

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: October 13, 2009

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. The first Energy Program Status Report was presented to the School Board on April 14, 2009.

The October 2009 Energy Program Status Report summarizes the performance results of the Energy Conservation Program during the first eight months of implementation and the results of the 2009 Summer Energy Savings Program. Part 1 of the report shows data on energy consumption of the District during the previous eight months. 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. Part 2 shows the results of the 2009 Summer Energy Savings strategies. Although it is difficult to separate the impact of each specific strategy, Facilities Department staff has researched the data to offer approximate savings for each strategy.

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: The EEI program is designed to save the district 20 to 30 percent in utility costs. The target net savings after the first year of implementation is \$913,280.00 with a ten year target net savings of \$18,531,186.00. The EEI contract guarantees the savings will exceed the costs 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,



Tim Forson, Associate Superintendent for Facilities & Operations

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

St. Johns County School District



ENERGY CONSERVATION PROGRAM OCTOBER 13, 2009

Primary Goals



- **Save Dollars**
 - Minimize “consumption and demand” charges
 - Audit and monitor utility bills and meters for errors or overcharges
 - Evaluate usage trends for abnormalities
 - Investigate rebate and grant programs
- **Eliminate Energy Waste**
 - Audit buildings
 - Maintain energy policy and guidelines
- **Maintain Comfort and Safety in Occupied Areas**

Timeline



- **6 months training**
July 2008-December 2008
- **8 months implementation**
January 2009- August 2009

Total Cost Avoidance



Training Period (July – December 2008):

\$1,302,243 30%

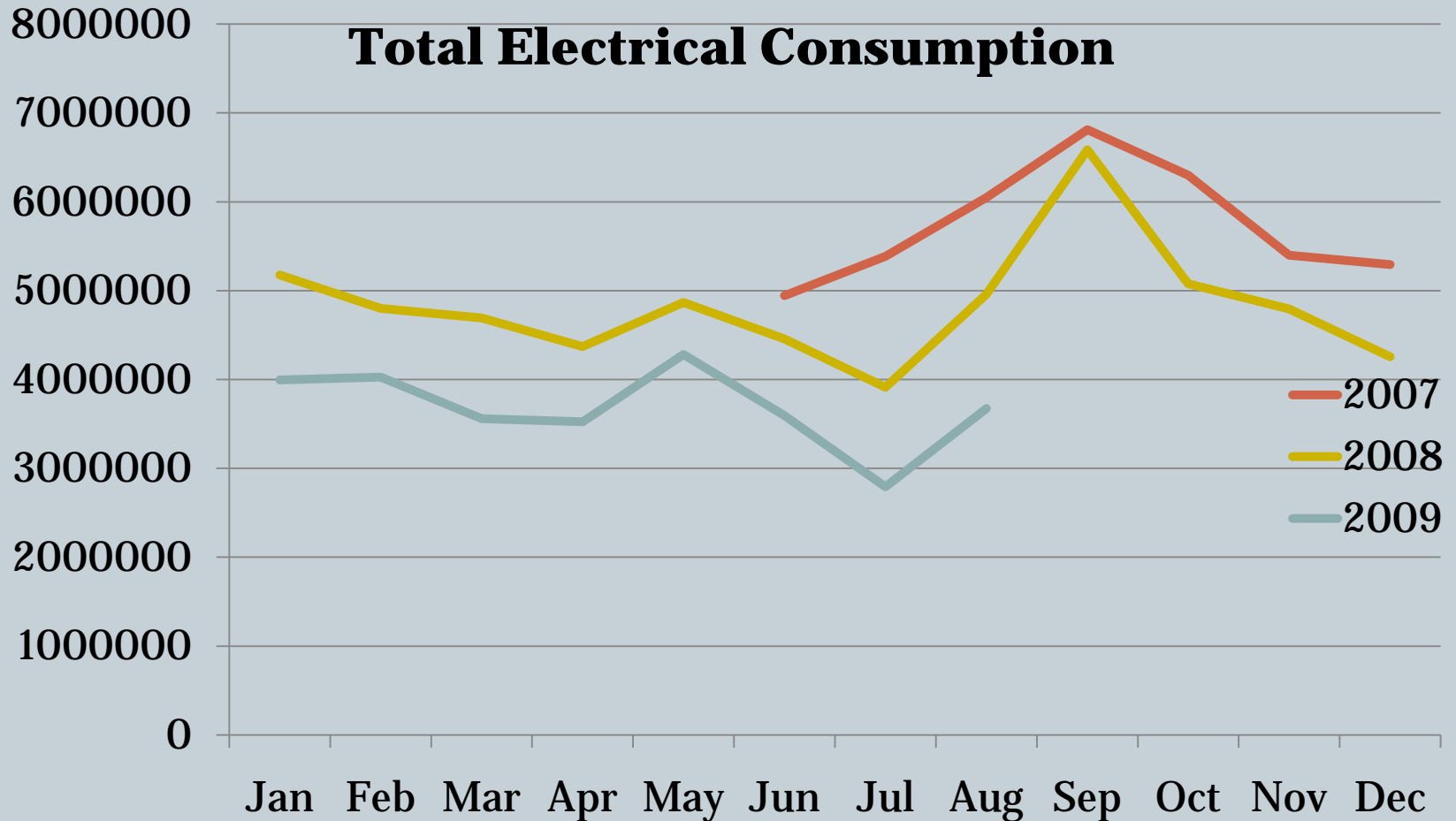
Implementation Period (January - August 2009):

\$2,238,332 40%

Total Cost Avoidance (July 2008-August 2009):

\$3,540,575 36%

Overall Performance



Overall performance



St Johns County School District

Energy CAP

Cost Avoidance Program

Cost Avoidance Summary - Sites

Sorted by Site

Site Code & Name	Cost Without CAP	Actual Cost	Cost Avoidance \$	Cost Avoidance %
ADM - ADMINISTRATIVE COMPLEX	\$63,982.65	\$48,929.08	\$15,053.57	23.53%
BTH - BARTRAM TRAIL HIGH	\$551,476.78	\$278,591.78	\$272,885.00	49.48%
CBS - CROOKSHANK BUS GARAGE	\$19,301.03	\$14,092.60	\$5,208.43	26.99%
CCS - CUNNINGHAM CREEK ELEMENTARY	\$133,126.80	\$86,586.85	\$46,539.95	34.96%
CES - CROOKSHANK ELEMENTARY	\$83,323.15	\$47,762.88	\$35,560.27	42.68%
CHS - CREEKSIDE HIGH	\$34,223.68	\$33,191.13	\$1,032.55	3.02%
DCE - DURBIN CREEK ELEMENTARY	\$265,821.15	\$147,936.59	\$117,884.56	44.35%
FCS - FRUIT COVE MIDDLE	\$150,441.60	\$118,880.82	\$31,560.78	20.98%
GAS - GAINES ALTERNATIVE SCHOOL	\$41,106.51	\$25,515.65	\$15,590.86	37.93%
GRM - GAMBLE ROGERS MIDDLE	\$158,912.79	\$92,880.86	\$66,031.93	41.55%
HCE - HICKORY CREEK ELEMENTARY	\$191,734.45	\$95,780.11	\$95,954.34	50.05%
JCE - JULINGTON CREEK ELEMENTARY	\$122,837.46	\$70,954.40	\$51,883.06	42.24%
KES - KETTERLINUS ELEMENTARY	\$67,767.51	\$44,021.27	\$23,746.24	35.04%
LMS - ALLEN B LANDRUM MIDDLE	\$226,973.24	\$142,252.81	\$84,720.43	37.33%
MCE - MILL CREEK ELEMENTARY	\$147,894.10	\$86,271.33	\$61,622.77	41.67%
MES - OTIS A MASON ELEMENTARY	\$78,814.58	\$56,674.60	\$22,139.98	28.09%
MIT - FULLERWOOD	\$30,939.16	\$23,154.43	\$7,784.73	25.16%
MMS - RJ MURRAY MIDDLE	\$186,021.46	\$92,173.64	\$93,847.82	50.45%
MNT - MAINTENANCE-PURCHASING	\$11,695.96	\$8,452.50	\$3,243.46	27.73%
NHS - ALLEN D NEASE HIGH	\$316,904.66	\$194,636.35	\$122,268.31	38.58%
OES - OSCEOLA ELEMENTARY	\$120,693.50	\$61,630.03	\$59,063.47	48.94%
OPE - OCEAN PALMS ELEMENTARY	\$149,944.13	\$112,237.28	\$37,706.85	25.15%
PBM - PACETTI BAY MIDDLE	\$227,543.42	\$110,363.97	\$117,179.45	51.50%
PMH - PEDRO MENENDEZ HIGH	\$384,211.33	\$240,718.61	\$143,492.72	37.35%
PVH - PONTE VEDRA HIGH	\$54,840.76	\$30,126.27	\$24,714.49	45.07%
PVP - PV- PV ELEMENTARY	\$103,889.13	\$64,624.98	\$39,264.15	37.79%
RBH - RB HUNT ELEMENTARY	\$96,079.94	\$57,638.38	\$38,441.56	40.01%
RES - RAWLINGS ELEMENTARY	\$111,693.48	\$83,514.42	\$28,179.06	25.23%
SAH - ST AUGUSTINE HIGH	\$244,908.85	\$156,269.22	\$88,639.63	36.19%
SJT - ST JOHNS TECHNICAL HIGH	\$42,040.34	\$29,080.30	\$12,960.04	30.83%
SMS - SEBASTIAN MIDDLE	\$129,054.36	\$83,631.53	\$45,422.83	35.20%
SFM - SWITZERLAND POINT MIDDLE	\$175,280.07	\$103,453.46	\$71,826.61	40.98%
SWE - SOUTH WOODS ELEMENTARY	\$222,803.62	\$115,775.13	\$107,028.49	48.04%
TCE - TIMBERLIN CREEK ELEMENTARY	\$226,086.77	\$132,849.13	\$93,237.64	41.24%
WCE - WARDS CREEK ELEMENTARY	\$175,736.15	\$106,106.34	\$69,629.81	39.62%
WDH - WD HARTLEY ELEMENTARY	\$115,939.82	\$74,350.43	\$41,589.39	35.87%
WSE - WEBSTER SCHOOL ELEMENTARY	\$114,975.20	\$69,578.23	\$45,396.97	39.48%
Totals:	\$5,579,019.61	\$3,340,687.39	\$2,238,332.22	40.12%

Filters: Billing Periods In Range From 200901 To 200906

Utility Comparison



July – Year	Additional Sites	Annual Cost	Unit Cost (Electricity)
2007	None	\$550,763	\$0.096
2008	Pacetti Bay	\$453,774	\$0.110
2009	Ponte Vedra High Creekside High Liberty Pines JCES Additions	\$389,394	\$0.118

Cumulative Greenhouse Gas Reduction



- **Energy Reduction Impact:**
 - 96,735 MMBTU
 - 16,955 equiv. metric tons of CO₂

- **This is equivalent to the following:**
 - Passenger cars not driven for 1 year – 3,043
 - Tree seedlings grown for 10 years – 433,664

Summer Savings Goals



- **Four Day Work Week**

- Goal \$200,000 – 250,000
- Actual Savings \$309,556

- **One Week Shut Down**

- Goal \$100,000 – 150,000
- Actual Savings \$154,778

- **Consolidation and Restricted Operations**

- Goal \$350,000 – 550,000
- Actual Savings \$383,916

School District Impact



Summer Savings

\$848,250

Goals



- **Focus on primary goals**
- **Mechanical/operational improvements**
- **Planning and design evaluation**