

CITY OF NEWTON

IN BOARD OF ALDERMEN

PUBLIC FACILITIES COMMITTEE REPORT

WEDNESDAY, MARCH 7, 2012

Present: Ald. Salvucci, Lennon, Albright, Gentile, Crossley, Danberg, Laredo, and Lappin

Also present: Ald. Hess-Mahan and Linsky

City staff present: John Daghlian (Associate City Engineer), Joshua Morse (Facilities and Operations Supervisor; Public Buildings Department), Maciej Konieczny (Sustainability Project Manager), and Robert Rooney (Chief Operating Officer)

#41-12      NATIONAL GRID petitioning for a grant of location to install and maintain approximately 125 feet of gas main easterly from the existing 4" gas main at the intersection of Broken Tree Road to provide service to 131 Old Farm Road.

**ACTION:**      **APPROVED 7-0 (Gentile not voting)**

**NOTE:**      Dennis Regan, National Grid Permit Representative, presented the petition to the Committee. It is a simple main extension and requires no above ground equipment. There is no gas service on Old Farm Road and the new gas main will provide gas service to 131 Old Farm Road. The installation will not impact the City's work on the roadway and National Grid will restore the road to its existing condition.

The public hearing was opened and Margarita Drucker, 131 Old Farm Road spoke in favor of the petition. The new gas main, which she is paying for, will provide service to her home. The home currently has oil heat and the oil burner is failing.

The Committee did not have any questions on the petition but did discuss whether a new grant of location was required for the addition of above ground equipment at a site of an existing grant of location. The City's Law Department is of the opinion that the addition of above ground equipment is a substantial change to the original grant of location; therefore, the above ground equipment requires a new grant of location. Mr. Regan stated that National Grid is willing to petition for a new grant of location when making a substantial change to an existing site of a grant of location.

Ald. Albright moved approval of the item, which carried unanimously.

#418-11      ALD. CROSSLEY, HESS-MAHAN, LINSKY AND SALVUCCI requesting a report from the administration on the status of a strategy to meet the City's obligation as a Department of Energy Resources Green Community to reduce municipal energy consumption by 20% over five years, and how that strategy is incorporated into the capital improvement plan. [12/08/11 @ 4:09 PM]

**ACTION:**      **HELD 7-0 (Lappin not voting)**

**NOTE:** The item was discussed in conjunction with the below item as there is a direct correlation between the two. Chief Operating Officer Robert Rooney began the discussion by announcing that the City is working with Serrafix to introduce a new initiative for citizens, commercial entities, and the municipality to reduce energy 20% citywide by 2020. The City of Newton is a pilot city for the initiative and if it works here, it will be attempted in other municipalities that have a strong Mayor type government.

The administration is focusing on the municipal initiative and its obligation to reduce energy by 20% by Fiscal Year 2012, because of its Green Community designation. Two phases of the Noresco project are complete and the administration is looking at alternatives to implementing Phase III of the energy reduction plan. The Executive Department has gone through a Request for Qualifications process for solar panels and is pursuing installing the panels. There is a certain amount of behavior modification needed to reduce energy use, such as shutting off lights and adjusting building temperature. The Executive Department will hold education sessions with City departments on energy reduction. The City has entered into a contract for four years with a gas supplier at a very favorable rate and is likely to enter into the same type of contract with an electricity supplier. These two contracts should result in millions of dollars in savings. The Public Buildings Department has converted several boilers and upgraded HVACs systems in many City buildings. The Newton Lower Falls Community Center has undergone a deep energy retrofit. Even with all of the improvements, it is not likely that the City will meet the 20% reduction in energy.

Josh Morse and Maciej Konieczny of the Public Buildings Department gave the attached presentation on energy reduction projects and how the City plans to reduce energy consumption further. The presentation also supplied information on how the City consumed energy.

Phase I of the Noresco project was focused on Day Middle School and was completed in 2009. A graph illustrating the energy reduction at Day Middle School was part of the presentation. The graph shows a significant drop in use since the retrofit of the school. The energy use will continue to drop as building personnel learn how to efficiently manage the HVAC system.

Phase II of the Noresco project is substantially complete. The City invested approximately \$3.6 million to reduce energy consumption by 30% at City Hall, the Ed Center, police buildings, and the Brown, Oak Hill and Bigelow Middle Schools. The City does not have enough data at this time to determine if the 30% reduction has been met.

Phase III of the project remains and includes multiple buildings. The expected cost of these energy related projects if undertaken by Noresco is estimated to cost \$4.1 million. Implementation of the last phase will not get the City to the 20% reduction in energy goal. The Public Buildings Department is looking at costs and taking a comprehensive look at the buildings to determine where to go with energy retrofits. When Noresco was hired, the Public Buildings Department needed a contractor to manage these energy projects. However, the Public Buildings Department currently has greater resources and can manage energy projects.

The Public Buildings Department is looking at preferred vendor programs offered by utility companies. If the City goes in this direction, it should be able to fund the projects over time. The City will focus on the most inefficient buildings and will retrofit approximately three to four buildings per year. However, if a building is scheduled for replacement or renovation, the Public Buildings Department will scale back on the projects by only doing projects that have short-term payback. The Committee requested that the Public Buildings Department provide information of the preferred vendor programs.

The City is not going to meet its obligation of a 20% reduction in energy use in 2012 or 2013. The Administration has contacted the Department of Energy Resources (DOER) and there are several other Green Community municipalities that are not going to meet their obligation. The DOER seems satisfied as long as the City continues to move forward in reducing energy consumption. The City's designation as a green community is not threatened. The City originally chose FY 2007 as its baseline year in order to capture the streetlight replacement program. The Public Buildings Department is proposing identifying a new baseline year of 2008 instead of 2007. The resulting energy savings due to streetlight replacement will still be captured. By changing the year, it increases the baseline energy consumption figure. It was pointed out that the Department of Energy does not take into consideration "degree days" when calculating energy consumption. If it is extremely cold or extremely hot resulting in further energy use, that is not factored into the Department of Energy's analysis of energy consumption.

There will be an additional column included in the Capital Improvement Program reflecting a building's energy efficiency rating. Energy projects also tend to address capital needs in the buildings.

After viewing the presentation, Committee suggested that when presenting energy reduction data, it should be dollar based. In addition, the Committee requested a draft plan on the proposed energy reductions going forward, which includes how the plan dovetails with the Capital Improvement Program and weighted average savings. The Public Buildings Department agreed to provide the plan in approximately four weeks. The Committee felt that Docket Item #116-10 could be discussed as part of the above docket item; therefore, a motion for no action necessary on Docket Item #116-10 was made and approved. The Committee held the above item for the report from Public Buildings and further discussion.

#116-10      ALD. CROSSLEY AND HESS-MAHAN requesting discussion regarding status of ESCO weatherization audit focusing on building envelope retrofits proposed for Phase II and Phase III and coordinating those efforts to inform decision making on related capital expenditures. [04/13/10 @ 7:24 PM]

**ACTION:**      **NO ACTION NECESSARY 7-0 (Lappin not voting)**

**NOTE:**      See the above note for information on the discussion of this item, as the two items were discussed in conjunction.

#126-09 ALD. LAPPIN requesting an update on the status of repairs and rental of the Kennard Estate. [04/17/09 @ 2:49 PM]

**ACTION:** **NO ACTION NECESSARY 8-0**

**NOTE:** The item was previously discussed in September 2009 and held for further information regarding rental of the residential building and the possibility of using Community Preservation Act Funds to pay for some renovations to the building. The Kennard Residence is located on the Kennard Estate. The building is under the direction of the Public Buildings Department and the land is under the direction of the Parks and Recreation Department.

The Kennard Residence has remained vacant over the past few years. The Newton Partnership, a federally funded program run by the School Department, signed a one-year lease with an option for an additional year in January 2011 for rental of the Kennard Residence. The rental fee of \$1,000 a month covers the operating expenses and the language included within the Memorandum of Understanding between Newton Public Schools and the Public Buildings Department, which allows the Public Buildings Department to transfer bill the School Department for any shortfall between the actual utility and expense costs and the monthly payments at the end of each license term.

The Newton Partnership has made some small necessary improvements to the buildings. The improvements are funded through the School Department's Charter Maintenance Account. The School Department wanted the space and was willing to pay for the minimal day-to-day maintenance required to occupy the building.

Improvements to the building envelope are included in the Capital Improvement Program in Fiscal Year 2016 or Fiscal Year 17. The Public Buildings Department is proposing using Community Preservation Funds for some of the envelope improvements.

The Committee was pleased that the building has been rented. There was some question regarding whether the building could be used as a residence. It was explained that the building contains a large amount of lead; therefore, it is unsuitable for residential rental. Ald. Lappin moved the item no action necessary, which carried unanimously. The Committee will docket a new item when the Kennard Residence is vacant.

**Chairman's Note:** Ald. Gentile informed the Committee that there has been a small change to a use of space at Newton North High School. The original classroom space was designed for the electrical program but enrollment in that program has declined. The new use would be for a green engineering innovation lab, which is a newly offered program at the school. The cost of the conversion is minimal and would be part of the existing program.

All other items before the Committee were held without discussion.

Respectfully submitted,

Anthony J. Salvucci, Chairman



**Energy Smart Newton**

**A Community  
Partnership**

# Energy Smart Newton

*A partnership for a **Sustainable Community***

Goal: reduce the energy consumption in Newton  
20% by the year 2020

\*Worked in partnership with energy consultant  
Serrafix at no cost as a pilot for the Commonwealth

# Energy Smart Newton

*A partnership for a **Sustainable Community***

Goal: to reduce the energy consumption in Newton 20% by the year 2020

\*Residential sector

→ Green Decade Eco-Teams

\*Commercial/Industrial sector

→ Chamber of Commerce  
(Needham Street focus)

\*Municipal/Institutional sector

→ Public Buildings Department

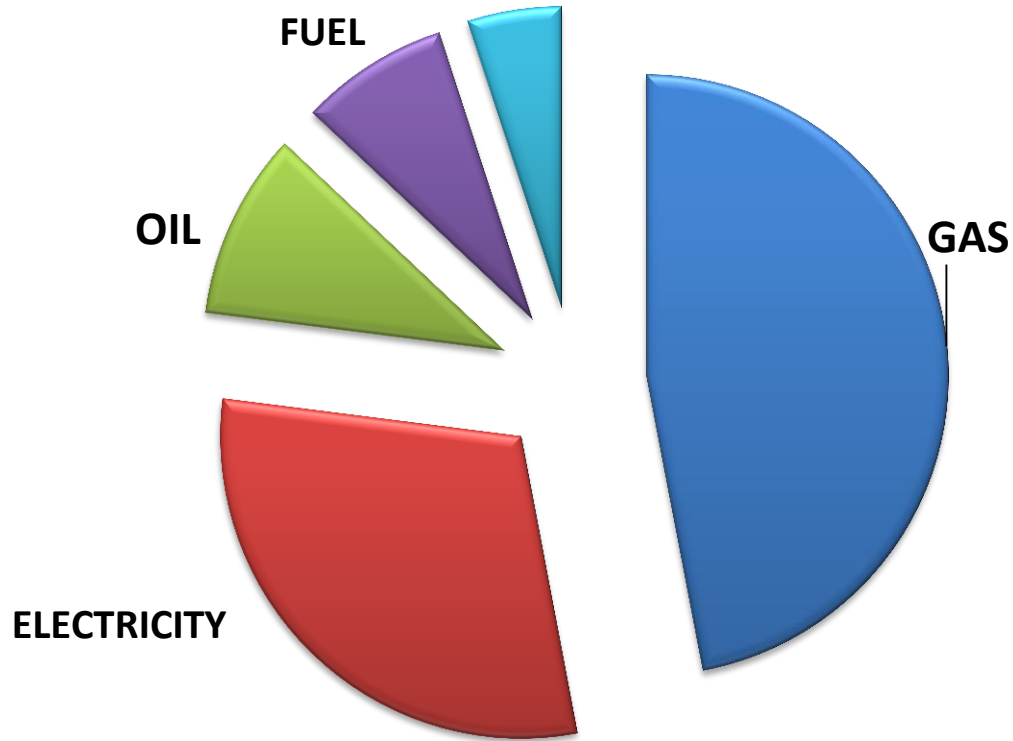
# Municipal Initiatives

- Energy Retrofits - Phase I, II, and ..... III
- State Green Communities Program
- Solar Power Purchase Agreement
- Electric Vehicle Charging Station
- Behavior Modification Changes (Building Competition)
- Department Head seminars and monitoring
- Use of American Reinvestment and Recovery Act (Stimulus) monies
- Boiler Replacement/HVAC Upgrades
- Gas Conversions from Oil
- Long term (4 yr) Price Lock



# Where is our Energy Demand?

Total City Energy Consumption by Commodity

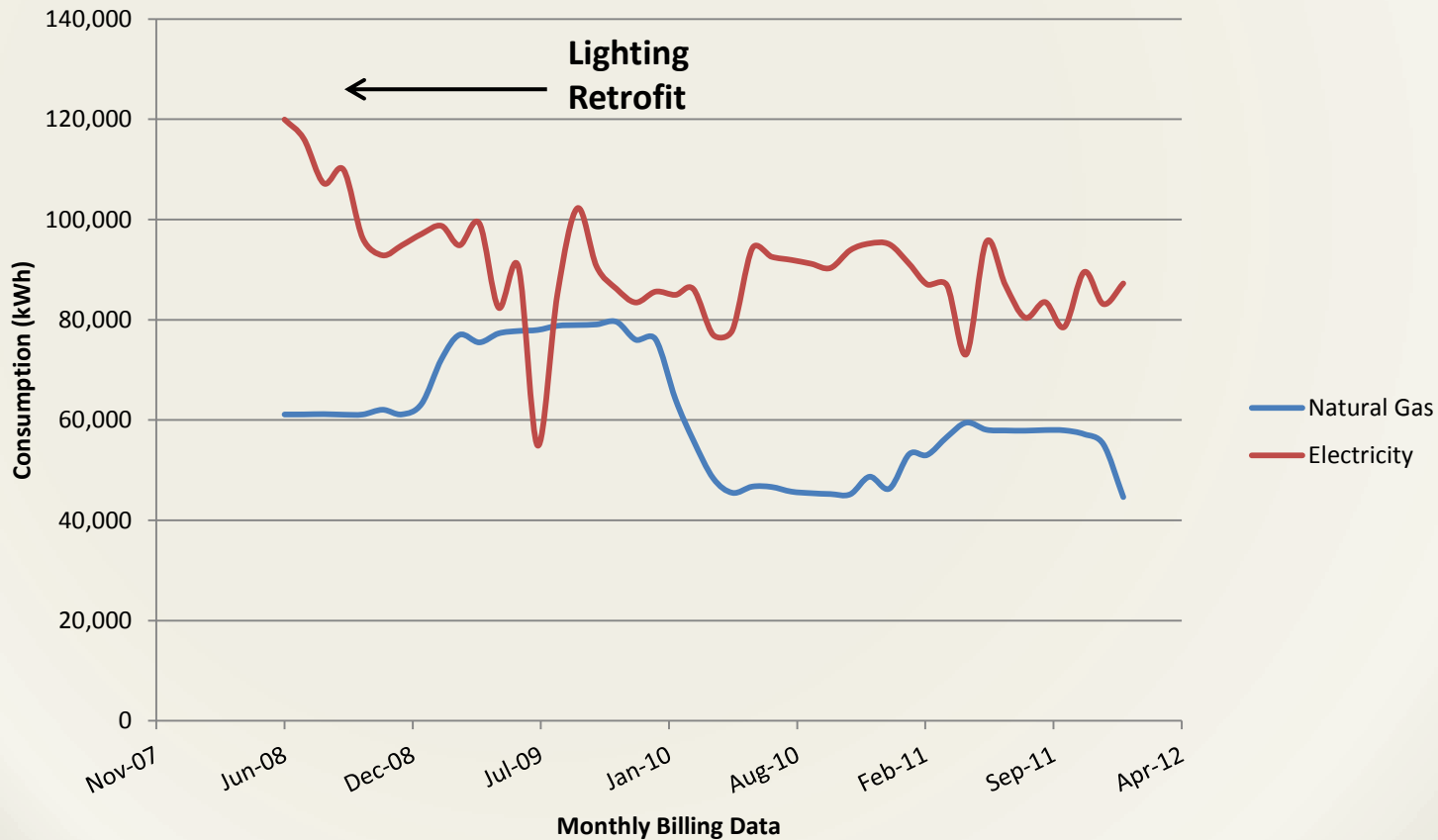


# Energy Retrofit

Phase I – F.A. Day Middle School - Complete

- \$1.96 million
- Energy Reduction: 4,100 MMBtu (~20%)

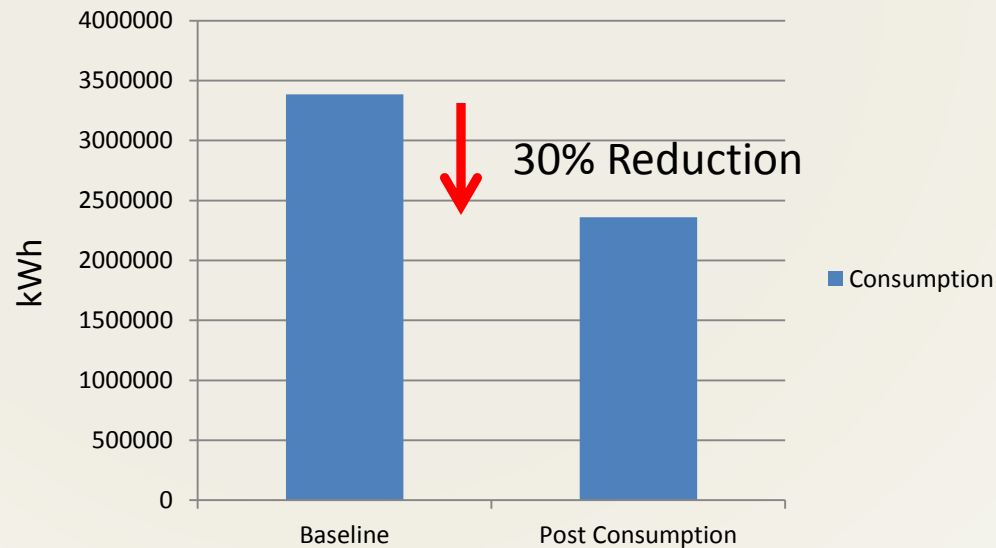
## F. A. Day Middle School



# Energy Retrofit

Phase II – Substantially Complete in 2012

- City Hall
- Ed Center
- Brown, Oak Hill, Bigelow Middle Schools
- Police Buildings
  - \$3.6 million
  - Estimated Energy Reduction: 12,500 MMBtu



## Energy Retrofit Remaining

### Phase III – Originally Proposed

- Multiple Buildings (remaining 32)
- \$4.1 million
- Energy Reduction: 11,180 MMBtu
- Unit Cost of Energy Reduction: 365/MMBtu

# Department of Energy Resources' Green Communities Program

#418-11

## *What is it?*

- Goal to reduce consumption across Massachusetts' municipal buildings
- Newton Designated a Green Community: 2010
- Newton committed to:
  - As of Right Zoning
  - Expedited Permitting
  - Reduction of Energy Consumption
  - Adopt Stretch Code

# Green Communities Program

## *Where did we start?*

### Energy Consumption Reduction:

- Established a baseline year
    - FY 2007 @ 289k MMBtu
  - Goal of 20% reduction in 5 years
    - FY 2012 @ 231k MMBtu
- Reduce Newton municipal energy component by 58k MMBtu

# Green Communities Program

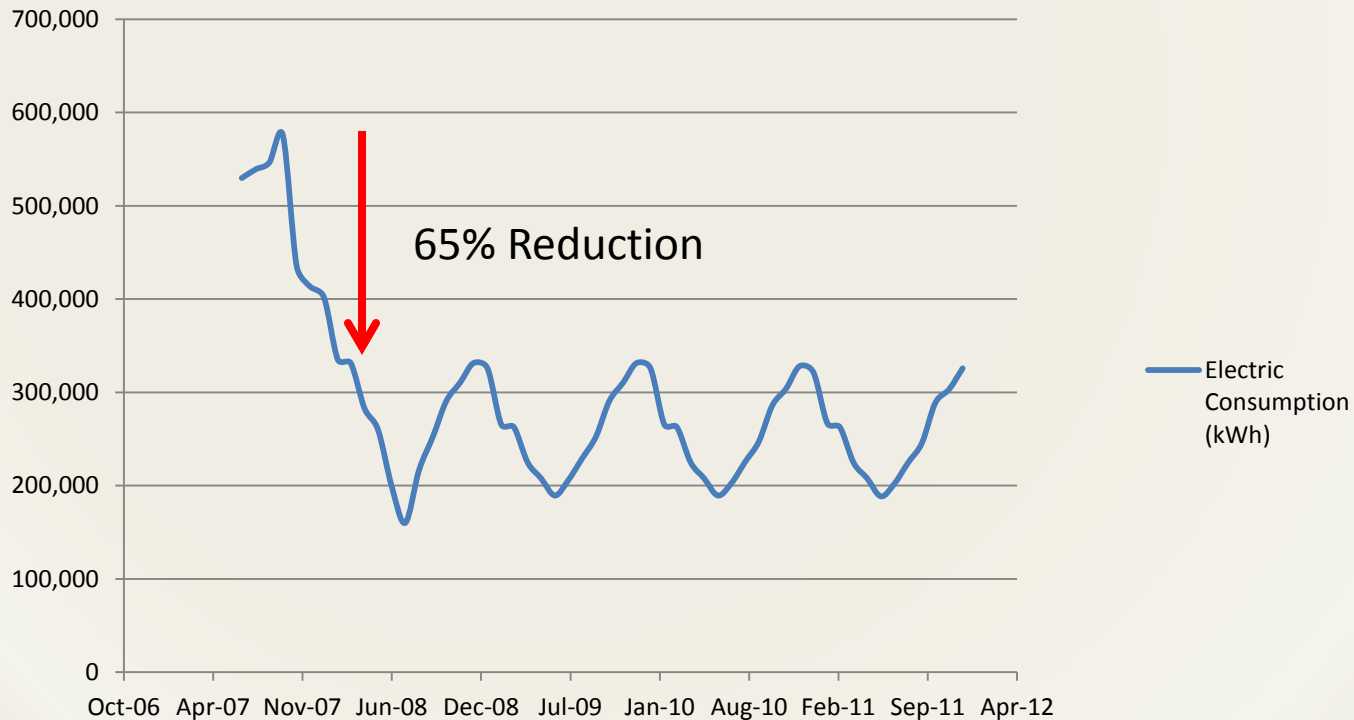
## *What have we done?*

Noresco: Phase 1 and 2 – 16.6k MMBtu (~20%)

Street Light Replacement - 9k MMBtu (~65%)

Gas Conversions: 14 completed; 3 to be completed by FY13

### Street Lighting Replacement

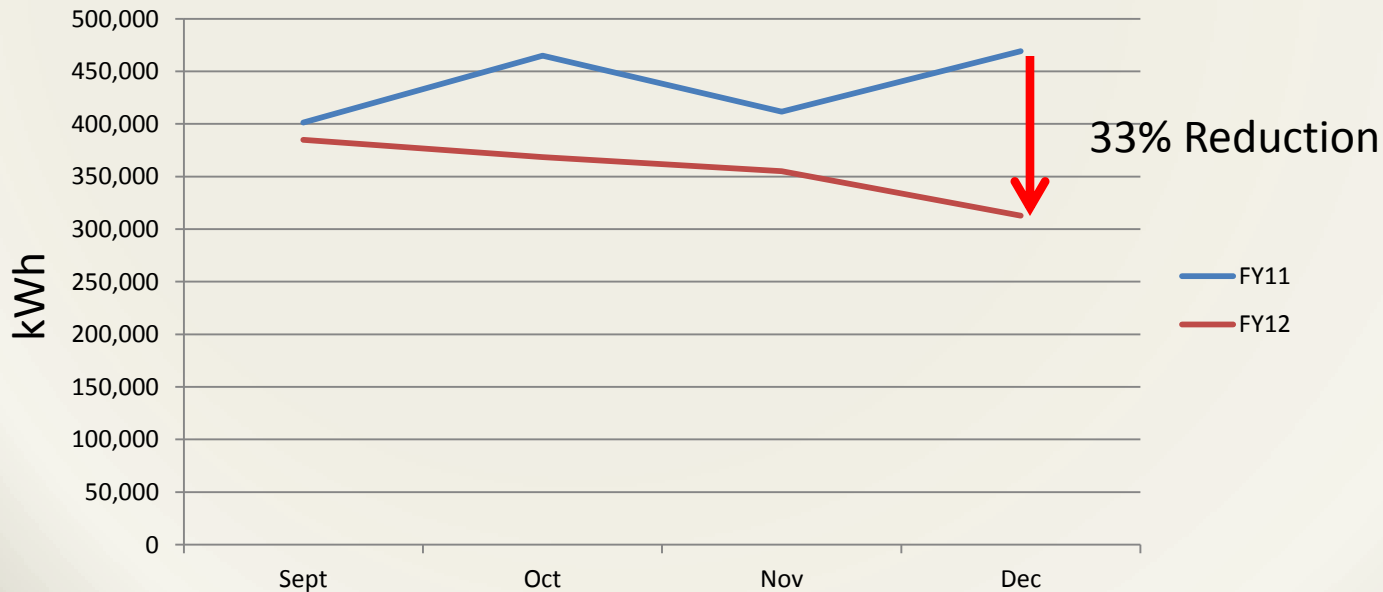


# Green Communities Program

## *What have we done?*

Deep Energy Retrofit – Lower Falls Community Center  
Boiler replacement: 24 completed; 3 to be complete by FY13  
New Building Operator at HS and MS  
Additional savings system wide.

### NNHS Electricity Consumption Change Since Building Operator Started in Fall of FY12





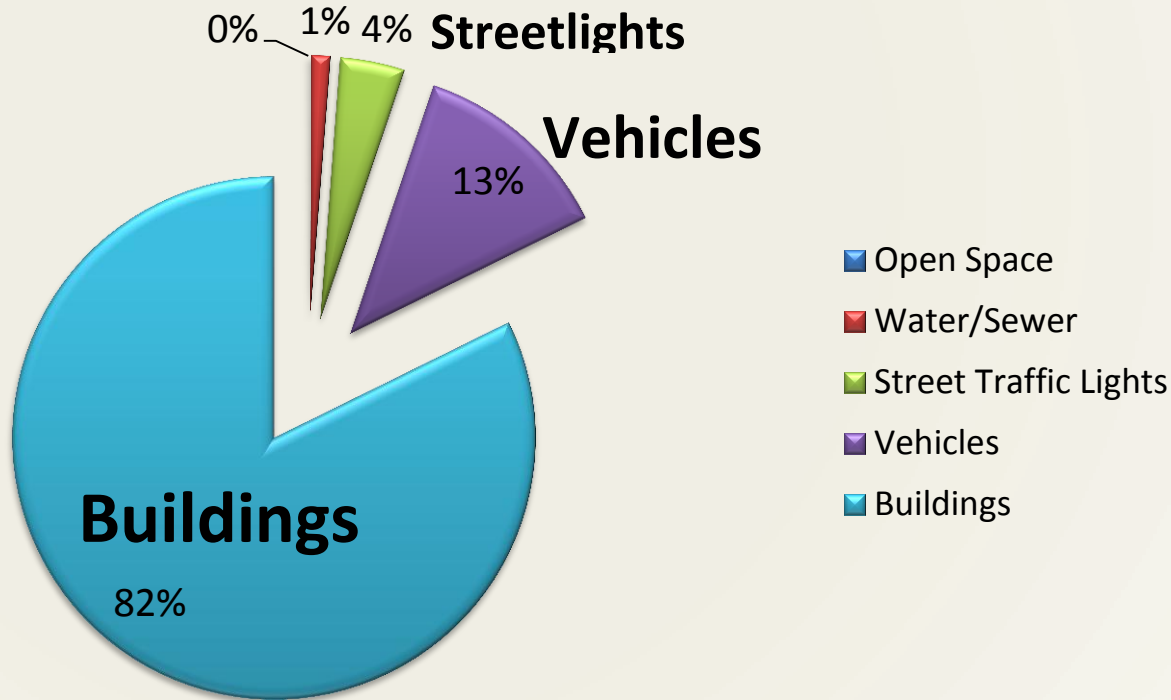
# Green Communities Program

## *Where we are?*

Current consumption: 282k MMBtu

Further reduction needed: 51k MMBtu by June 2012

### FY11 Citywide Energy Consumption by Category



# Green Communities Program

*Where are we going?*

Propose to:

Identify new baseline year: 2008

- New baseline consumption: 308k MMBtu
- Further reduction needed: 36k MMBtu

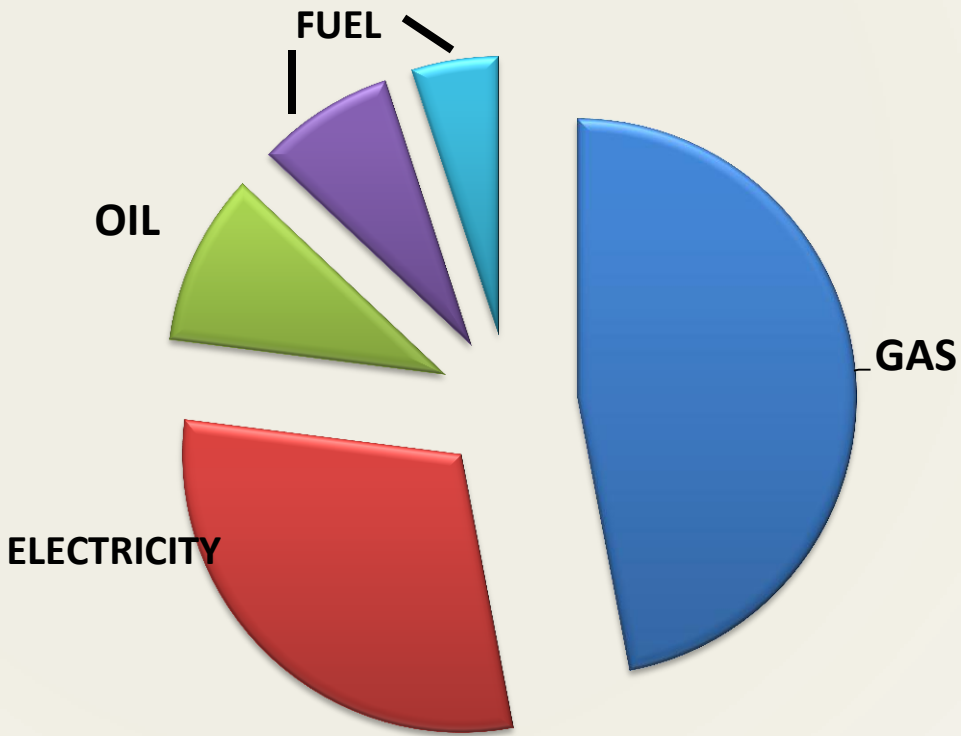
Working with NSTAR on their Preferred Vendor Program as a partnership to success

# Green Communities Program

*Where should we focus?*

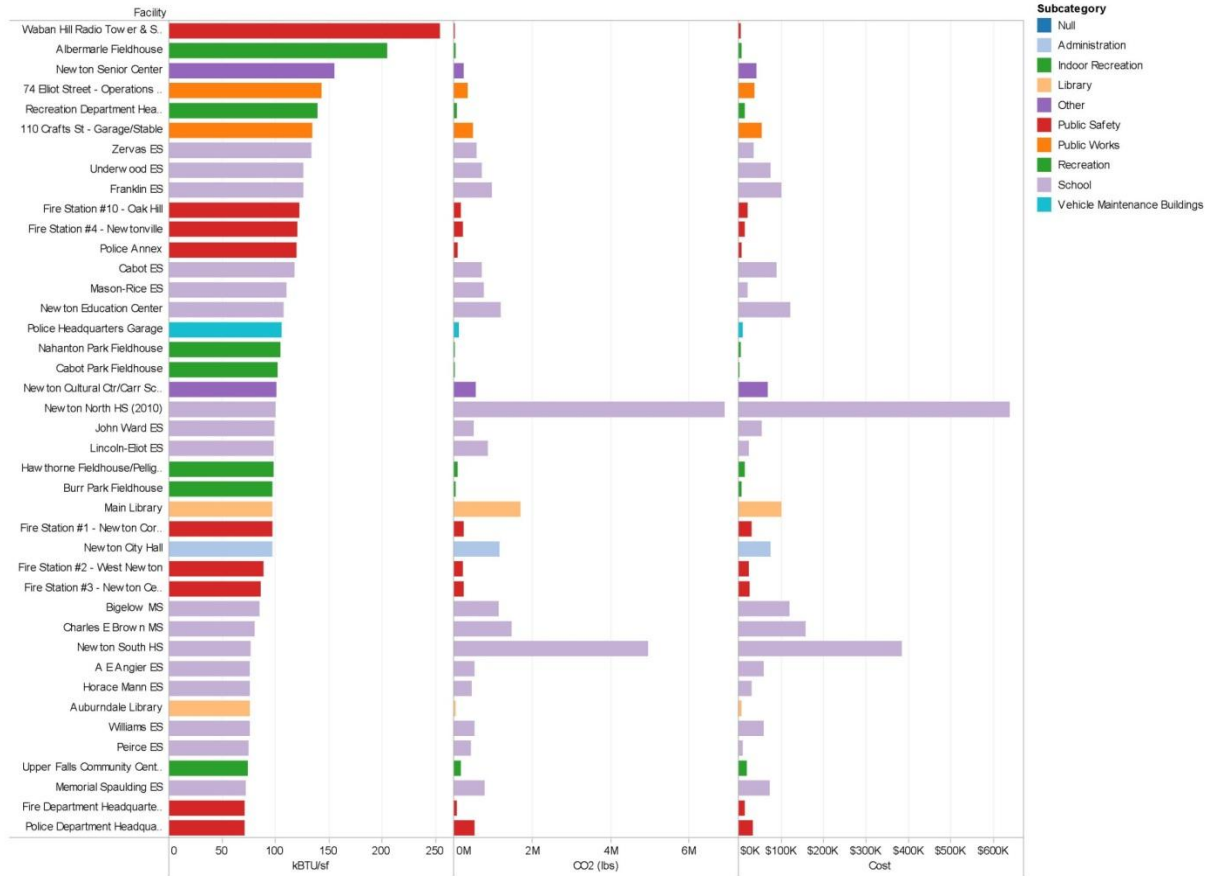
## BUILDINGS

Energy Consumption by Commodity



# Many reports/graphs available:

For Printing - Building Efficiency, Emissions and Cost



# Preferred Vendor Program

#418-11

## Next steps?

Concentrate on:

- Most inefficient buildings; 3-4 buildings/year
- Buildings over 30,000 gsf
- Blended Payback < 8 years

