

Joseph G. Joyner, Ed.D.  
Superintendent



**MEMORANDUM**

**TO:** Members of the School Board  
**FROM:** Joseph G. Joyner, Ed.D., Superintendent of Schools  
**SUBJECT:** Request for Acceptance of Report on Status of Energy Program  
**DATE:** April 12, 2011

**Background Information:** The School District entered into an agreement with Energy Education, Inc. (EEI) on July 1, 2008. The Facilities and Operations Department then began the development of the Energy Conservation Program (ECP) for the District. The ECP was established following the hiring of an energy manager and initial training by EEI and has included onsite training and assessments, EEI specialists training, and monitoring of energy consumption by the Maintenance Manager at each of the sites. The training period ended December 2008 with performance evaluations beginning in January 2009. Quarterly Energy Program Status Reports have been presented to the School Board since April 2009.

The April 2011 Energy Program Status Report summarizes the performance results of the Energy Conservation Program for the period November 2010 – January 2011. The report shows data on energy consumption of the District during this period. Also provided is data for each district facility. The information is presented to show actual energy consumed and cost avoidance to the District as a result of the energy conservation strategies.

**Strategic Plan Impact:** Supports the District's Mission Statement by providing appropriate facilities to inspire in all students a passion for lifelong learning.

**Educational Impact:** The program is intended to reduce operational costs related to utilities therefore increasing dollars available for other school related expenses.

**Fiscal Impact:** During the period November 2010 – January 2011, the Energy Savings Program has resulted in cost avoidance for the School District of \$1,388,510.74. The current rate of energy savings significantly exceeds the projected performance of the program.

**Recommendation:** Acceptance of the Energy Conservation Program Status Report.

**Action Required:** Approval of the Superintendent's recommendation.

**Drafted and submitted for approval by:** Al Crutchfield, Energy Manager

Respectfully Submitted,

A handwritten signature in blue ink that reads "Tim Forson".

Tim Forson, Associate Superintendent  
For Facilities & Operations

Joseph G. Joyner, Ed.D.,  
Superintendent of Schools

**QUARTERLY ENERGY REPORT**  
**November 2010 – January 2011**

**EXECUTIVE SUMMARY**

The April 2011 Energy Program Status Report summarizes the performance results of the Energy Conservation Program during the period November 2010 – January 2011 and is comprised of the following:

- **Cost Avoidance Summary by Site November 2010 – January 2011:** The District realized cost avoidance for this period of \$1,388,510.74 or 49.03%.
- **Cumulative Cost Savings:** Our cost avoidance for this period reduced CO<sup>2</sup> by 6,273 metric tons.
- **Overall Program Summary:** November 2010 – January 2011.
- **Energy Summary:** Summary for electricity, water & sewer, and irrigation for November 2010 – January 2011
- **Monthly Summary January – December 2010:** This reflects the monthly summary of cost avoidance for the period January 2010 – December 2010.
- **Energy Summary:** Summary for electricity, water & sewer, and irrigation for January – December 2010.
- **Cost avoidance for the district July 2008 – January 2011:** This reflects the total cost avoidance since the implementation of the program in the amount of \$9,703,384.52.

During the period of November 2010 – January 2011 there were 74 energy audits performed at District facilities. These audits demonstrate continued efforts by employees to reduce energy use.

Our district continues to show a high regard in reducing the overall energy consumption. This is evident in the everyday strategies being used at our sites. At least 90% of our schools are on track to receive the Energy Star Award for 2011.

# St Johns County School District

Energy CAP

Cost Avoidance Program

## Cost Avoidance Summary - Buildings

Sorted by Building

Building Code & Name	Cost Without CAP	Actual Cost	Cost Avoidance \$	Cost Avoidance %
ADM - ADMINISTRATIVE COMPLEX	\$22,591.35	\$15,877.11	\$6,714.24	29.72%
BTH - BARTRAM TRAIL HIGH	\$215,149.94	\$98,696.21	\$116,453.73	54.13%
CBS - CROOKSHANK BUS GARAGE	\$5,859.81	\$5,138.35	\$721.46	12.31%
CCS - CUNNINGHAM CREEK ELEMENTARY	\$52,242.40	\$33,353.88	\$18,888.52	36.16%
CES - CROOKSHANK ELEMENTARY	\$27,492.77	\$23,022.33	\$4,470.44	16.26%
CHS - CREEKSIDE HIGH	\$173,926.69	\$100,673.11	\$73,253.58	42.12%
DCE - DURBIN CREEK ELEMENTARY	\$199,635.42	\$58,194.65	\$141,440.77	70.85%
FCS - FRUIT COVE MIDDLE	\$53,038.68	\$38,505.31	\$14,533.37	27.40%
GAS - GAINES ALTERNATIVE SCHOOL	\$12,655.31	\$10,008.85	\$2,646.46	20.91%
GRM - GAMBLE ROGERS MIDDLE	\$56,233.88	\$29,398.22	\$26,835.66	47.72%
HCE - HICKORY CREEK ELEMENTARY	\$175,520.31	\$40,638.45	\$134,881.86	76.85%
JCE - JULINGTON CREEK ELEMENTARY	\$90,468.62	\$56,764.09	\$33,704.53	37.26%
KES - KETTERLINUS ELEMENTARY	\$23,129.90	\$13,383.94	\$9,745.96	42.14%
LMS - ALICE B LANDRUM MIDDLE	\$79,235.54	\$50,643.21	\$28,592.33	36.09%
LPA - LIBERTY PINES ACADEMY	\$169,444.44	\$73,685.60	\$95,758.84	56.51%
MCE - MILL CREEK ELEMENTARY	\$54,102.19	\$33,587.22	\$20,514.97	37.92%
MES - OTIS A MASON ELEMENTARY	\$25,449.56	\$17,245.10	\$8,204.46	32.24%
MIT - FULLERWOOD	\$11,778.78	\$7,133.95	\$4,644.83	39.43%
MMS - RJ MURRAY MIDDLE	\$59,453.89	\$28,269.21	\$31,184.68	52.45%
MNT - MAINTENANCE-PURCHASING	\$4,328.25	\$2,880.72	\$1,447.53	33.44%
NHS - ALLEN D NEASE HIGH	\$99,720.07	\$55,106.38	\$44,613.69	44.74%
OCC - OCONNELL CENTER	\$3,173.89	\$2,227.55	\$946.34	29.82%
OES - OSCEOLA ELEMENTARY	\$49,279.20	\$21,887.64	\$27,391.56	55.58%
OPE - OCEAN PALMS ELEMENTARY	\$71,805.76	\$36,953.19	\$34,852.57	48.54%
PBM - PACETTI BAY MIDDLE	\$108,345.57	\$44,687.35	\$63,658.22	58.75%
PMH - PEDRO MENENDEZ HIGH	\$152,325.15	\$84,902.38	\$67,422.77	44.26%
PVH - PONTE VEDRA HIGH	\$111,845.39	\$80,036.15	\$31,809.24	28.44%
PVP - PV-PV ELEMENTARY	\$30,294.55	\$23,852.48	\$6,442.07	21.26%
RBH - RB HUNT ELEMENTARY	\$34,399.33	\$20,829.99	\$13,569.34	39.45%
RES - RAWLINGS ELEMENTARY	\$35,627.13	\$24,067.42	\$11,559.71	32.45%
SAH - ST AUGUSTINE HIGH	\$87,177.74	\$53,831.42	\$33,346.32	38.25%
SJT - ST JOHNS TECHNICAL HIGH	\$19,783.18	\$14,037.24	\$5,745.94	29.04%
SMS - SEBASTIAN MIDDLE	\$40,112.78	\$27,131.06	\$12,981.72	32.36%
SPM - SWITZERLAND POINT MIDDLE	\$63,611.66	\$32,366.51	\$31,245.15	49.12%
SWE - SOUTH WOODS ELEMENTARY	\$82,709.70	\$35,610.48	\$47,099.22	56.95%
TCE - TIMBERLIN CREEK ELEMENTARY	\$143,471.51	\$57,007.77	\$86,463.74	60.27%
WCE - WARDS CREEK ELEMENTARY	\$107,770.03	\$46,034.45	\$61,735.58	57.28%
WDH - WD HARTLEY ELEMENTARY	\$41,623.95	\$20,180.64	\$21,443.31	51.52%
WSE - WEBSTER SCHOOL ELEMENTARY	\$37,229.97	\$25,683.95	\$11,546.02	31.01%
<b>Totals:</b>	<b>\$2,832,044.30</b>	<b>\$1,443,533.56</b>	<b>\$1,388,510.74</b>	<b>49.03%</b>

Filters: Billing Periods In Range From 201011 To 201101

# St Johns County School District

Energy CAP

Cost Avoidance Program

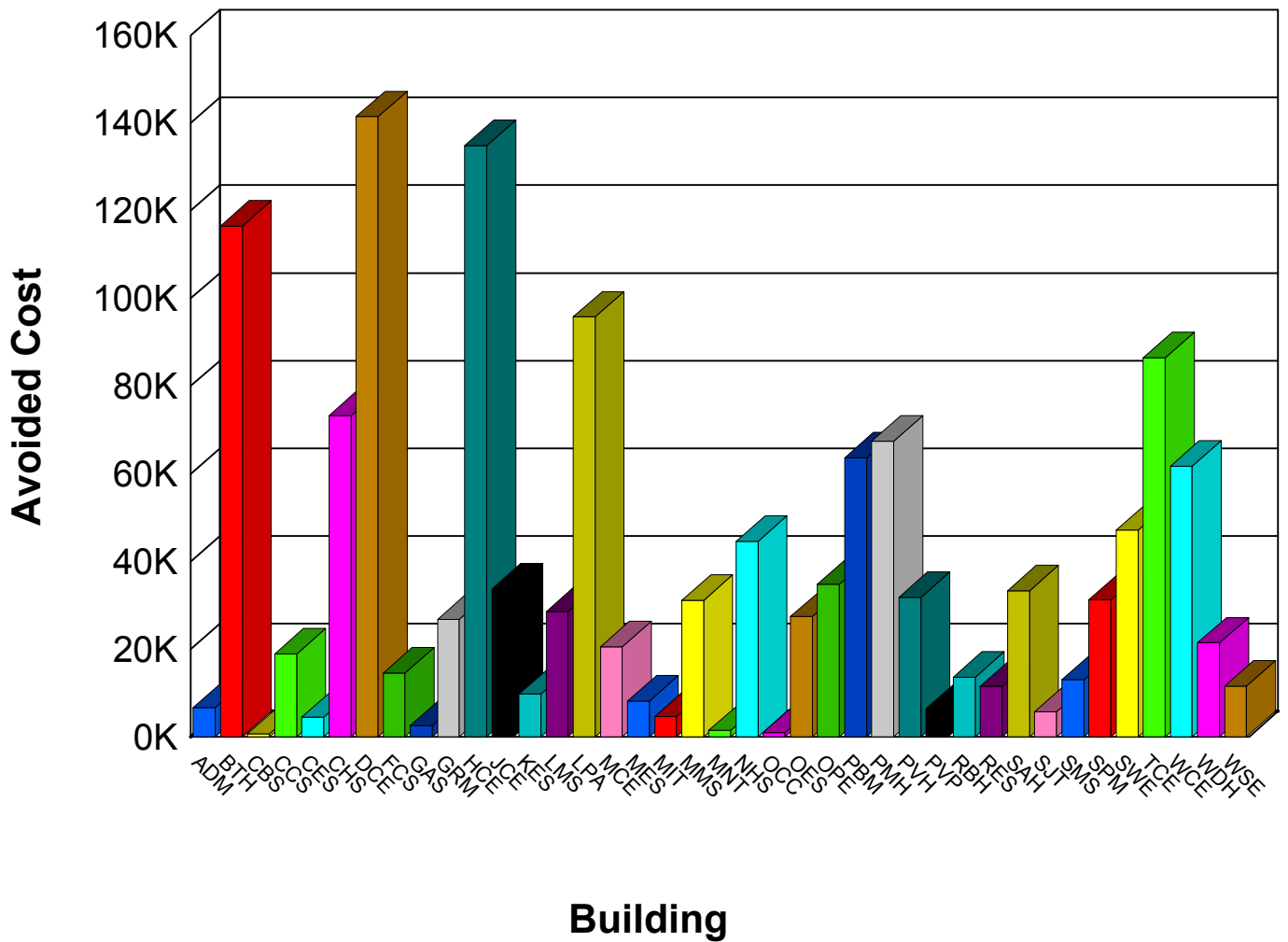
## Cost Avoidance Summary - Buildings

Sorted by Building

## Cost Avoidance Summary - Buildings

Sorted by Building

Building Code & Name	Cost Without CAP	Actual Cost	Cost Avoidance \$	Cost Avoidance %
----------------------	------------------	-------------	-------------------	------------------



Filters: Billing Periods In Range From 201011 To 201101

# St Johns County School District

Energy CAP

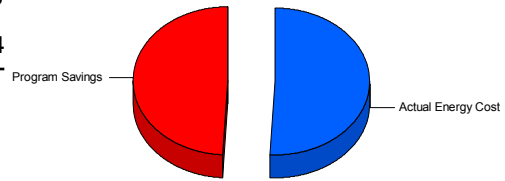
Cost Avoidance Program

## Energy Conservation Program

January 2011

### Cumulative Cost Savings

Expected Energy Costs	\$2,832,045
Actual Energy Cost	\$1,443,534
Program Savings	\$1,388,511
Savings Percent	49.03%



#### 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%.

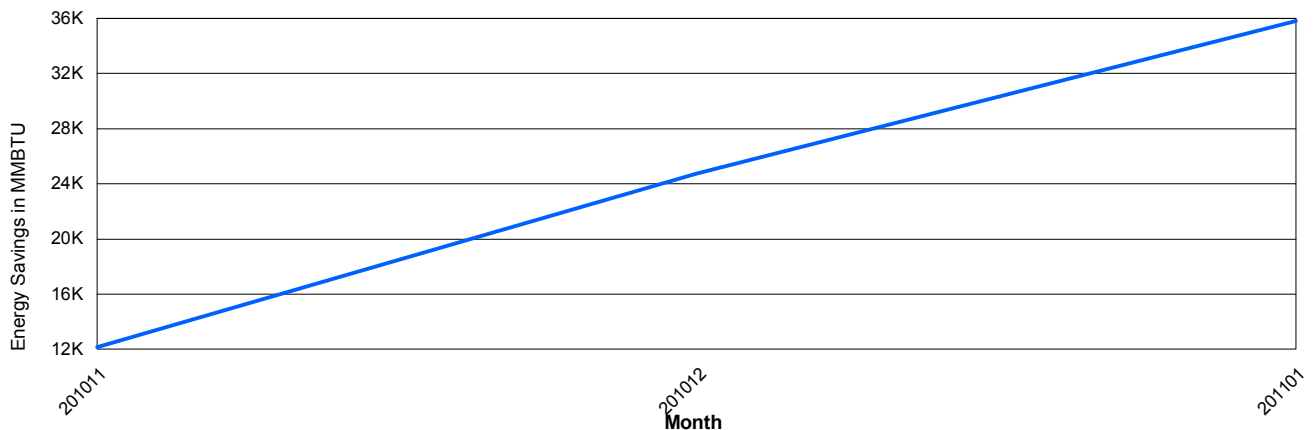
### Cumulative Greenhouse Gas Reduction

**Energy Reduction Impact:** 35,790 MMBTU 6,273 equiv. metric tons of CO2

This is equivalent to the following:

Passenger cars not driven for one year:	1,126
Tree seedlings grown for 10 years:	160,444

### Cumulative Energy Savings



All Energy Types

3/18/2011

# St Johns County School District

Energy CAP

Cost Avoidance Program

## Overall Program Summary

---

### Monthly Summary

---

	2010			
	Cost Avoid \$	Cost Avoid %	Spl Savings \$	Total \$
Nov	458,299	49.3	0	458,299
Dec	505,333	51.9	0	505,333
Total	1,388,511	49.0	1,462	1,389,973

*Filters: Savings Periods In Range From 201011 To 201101*

# St Johns County School District

Energy CAP

Cost Avoidance Program

## Overall Program Summary

---

### Monthly Summary

---

	2011			
	Cost Avoid \$	Cost Avoid %	Spl Savings \$	Total \$
Jan	424,879	45.7	1,462	426,341

*Filters: Savings Periods In Range From 201011 To 201101*

# St Johns County School District

Energy CAP

Cost Avoidance Program

## Overall Program Summary

### Energy Summary

	Use				Cost					
	w/o CAP	Actual	Avoid	Avoid %	w/o CAP	Actual	Avoid	Avoid %	Spl Savings	Total Savings
Electricity	21,137,786	10,651,550	10,486,236	49.6	2,643,046	1,314,056	1,328,990	50.3	1,462	1,330,452
Water & Sewe	13,900	9,496	4,404	31.7	180,729	122,745	57,984	32.1	0	57,984
Irrigation	2,819	2,544	275	9.8	8,270	6,733	1,537	18.6	0	1,537
<b>Total</b>					<b>2,832,045</b>	<b>1,443,534</b>	<b>1,388,511</b>	<b>49.0</b>	<b>1,462</b>	<b>1,389,973</b>

*Filters: Savings Periods In Range From 201011 To 201101*



# St Johns County School District

Energy CAP

Cost Avoidance Program

## Overall Program Summary

---

### Monthly Summary

---

	2010			
	Cost Avoid \$	Cost Avoid %	Spl Savings \$	Total \$
Jan	288,218	36.3	0	288,218
Feb	286,069	36.8	1,349	287,418
Mar	346,605	46.1	0	346,605
Apr	229,011	32.0	7,233	236,244
May	229,557	30.7	0	229,557
Jun	353,880	45.1	3,266	357,146
Jul	446,276	52.1	9,258	455,534
Aug	376,039	39.4	789	376,828
Sep	402,666	41.5	0	402,666
Oct	438,069	46.7	0	438,069
Nov	458,299	49.3	0	458,299
Dec	505,333	51.9	0	505,333
Total	4,360,022	42.8	21,895	4,381,917

*Filters: Savings Periods In Range From 201001 To 201012*

# St Johns County School District

Energy CAP

Cost Avoidance Program

## Overall Program Summary

### Energy Summary

	Use				Cost					
	w/o CAP	Actual	Avoid	Avoid %	w/o CAP	Actual	Avoid	Avoid %	Spl Savings	Total Savings
Electricity	82,509,777	46,594,062	35,915,715	43.5	9,476,115	5,298,477	4,177,638	44.1	0	4,177,638
Water & Sewe	57,038	41,162	15,876	27.8	673,800	484,867	188,933	28.0	21,895	210,828
Irrigation	15,429	18,758	-3,329	-21.6	43,376	49,925	-6,549	-15.1	0	-6,549
<b>Total</b>					<b>10,193,291</b>	<b>5,833,269</b>	<b>4,360,022</b>	<b>42.8</b>	<b>21,895</b>	<b>4,381,917</b>

*Filters: Savings Periods In Range From 201001 To 201012*

# St Johns County School District

Energy CAP

Cost Avoidance Program

## Cost Avoidance Summary - Energy Types

Sorted by Energy Type

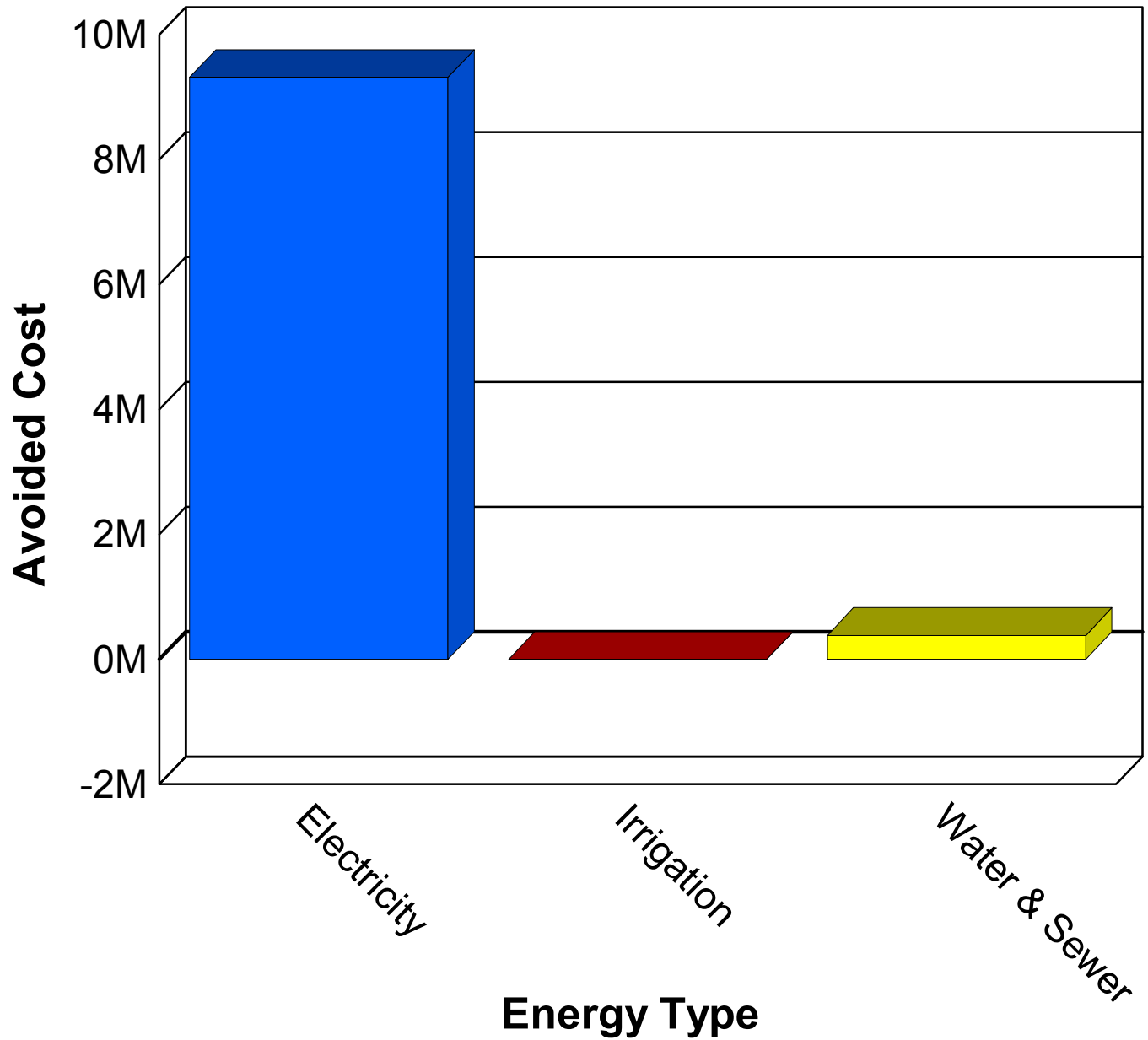
Energy Type	Cost Without CAP	Actual Cost	Cost Avoidance \$	Cost Avoidance %
Electricity	\$23,011,843.80	\$13,692,473.39	\$9,319,370.41	40.50%
Irrigation	\$63,120.21	\$63,838.77	(\$718.56)	(1.14%)
Water & Sewer	\$1,476,814.57	\$1,092,081.90	\$384,732.67	26.05%
<b>Totals:</b>	<b>\$24,551,778.58</b>	<b>\$14,848,394.06</b>	<b>\$9,703,384.52</b>	<b>39.52%</b>

*Filters: Billing Periods In Range From 200807 To 201101*

# Cost Avoidance Summary - Energy Types

Sorted by Energy Type

Energy Type	Cost Without CAP	Actual Cost	Cost Avoidance \$	Cost Avoidance %
-------------	------------------	-------------	-------------------	------------------



Filters: Billing Periods In Range From 200807 To 201101