

# “Our ENERGY CONSERVATION PROGRAM”

## New Developments in Energy Conservation

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Want to update the staff on what Energy Conservation efforts were done in the past year.

Smaller projects the Maintenance Department has done in-house such as replacing 20 year old boilers used for domestic water heating with more efficient, new technology on demand tankless heaters. You may or may not have noticed lighting changes to large spaces such as all the gyms, Maintenance Shop and Bus Garage bays were changed to CFL (compact florescent lighting). The MS cafeteria lighting changed to more efficient and brighter T-5

fixtures to save energy. And motion sensors in MS locker bay and shower rooms.

As every year we perform PM service schedules throughout the year for best performance of equipment on roof fans and heat/cooling systems, kitchens and boiler rooms.

During larger projects such as new roof coatings for energy efficiency. Boiler and classroom univentilator replacement in the Primary School. And light fixture changes for brighter lighting and less energy use in MS library and Primary was done with contractors during the

Capital Improvements.

Next time you are in the High School, check out the newest light technology. Most recently we remove 76 halogen bulbs at 60 watts each in the High School auditorium and installed 6 watt LED (light emitting diode) lights. These made a huge difference in light level and brightness. These lights will last 2-3 times longer, use less energy and run cooler. Next time you visit any of these locations please see our progress. There are many small projects done during the year to better serve the district to help reduce our Carbon Footprint, save Tax Dollars and help student leaning.

## Buying Energy Star Equipment

The technology department has done much research on purchasing new computers, main frame equipment and monitors that are Energy Star rated for best performance, use less energy and most up to date for student learning.

Equipment used in offices, building mechanical rooms and lighting we now choose Energy Star where able.

### Special points of interest:

- Energy Star rated district 06'-07'-08'
- Energy Star Leader 06'-08'

“Thank you”

Staff for your Energy Conservation Efforts  
to help Conserve Energy in our District



## Heating & Air Quality

An important subject:  
Indoor Air Quality

Fresh air is very important to the health and comfort of building occupants. Most of our buildings now have heating systems that incorporate adjustable ventilation dampers that bring in fresh air and exhaust stale air. The amount of fresh air delivered is dictated by SED codes.

For a time in the 70's and

80's lower fresh air ventilation rates were recommended. These lower rates contributed to indoor air quality problems. At present, new regulations have recommended that 15-20 cubic feet of air per minute be brought into the classroom for every student. This fresh air should eliminate potential indoor air quality problems but makes it difficult to maintain high levels of comfort.

Most classrooms have at least one if not two univentilators. These units run all day to cycle heat and fresh air in the rooms. This is different from home heating where the unit turns off when the room reaches temperature. The design of these units actually bring in outside air which makes for uncomfortable cold air movement at times around these units. When this happens, they are functioning as expected.

## Terms you may see used

### EMS

Energy Management System is a computerized network monitoring and controlling all building heating, cooling and venting systems and exterior lighting.

### ECAP

Energy Education Cost Avoidance Program

### Plug Loads

Appliances such as TV's, VCR's, chargers or other related equipment that may not be used for a couple days

### Cost Avoidance

Money not spent to utility company due to energy conservation

*Energy Star is more than a "Label Award" for energy efficiency. It is a partnership among government and consumers united in a common goal to protect our environment for future generations.*

## Cost Avoidance Summary Since Start of Our Energy Conservation Program in 2004 to Date

Site	Cost Avoidance	Reduction
Bus Garage	\$24,829	21%
Middle School	\$243,006	21%
High School	\$154,542	14%
Maintenance Shop	\$18,444	35%
Martin H. Glynn	\$34,020	15%
Martin VanBuren	\$57,411	23%
Primary School	\$118,406	27%

# CUMULATIVE COST SAVINGS and GREENHOUSE GAS REDUCTION NEWSLETTER page 3

**ICHABOD CRANE NY**  
 Bob Thorsey - Energy Manager  
 Energy Program

Energy Conservation Program

January 2010

## Cumulative Cost Savings

Expected Energy Costs	\$3,348,384
Actual Energy Cost	\$2,693,579
Program Savings	\$652,815
Savings Percent	19.51%



### Expected Energy Costs

Amount you would have spent on energy without energy management program.

This is the base year usage adjusted for changes in weather, equipment, schedules, occupancy and prices

### Actual Energy Costs

Actual utility costs for electricity, gas, water, sewer, etc obtained directly from bills.

### Program Savings

The difference between Expected and Actual Costs, calculated in accordance with the International Performance Measurement & Verification Protocol. Does not include savings attributable to reduced equipment maintenance and replacement costs and other collateral benefits. These savings can increase the program savings up to 20%.

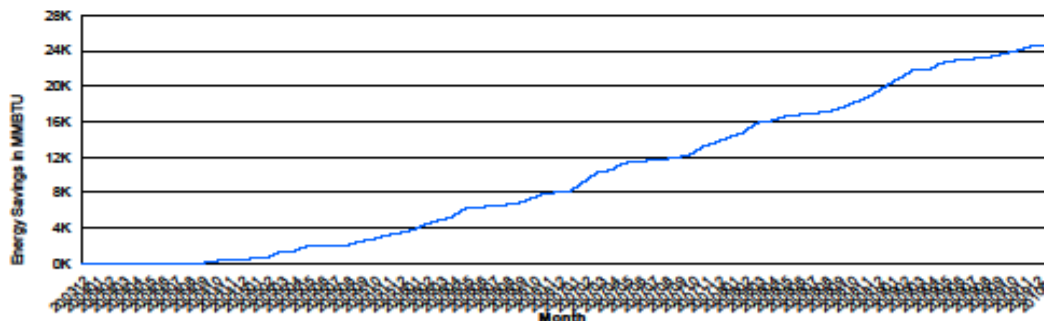
## Cumulative Greenhouse Gas Reduction

Energy Reduction Impact: 24,601 MMBTU 1,965 equiv. metric tons of CO2

This is equivalent to the following:

Passenger cars not driven for one year:	353
Tree seedlings grown for 10 years:	50,264

## Cumulative Energy Savings



*"Our District qualifies for the Energy Star Label again for the Year 2009"*