hereby notified that COMMITMENT(S) as shown below has (have) this day been made by the Board of Sewer Commissioners to Veronica LaChance, Tax Collector (Town Collector) and Collector of Sewer Charges. Bill date is September 10, 2013.

To: Veronica LaChance, Tax Collector (Town Collector) and Collector of Sewer Charges for the Town of Gill in the County of Franklin:

You are hereby required to collect from the several persons named in the list dated August 27, 2013, herewith committed to you the amount of the sewer usage charges assessed therein to each such person, with penalties, the sum total of such list being Twenty One Thousand Five Hundred Eighty Five and 75/100 Dollars ($21,585.75).

Given under our hands the Ninth day of September, 2013.

John R. Ward

John R. Ward

Randy Crochier

Ann H. Banash

Board of Sewer Commissioners of the Town of Gill

Franklin Regional Council of Governments

DLTA Broadband Project

As discussed at the October Council meeting, the FRCOG has funding to assist towns in assessing their broadband, phone and IT needs. The fiber connection offered by the MassBroadband 123 project is an opportunity for municipalities to significantly upgrade their methods of communication internally and externally, connect town offices and departments in different buildings, and improve town hall operations. However, based on the FRCOG's experiences during our move to the Transit Center, the choices and considerations to be made both now and to plan for the future can be vast and overwhelming. The services being offered to municipalities by the FRCOG is an assessment of current IT, phone and broadband services, conditions and costs; a facilitated visioning session with towns employees and boards to determine what the Town would like to be able to do with technology and communication both now and in the future; an assessment of budget considerations; and the development of a technology plan and set of recommendations for IT, phone and bandwidth needs. With this information, it is hoped that municipalities will have a solid understanding of IT and broadband needs and costs for FY 15 budget planning and will be ready to access or improve broadband services through the MassBroadband 123 network or another provider, either through a FRCOG-facilitated cooperative purchase or on its own. The proposed scope of work for the project is:

1. Existing Services Summary, Pre-work of FRCOG

- Review Massachusetts Broadband Institute municipal one-on-one meetings notes
- Review municipal CAI survey responses (a survey issued to municipalities by the FRCOG last year)
- Summarize and send to community in advance

2. Visioning Session facilitated by FRCOG

- FRCOG facilitates meeting with major municipal users of internet and phone (i.e. treasurer, accountant, town administrator, police chief, etc.)
- Review existing services summary
- FRCOG facilitated visioning session. What does the town hope to do?
    - Virtual connection between CAIs
    - Data backup
    - VOIP
    - Room for future expansion (both municipal and to unserved last mile)
    - File and software sharing
    - Budget availability/constraints

3. Visioning Report

- FRCOG summarizes results of Visioning Session and provides report to technology consultant, Chip Brodeur

4. Town Meeting with Technology Consultant, Chip Brodeur

- Review of Visioning Report with municipal officials
- Tour existing IT facilities in primary CAI location
- Discuss what is needed to meet the goals outlined in the visioning report

5. Technology Report and Recommendations by Technology Consultant, Chip Brodeur

- Review pricing and proposal info towns have already received
- Review budget availability/constraints and current operating costs
- IT recommendations
- Bandwidth recommendations
- Phone system recommendations

6. Final Town Report

- Compilation of Visioning Report and Technology Report

7. RFP/Procurement – January or later, tbd

Selectboard Essentials Workshop Series for 2013-2014

COST: Workshops are provided by the Franklin Regional Council of Governments, free of cost, to Franklin County Selectboard Members

LOCATION: All workshops will be held in the First Floor Meeting Room of the John W. Olver Transit Center (12 Olive Street, Greenfield)

1 **ADVANCED OPEN MEETING LAW TOPICS FOR SELECTBOARDS**
Legal topics such as executive session, public records requests, and complaint procedures will be covered.
Presenter: Atty. Donna MacNicol

9/19/13 (Thurs.)
7:00pm-9:00pm

2 **HOW CAN YOUR SELECTBOARD GET THE MOST FROM THE FRCOG?**
Learn about how the FRCOG is organized, what services are provided to your town, municipal oversight/governance of the FRCOG and the FRCOG budget. Ideal for new officials!
Presenters: FRCOG Executive Director Linda Dunlavy; FRCOG Department Heads

10/3/13 (Thurs.)
7:00pm-9:00pm

3 **THE BASICS OF SCHOOL FINANCE**
Department of Elementary and Secondary Education officials will address laws and regulations that Selectboard members should understand about school finance, regional districts and superintendents, how Chapter 70 is determined, and how funding works for school choice, charter schools and vocational/technical schools.
Presenters: Roger Hatch, School Finance Programs Administrator; Melissa King, State Aid Coordinator

10/23/13 (Wed.)
7:00pm-9:00pm

4 **YOU ARE THE BOSS: PERSONNEL LEGAL GUIDANCE FOR SELECTBOARDS**
Classification and compensation plans, performance evaluations, job descriptions and the difference between appointed and elected staff..
Presenter: John Dolan, Kopelman and Paige

11/21/13 (Thurs.)
7:00pm-9:00pm

5 **PREPARING FOR THE SILVER WAVE: THE AGING OF FRANKLIN COUNTY AND ITS IMPACTS**
The aging population is expected to increase by 77% over the next 25 years. What does the changing demographic mean for your town services and what are some regional approaches to meeting the needs of our aging population?
Presenters: Cynthia Jacelon, Director of the UMass Nursing PhD Program; Roseann Martoccia, Executive Director of the Franklin County Home Care Corporation; Dave Stevens, Massachusetts Councils on Aging

12/12/13* (Thurs.)
7:00pm-9:00pm
*Snow Date: Thursday, December 19, 2013

PLEASE SEE PAGE 2 FOR ADDITIONAL WORKSHOPS

frcog Franklin Regional Council of Governments

For more information and to register please call:
(413)774-3167 (ext.101) or email admin@frcog.org

Selectboard Essentials Workshop Series for 2013/2014

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LOCATION: All workshops will be held in the First Floor Meeting Room of the John W. Olver Transit Center (12 Olive Street, Greenfield)

6 **SHOW ME THE MONEY: FINANCIAL SKILLS FOR SELECT BOARDS**

This session by the Massachusetts Department of Revenue's Division of Local Services will focus on the tax recap, with discussion on topics including levy limits and Proposition 2 ½, state aid, local receipts and enterprise funds, and free cash and stabilization funds.

Presenter: Rick Kingsley, DOR/DLS Municipal Data Management & Technical Assistance Bureau Chief

2/19/14* (Wed.)
7:00pm-9:00pm
*Snow Date: Thursday, February 20, 2014

7 **THE ROADS AND BRIDGES OF FRANKLIN COUNTY: A TRANSPORTATION FUNDING PRIMER**

Learn about Federal funding for roads and bridges (funding allotment and funding process) and other State funding sources for road and infrastructure projects (MassWorks, STRAP, Chapter 90) and your town's responsibilities.

Presenters: MassDOT Staff; FRCOG Transportation Planning Staff

3/20/14* (Thurs.)
7:00pm-9:00pm
***Snow Date:** Thursday, March 27, 2014

8 **DOTTING YOUR I'S AND CROSSING YOUR T'S: CONTRACTING AND PROCUREMENT BASICS**

Overview of MGL30b (goods and services), MGL149 (building construction), MGL7 (design), MGL30 §39M (construction public works), how OSD statewide contracts work for municipalities and an explanation of the new *Procurement Tool* that is taking the place of the old *Comm-Pass System*. There will be an opportunity to look at the Tool on-line and to provide feedback to the OSD about statewide contracts.

Presenters: Gary Lambert, Asst. Secretary for OSD; Andrea Woods, FRCOG CPO

4/24/14 (Thurs.)
7:00pm-9:00pm

9 **CONFLICT OF INTEREST**

Learn about the Conflict of Interest Law. How does the law apply in small towns where people wear a lot of hats? How are the rules different for elected and appointed officials? What is the Selectboard's role?

Presenters: Massachusetts State Ethics Commission (Speakers TBD)

5/22/14 (Thurs.)
7:00pm-9:00pm

PLEASE SEE PAGE 1 FOR ADDITIONAL WORKSHOPS

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