



**Minutes of the Energy Task Force**  
**SPECIAL MEETING January 18, 2012**

Geoff Cook, Cathy Iino, George Keithan, Sue Gumbart, John Byrne, Deb Sodergren, Peter Brandon; **Absent:** Bill Leahy, Terry Doyle, Harsh Luthra, Jonathan Norton

**1. CALL TO ORDER 7:00**

**2. REVIEWED AND APPROVED MEETING MINUTES FROM 01/11/2012 SPECIAL KETF MEETING.**

**3. NEW BUSINESS:**

**a. Review audit reports from all sub-groups. Determine if any critical information is missing and needs to be obtained.** George reviewed the spreadsheet he created for all the buildings with the new data inserted from each team (attached, dated 1/18/12). In total the data lists over \$290,000 worth of building improvements that should be addressed over a five year period in order for the Town buildings to operate at a meaningful level of energy efficiency.

George took us through the charts, building by building and we examined some of the relevant photos that support the need for these items to be addressed. Many of the improvements involve adding insulation in attics and basements, weather stripping doors and windows, programmable thermostats and changing light fixtures. In addition we discussed aging/uninsulated water tanks, furnaces, storm windows, power loads, and some safety issues. After reviewing our findings, we then discussed the report we need to pull together to present this material before the town Selectmen in order to obtain funding for these items.

**b. Begin review and validation of dollar amounts associated with each recommended upgrades / fixes.** – In examining the budget created by the spreadsheet, we decided that we may highlight some of the items that are more maintenance vs energy efficient only. As mentioned we have over \$290,000 worth of building improvements noted in the document, although many of the items listed would need to be addressed sooner rather than later due to age and other general maintenance issues regardless of whether or not we are doing this from an energy conservation standpoint. Cathy also thought that based on some of the findings it may be prudent for the Town to begin thinking about a more stringent building maintenance program, perhaps an overseer, as some of the problems in the buildings have evidently been a problem for a while and have gone unnoticed/unaddressed, and some pose a safety hazard.

**c. Create and approve layout of final report format** – Regarding the report it was decided that we have an executive summary (Geoff will write). Then we will include George's spreadsheet and finally have the

documenting photos organized by building. We need to have the report finished by Feb 1. Geoff and George will plan meet with the Selectmen on Feb 2.

Cathy stressed that it is important to include the payback periods when preparing report for Selectmen.

**4. OLD BUSINESS** - No old business discussed

**6. MEETING ADJOURNMENT:** Deb called for the meeting to be adjourned at 8:45. Geoff seconded. Meeting adjourned.

Respectfully Submitted,

Susan Gumbart

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Secretary – Killingworth Clean Energy Task Force

**Executive Summary Request**

	Town Hall	Public Works	Fire House #1	Fire House #2	Library	State Police
1 Building Insulation:	\$ 15,900.00	\$ 5,250.00	\$ 4,750.00	\$ 5,250.00	\$ 750.00	\$ -
2 Air Sealing	\$ 2,175.00	\$ 1,500.00	\$ 620.00	\$ 560.00	\$ 1,400.00	\$ 524.00
3 Weather-stripping upgrades and repairs - Look at every door and window	\$ 3,125.00	\$ 3,600.00	\$ 5,800.00	\$ 600.00	\$ 750.00	\$ 570.00
4 Window types	\$ 3,500.00	-	-	\$ 500.00	-	\$ 9,500.00
5 Doors	\$ 3,000.00	\$ 28,000.00	-	-	-	\$ 1,500.00
6 Upgrading Air-conditioning Systems	\$ 400.00	\$ 10,000.00	-	-	\$ 15,000.00	\$ 5,000.00
7 Upgrade the Heating System	\$ 2,000.00	-	-	-	\$ 500.00	\$ 1,000.00
8 Install programmable thermostats	\$ 250.00	\$ 750.00	\$ 250.00	-	\$ 500.00	\$ 250.00
9 Installation of Building Automation System	\$ -	-	-	-	\$ 28,000.00	-
10 Install outside temperature set back controller	\$ 500.00	-	-	-	\$ 1,500.00	\$ 500.00
11 Repair air damper controls on boiler	\$ -	-	-	-	\$ 1,200.00	-
12 Replace electric heating coils in Library	\$ -	-	-	-	\$ 15,000.00	-
13 Water Heater upgrades	\$ 400.00	\$ 650.00	\$ 400.00	\$ 400.00	\$ 400.00	\$ 750.00
14 Water savings	\$ -	\$ 1,350.00	-	-	-	-
15 Light fixture Occupancy Sensors	\$ 3,000.00	\$ 3,000.00	\$ 1,600.00	\$ 1,600.00	\$ 2,400.00	\$ 1,600.00
16 Lighting fixture upgrades	\$ 1,236.00	-	\$ 33.00	-	\$ 600.00	\$ 2,100.00
17 Install Vending Machine Miser	\$ -	-	\$ 225.00	\$ 225.00	-	-
18 Day Light Harvesting	\$ 3,000.00	-	-	-	\$ 2,000.00	-
19 Energy Efficiency, parasitic loads and Energy Star	\$ 2,250.00	\$ 2,100.00	\$ 2,850.00	\$ 1,500.00	\$ 2,250.00	\$ 1,800.00
20 Miscellaneous	\$ -	-	-	-	\$ 1,500.00	\$ 1,000.00
<b>Total Per Building</b>	\$ 40,736.00	\$ 56,200.00	\$ 16,528.00	\$ 10,635.00	\$ 73,750.00	\$ 26,094.00
Contingency of 10% for found issues	\$ 4,073.60	\$ 5,620.00	\$ 1,652.80	\$ 1,063.50	\$ 7,375.00	\$ 2,609.40
Bidding process, advertising, legal, administrative expenses of 20%	\$ 8,147.20	\$ 11,240.00	\$ 3,305.60	\$ 2,127.00	\$ 14,750.00	\$ 5,218.80
<b>Total Per Building</b>	\$ 52,956.80	\$ 73,060.00	\$ 21,486.40	\$ 13,825.50	\$ 95,875.00	\$ 33,922.20
<b>Total for all buildings</b>	\$ 291,125.90					

Total for all Buildings \$ 223,943.00  
 Contingency of 10% for found issues \$ 22,394.30  
 Bidding process, advertising, legal, administrative expenses of 20% \$ 44,788.60  
 Total Request for 5 Year plan \$ 291,125.90

## Summary Sheet By Year

	Total All Years	Year 1	Year 2	Year 3	Year 4	Year 5
1 Building Insulation:	\$ 31,900.00	\$ 4,000.00	\$ 16,650.00	\$ -	\$ 11,250.00	\$ -
2 Air Sealing	\$ 6,779.00	\$ 5,779.00	\$ -	\$ 1,000.00	\$ -	\$ -
3 Weather-stripping upgrades and repairs - Look at every door and window	\$ 14,445.00	\$ 8,645.00	\$ 5,800.00	\$ -	\$ -	\$ -
4 Window types	\$ 13,500.00	\$ 1,000.00	\$ 500.00	\$ 12,000.00	\$ -	\$ -
5 Doors	\$ 32,500.00	\$ 5,500.00	\$ -	\$ -	\$ -	\$ 27,000.00
6 Upgrading Air-conditioning Systems	\$ 30,400.00	\$ -	\$ 10,000.00	\$ 5,400.00	\$ 15,000.00	\$ -
7 Upgrade the Heating System	\$ 3,500.00	\$ 500.00	\$ 1,000.00	\$ 2,000.00	\$ -	\$ -
8	\$ 2,000.00	\$ 1,250.00	\$ 750.00	\$ -	\$ -	\$ -
9 Install programmable thermostats	\$ 28,000.00	\$ -	\$ -	\$ -	\$ -	\$ -
10 Installation of Building Automation System	\$ 2,500.00	\$ 2,500.00	\$ -	\$ -	\$ -	\$ 28,000.00
11 Install outside temperature set back controller	\$ 1,200.00	\$ 1,200.00	\$ -	\$ -	\$ -	\$ -
12 Repair air damper controls on boiler	\$ 1,200.00	\$ -	\$ -	\$ -	\$ -	\$ -
13 Replace electric heating coils in Library	\$ 15,000.00	\$ -	\$ -	\$ -	\$ -	\$ 15,000.00
14 Water Heater upgrades	\$ 3,000.00	\$ 2,500.00	\$ 500.00	\$ -	\$ -	\$ -
15 Water savings	\$ 1,350.00	\$ -	\$ -	\$ -	\$ 1,350.00	\$ -
16 Light fixture Occupancy Sensors	\$ 13,200.00	\$ -	\$ -	\$ 13,200.00	\$ -	\$ -
17 Lighting fixture upgrades	\$ 3,969.00	\$ 669.00	\$ -	\$ 3,300.00	\$ -	\$ -
18 Install Vending Machine Miser	\$ 450.00	\$ 450.00	\$ -	\$ -	\$ -	\$ -
19 Day Light Harvesting	\$ 5,000.00	\$ -	\$ -	\$ -	\$ 5,000.00	\$ -
20 Energy Efficiency, parasitic loads and Energy Star	\$ 12,750.00	\$ 8,250.00	\$ -	\$ 4,500.00	\$ -	\$ -
Miscellaneous	\$ 2,500.00	\$ 2,500.00	\$ -	\$ -	\$ -	\$ -
<b>Total Per Building</b>	<b>\$ 223,943.00</b>	<b>\$ 44,743.00</b>	<b>\$ 35,200.00</b>	<b>\$ 41,400.00</b>	<b>\$ 32,600.00</b>	<b>\$ 70,000.00</b>
Contingency of 10% for found issues	\$ 22,394.30	\$ 4,474.30	\$ 3,520.00	\$ 4,140.00	\$ 3,260.00	\$ 7,000.00
Bidding process, advertising, legal, administrative expenses of 20%	\$ 44,788.60	\$ 8,948.60	\$ 7,040.00	\$ 8,280.00	\$ 6,520.00	\$ 14,000.00
<b>Total Request for 5 year plan</b>	<b>\$ 291,125.90</b>	<b>\$ 58,165.90</b>	<b>\$ 45,760.00</b>	<b>\$ 53,820.00</b>	<b>\$ 42,380.00</b>	<b>\$ 91,000.00</b>