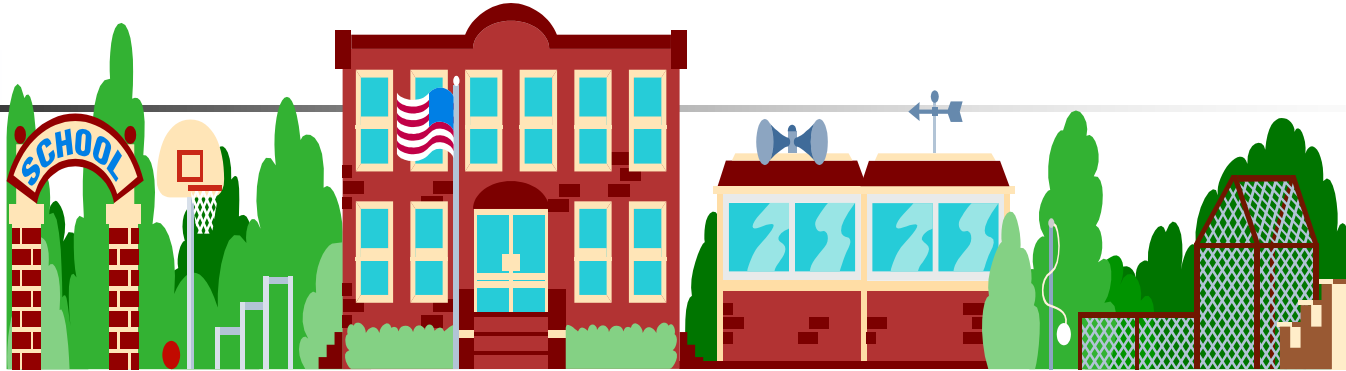


# Horseheads Central School District



## Energy Report May 2011

Ralph Marino  
Superintendent

Dan DeLorme  
Energy Manager



# **ENERGY REPORT**

## **Background Information**

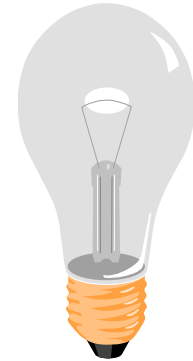
Contract awarded by Board action - December 1996

Energy Manager Start Date - February 1997

Base Period - February 1996 through January 1997

# CONSERVATION GOALS of Energy Management

Minimize energy waste



Maintain comfort in  
occupied areas

Save \$\$\$





## **Duties of the Energy Manager**

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1. Plan, organize, and administer conservation program.
2. Maintain energy records and data.
3. Monitor usage of facilities in compliance with energy guidelines.
4. Conduct routine inspections of each facility to ensure that each building is operating efficiently.
5. Ensure that the district is on the proper utility rate schedule and is being billed correctly.
6. Report to the Board of Education on the status and success/failure of the program.



# ACCOUNTING PROCESS

## To Determine Cost Avoidance

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The district uses EnergyCap Pro software for energy accounting that :

- ☆ Begins with usage during base period
- ☆ Adjusts for:
  - Temperature changes
  - Building size changes
  - Billing period lengths
- ☆ Develops adjusted baseline
- ☆ Applies to current rates



# CHANGES IN THE DISTRICT THAT HAD AN EFFECT ON UTILITY CONSUMPTION

## CHANGES:



New computers and other technology tools



Heating changes \*\*



Increased outside use of facilities



Other- New Air Conditioners, elevators, etc.

Sept 1, 2009 – March 31, 2010\*\* compared to  
Sept 1, 2008 – March 31, 2009

\*\*Room temperatures lowered from 72° to 68°

- Cost avoidance Sept 2009 – March 2010: \$379,748.88
- Cost avoidance Sept 1, 2008 – March 2009: \$334,865.74
- Cost avoidance increase during period: \$44,883.14



## Cost avoidance for heating season 2010 – 2011\*\* vs. 2009 – 2010

\*\* No after school heating for outside activities

- Cost avoidance Sept 2010 – March 2011: \$394,302.45
- Cost avoidance Sept 1, 2009 – March 2010: \$ 379,748.88
- Cost avoidance increase during period: \$14,553.57



# HHDS2

Energy CAP

Cost Avoidance Program

## Cost Avoidance Summary - Meters

Sorted by Meter

Meter Code & Name	Cost Without CAP	Actual Cost	Cost Avoidance \$	Cost Avoidance %
E14-520-04-002100-03 - MAINTENANCE ELECTR	\$1,961.95	\$1,232.83	\$729.12	37.16%
E14-520-08-001900-07 - MAINTENANCE ELECTR	\$4,080.55	\$3,022.89	\$1,057.66	25.92%
E14-520-08-378372-04 - FIELD HOUSE ELECTRIK	\$2,569.73	\$1,802.84	\$766.89	29.84%
E14-520-08-378375-01 - CENTER STREET ELEC	\$36,772.07	\$32,066.21	\$4,705.86	12.80%
E14-520-08-378380-04 - HIGH SCHOOL MAIN ELI	\$259,212.17	\$185,190.70	\$74,021.47	28.56%
E14-520-08-378864-09 - BUS GARAGE ELECTRIC	\$31,596.11	\$23,107.34	\$8,488.77	26.87%
E14-520-08-378867-06 - BROAD STREET ELECTI	\$39,771.31	\$23,568.11	\$16,203.20	40.74%
E19-520-08-996520-03 - RIDGE ROAD ELECTRIC	\$39,794.54	\$28,152.32	\$11,642.22	29.26%
E19-520-08-996652-03 - GARDNER ROAD ELECT	\$51,454.59	\$36,846.81	\$14,607.78	28.39%
E19-520-08-996730-09 - MS/SING SING ELECTRI	\$265,650.26	\$132,356.31	\$133,293.95	50.18%
E21-520-07-996846-07 - BIG FLATS ELECTRIC	\$42,249.11	\$30,619.07	\$11,630.04	27.53%
G01-520-99-379377-04 - HIGH SCHOOL/CENTER	\$230,037.33	\$197,226.12	\$32,811.21	14.26%
G01-520-99-379380-09 - BIG FLATS GAS	\$45,899.78	\$32,008.66	\$13,891.12	30.26%
G01-520-99-379390-07 - GARDNER ROAD GAS	\$54,160.21	\$40,152.44	\$14,007.77	25.86%
G01-520-99-379400-05 - RIDGE ROAD GAS	\$43,911.17	\$29,319.65	\$14,591.52	33.23%
G01-520-99-379410-03 - BROAD STREET GAS	\$48,385.86	\$34,042.38	\$14,343.48	29.64%
G01-520-99-998484-01 - MS/SING SING GAS	\$227,347.30	\$92,266.11	\$135,081.19	59.42%
G14-520-08-001900-07 - MAINTENANCE GAS	\$4,527.53	\$4,860.69	(\$333.16)	(7.36%)
G14-520-08-378372-04 - FIELD HOUSE GAS	\$9,468.90	\$6,235.29	\$3,233.61	34.15%
G14-520-08-378864-09 - BUS GARAGE GAS	\$29,604.65	\$18,258.63	\$11,346.02	38.33%
<b>Totals:</b>	<b>\$1,468,455.12</b>	<b>\$952,335.40</b>	<b>\$516,119.72</b>	<b>35.15%</b>

Feb 1, 2010 through Jan 31, 2011

# HHDS2

Energy CAP

Cost Avoidance Program

## Cost Avoidance Summary - Meters

Sorted by Meter

Meter Code & Name	Cost Without CAP	Actual Cost	Cost Avoidance \$	Cost Avoidance %
E14-520-04-002100-03 - MAINTENANCE ELECTR	\$32,321.90	\$22,729.22	\$9,592.68	29.68%
E14-520-08-001900-07 - MAINTENANCE ELECTR	\$69,192.27	\$50,803.96	\$18,388.31	26.58%
E14-520-08-378372-04 - FIELD HOUSE ELECTRIC	\$43,120.12	\$35,897.36	\$7,222.76	16.75%
E14-520-08-378375-01 - CENTER STREET ELEC	\$532,937.65	\$457,581.71	\$75,355.94	14.14%
E14-520-08-378380-04 - HIGH SCHOOL MAIN ELI	\$3,388,442.09	\$2,526,532.20	\$861,909.89	25.44%
E14-520-08-378864-09 - BUS GARAGE ELECTRIC	\$345,770.63	\$272,970.57	\$72,800.06	21.05%
E14-520-08-378867-06 - BROAD STREET ELECTI	\$572,341.41	\$366,509.31	\$205,832.10	35.96%
E19-520-08-996520-03 - RIDGE ROAD ELECTRIC	\$616,479.03	\$436,320.26	\$180,158.77	29.22%
E19-520-08-996652-03 - GARDNER ROAD ELECT	\$735,483.12	\$562,163.60	\$173,319.52	23.57%
E19-520-08-996730-09 - MS/SING SING ELECTRI	\$3,308,243.85	\$1,952,465.90	\$1,355,777.95	40.98%
E21-520-07-996846-07 - BIG FLATS ELECTRIC	\$598,414.85	\$431,742.73	\$166,672.12	27.85%
G01-520-99-379377-04 - HIGH SCHOOL/CENTER	\$2,404,861.88	\$2,143,167.80	\$261,694.08	10.88%
G01-520-99-379380-09 - BIG FLATS GAS	\$506,389.43	\$360,330.38	\$146,059.05	28.84%
G01-520-99-379390-07 - GARDNER ROAD GAS	\$579,254.97	\$501,204.26	\$78,050.71	13.47%
G01-520-99-379400-05 - RIDGE ROAD GAS	\$479,028.34	\$369,417.74	\$109,610.60	22.88%
G01-520-99-379410-03 - BROAD STREET GAS	\$524,522.10	\$394,903.37	\$129,618.73	24.71%
G01-520-99-998484-01 - MS/SING SING GAS	\$2,204,927.05	\$1,272,213.03	\$932,714.02	42.30%
G14-520-08-001900-07 - MAINTENANCE GAS	\$67,141.45	\$63,454.57	\$3,686.88	5.49%
G14-520-08-378372-04 - FIELD HOUSE GAS	\$128,692.77	\$105,753.19	\$22,939.58	17.83%
G14-520-08-378864-09 - BUS GARAGE GAS	\$320,355.78	\$226,221.99	\$94,133.79	29.38%
ZE14-520-08-378379-0 - STUDENT SERVICES EL	\$9,941.53	\$9,166.65	\$774.88	7.79%
ZG14-520-08-378379-0 - STUDENT SERVICES G,	\$6,420.22	\$5,017.53	\$1,402.69	21.85%
<b>Totals:</b>	<b>\$17,474,282.46</b>	<b>\$12,566,567.33</b>	<b>\$4,907,715.13</b>	<b>28.09%</b>

Feb 1, 1997 through March 2011



# SUMMARY

For Period February 1997 – March 2011

Anticipated costs without Energy  
Program:

**Adjusted Baseline Cost .....**  
**\$17,474,282.46**

**Actual Cost \$12,566,567.33**

**Cost Avoidance.....**  
**\$4,907,715.13**



# SUMMARY continued

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- Cost avoidance for February 1, 2010 through January 31, 2011 was \$516,119.72
- Annual operating cost of program is less than \$15,000
- Program pays for itself in about ten days each year. Two weeks of cost avoidance = an average of \$19,850.76.




# Summary continued

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- Good planning and foresight from past HHDS school board members and administrators, along with ongoing support from current district staff members, has kept HHDS CSD ahead of the curve with respect to energy usage.
- Other districts have had to take emergency measures to contain costs. So far, we have not. The only impact on staff has been the reduction in classroom temperatures from approximately 72 degrees to 68 degrees.
- Not heating after school activities could largely be responsible for our additional \$14,553.57 in cost avoidance.

# How do we keep costs down?



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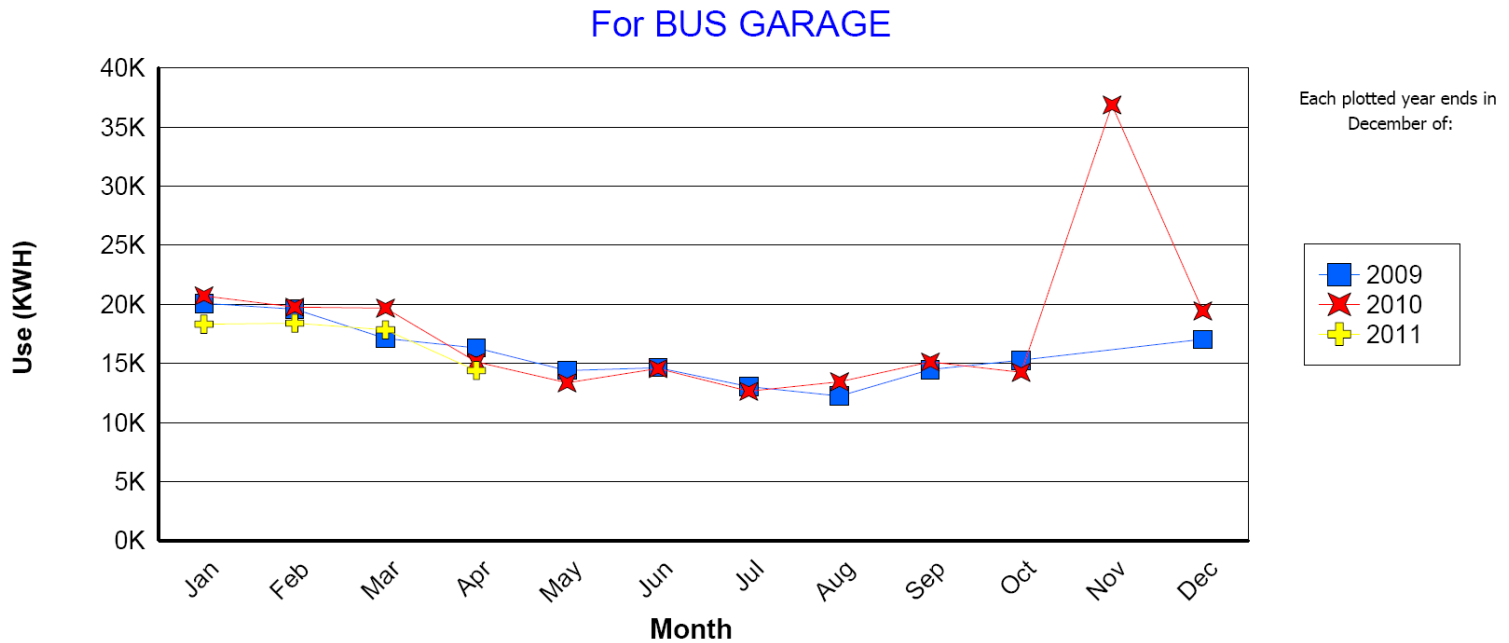
- Primarily through constantly monitoring usage either through data analysis of incurred costs/usage, HVAC programming and by doing energy audits on an ongoing basis throughout the district. See example next page.

# Bus garage electrical use trend graph

HHDS2  
Energy CAP  
Cost Avoidance Program

## Usage Trend Graph

Grouped by Site



Filters: Cost Center Name Equal To Buildings imported from Faser 5 Dataset; Site Name Equal To BUS GARAGE ; Energy Type Equal To Electricity; Start Year (yyyy) Equal To 2009



# What Now?

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- We will continue to promote and implement the energy management program.
- We will continue to purchase our natural gas and electric supplies from the New York School and Municipality Energy Consortium (NYSMEC).





# Questions for us?

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