



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

40 Orange Street
St. Augustine, Florida 32084
(904) 547-7500
www.stjohns.k12.fl.us

MEMORANDUM

SCHOOL BOARD

Beverly Slough
District 1

Tommy Allen
District 2

Bill Mignon
District 3

Kelly Barrera
District 4

Patrick Canan
District 5

TO: Members of the School Board

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

SUBJECT: Request for Acceptance of the Energy Conservation Program Quarterly Status Report

DATE: December 9, 2014

Background Information: The School District entered into an agreement with Cenergistic - The Energy Conservation Company (previously known as Energy Education, Inc.) on July 1, 2008. The Facilities 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 Cenergistic and has included onsite training and assessments, Cenergistic specialists training, and monitoring of energy consumption by each site's Maintenance Manager. 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 District completed its five-year performance contract with Cenergistic effective June 30, 2013. Performance payments will no longer be made to Cenergistic, however, we will continue to receive their full support and services as part of the initial agreement and contract.

The December 2014 Energy Program Status Report summarizes the performance results of the Energy Conservation Program for the quarterly period July 2014 – September 2014. 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 implementation of energy conservation strategies.

Strategic Plan Impact: Supports the District's Mission by providing appropriate facilities to help inspire good character and a passion for lifelong learning in all students, creating educated and caring contributors to the world.

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

Fiscal Impact: During the quarterly period July 2014 – September 2014 the Energy Savings Program has resulted in additional cost avoidance for the School District of \$1,596,300.60. The current rate of energy savings significantly exceeds the projected performance of the program.

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

Action Required: Approval of the Superintendent's recommendation.

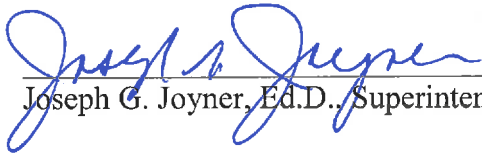
Drafted and submitted for approval by: Al Crutchfield, Energy Manager.

Reviewed and submitted for approval by: Paul Rose, Executive Director for Facilities & New Construction.

Respectfully Submitted,



Tim Forson, Deputy Superintendent for Operations



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

QUARTERLY ENERGY REPORT July 2014 – September 2014

EXECUTIVE SUMMARY

The December 2014 Energy Program Status Report summarizes the performance results of the Energy Conservation Program during the quarterly period July 2014 – September 2014 and is comprised of the following:

- Cost Avoidance Summary by Site (July 2014 – September 2014): The District realized a total cost avoidance for this quarterly period of \$1,596,300.60 (or a 51% cost avoidance from the baseline period).
- Greenhouse Gas Reduction: Greenhouse Gas Reduction for this quarterly period reduced CO² by 6,104 metric tons.
- Year to Date Monthly Cost Avoidance Summary (January 2014 – September 2014): This reflects the monthly summary of total cost avoidance for the period January 2014 – September 2014.
- Energy Consumption Summary (Cumulative Year to date): Summary breakdown for electricity, water & sewer, and irrigation for July 2014 – September 2014.
- Total cost avoidance for the district from program inception (July 2008 – September 2014): This reflects the total cost avoidance since the implementation of the program. Total cumulative cost avoidance of \$29,419,122.

During the period of July 2014 – September 2014 there were 65 energy audits performed at District facilities. The results of these audits demonstrate continued efforts by employees to reduce energy use.

Another successful summer consolidation was achieved this year netting over \$800,000 in cost avoidance.

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. Application is being made for the 2014 Energy Star Label for all our school sites and promises to be another banner year.

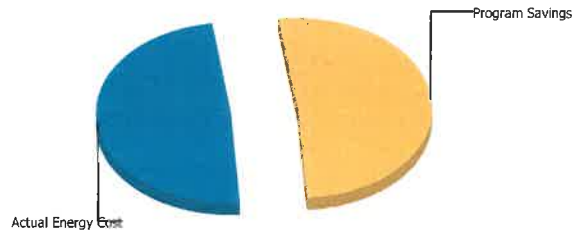
St. Johns County School Board

Cost Avoidance Summary By Building CAP - 01B

| Place | BATCC Cost | Actual Cost | Cost Avoidance | Cost Avoidance % |
|---|-----------------------|-----------------------|-----------------------|------------------|
| [AD] Administrative Complex | \$30,239.97 | \$20,175.62 | \$10,064.35 | 33.28 |
| [BG] CROOKSHANK BUS GARAGE | \$7,568.33 | \$5,053.52 | \$2,514.81 | 33.23 |
| [BH] Bartram High School | \$287,728.96 | \$105,292.99 | \$182,435.97 | 63.41 |
| [CE] Cunningham Creek Elementary School | \$70,208.31 | \$37,290.62 | \$32,917.69 | 46.89 |
| [CLN] CLINIC - RAY ROAD | \$995.69 | \$1,068.56 | (\$72.87) | -7.32 |
| [CM] CLINIC-SR206 | \$864.10 | \$862.69 | \$1.41 | 0.16 |
| [CRO] Crookshank Elementary School | \$41,523.99 | \$23,352.73 | \$18,171.26 | 43.76 |
| [CS] Creekside High School | \$156,643.18 | \$108,816.00 | \$47,827.18 | 30.53 |
| [DCE_1] Durbin Creek Elementary | \$155,899.24 | \$49,050.47 | \$106,848.77 | 68.54 |
| [FCS_1] Fruit Cove Middle School | \$79,311.54 | \$35,374.42 | \$43,937.12 | 55.40 |
| [FU] FULLERWOOD | \$11,753.34 | \$8,631.76 | \$3,121.58 | 26.56 |
| [GAS_1] Gaines Alternative School | \$19,389.72 | \$9,123.21 | \$10,266.51 | 52.95 |
| [GRM_1] Gamble Rogers Middle School | \$64,718.18 | \$35,356.88 | \$29,361.30 | 45.37 |
| [HCE_1] Hickory Creek Elementary School | \$125,158.92 | \$46,397.99 | \$78,760.93 | 62.93 |
| [JCE_1] Julington Creek Elementary School | \$79,434.04 | \$51,786.53 | \$27,647.51 | 34.81 |
| [KES_1] Ketterlinus Elementary School | \$33,785.45 | \$19,096.25 | \$14,689.20 | 43.48 |
| [LMS_1] Alice B. Landrum Middle School | \$110,773.01 | \$57,712.70 | \$53,060.31 | 47.90 |
| [LPA_1] Liberty Pines Academy k-8 | \$105,250.42 | \$80,268.51 | \$24,981.91 | 23.74 |
| [MCE_1] Mill Creek Elementary School | \$65,450.83 | \$38,075.76 | \$27,375.07 | 41.83 |
| [MES_1] Otis Mason Elementary School | \$36,448.88 | \$23,596.58 | \$12,852.30 | 35.26 |
| [MMS_1] RJ Murray Middle School | \$79,778.74 | \$34,349.17 | \$45,429.57 | 56.94 |
| [MT] Maintenance | \$5,547.27 | \$2,818.90 | \$2,728.37 | 49.18 |
| [NHS_1] Allen D. Nease High School | \$114,766.18 | \$32,939.83 | \$81,826.35 | 71.30 |
| [OES_1] Osceola Elementary School | \$99,257.78 | \$31,822.73 | \$67,435.05 | 67.94 |
| [OL] OCONNELL CENTER | \$3,199.34 | \$1,827.40 | \$1,371.94 | 42.88 |
| [OPE_1] Ocean Palms Elementary School | \$79,812.70 | \$27,867.87 | \$51,944.83 | 65.08 |
| [PBM_1] Pacetti Bay Middle School | \$76,947.35 | \$42,151.15 | \$34,796.20 | 45.22 |
| [PES_1] PALENCIA ELEMENTARY | \$33,147.80 | \$22,890.43 | \$10,257.37 | 30.94 |
| [PMH_1] Pedro Menendez High School | \$171,133.02 | \$77,190.07 | \$93,942.95 | 54.89 |
| [PVH_1] Ponte Vedra High School | \$195,631.65 | \$112,185.25 | \$83,446.40 | 42.65 |
| [PVP_1] PV-PV Elementary School | \$40,118.56 | \$16,275.70 | \$23,842.86 | 59.43 |
| [RBH_1] RB Hunt Elementary School | \$58,987.78 | \$17,845.82 | \$41,141.96 | 69.75 |
| [RES_1] Rawlings Elementary School | \$51,876.63 | \$28,230.06 | \$23,646.57 | 45.58 |
| [SAH_1] ST Augustine High School | \$120,743.58 | \$65,859.07 | \$54,884.51 | 45.46 |
| [SJT_1] ST Johns Technical High School | \$16,409.28 | \$11,717.53 | \$4,691.75 | 28.59 |
| [SMS_1] Sebastian Middle School | \$62,031.37 | \$29,530.49 | \$32,500.88 | 52.39 |
| [SPM_1] Switzerland Point Middle School | \$60,538.02 | \$40,755.21 | \$19,782.81 | 32.68 |
| [SWE_1] South Woods Elementary School | \$71,785.09 | \$31,243.31 | \$40,541.78 | 56.48 |
| [TCE_1] Timberlin Creek Elementary School | \$93,932.08 | \$45,353.95 | \$48,578.13 | 51.72 |
| [WCE_1] Wards Creek Elementary School | \$83,207.41 | \$40,114.97 | \$43,092.44 | 51.79 |
| [WDH_1] WD Hartley Elementary School | \$55,101.39 | \$24,847.19 | \$30,254.20 | 54.91 |
| [WSE_1] Webster School Elementary | \$58,330.08 | \$24,928.68 | \$33,401.40 | 57.26 |
| Totals: | \$3,115,429.17 | \$1,519,128.57 | \$1,596,300.60 | 51.24 |

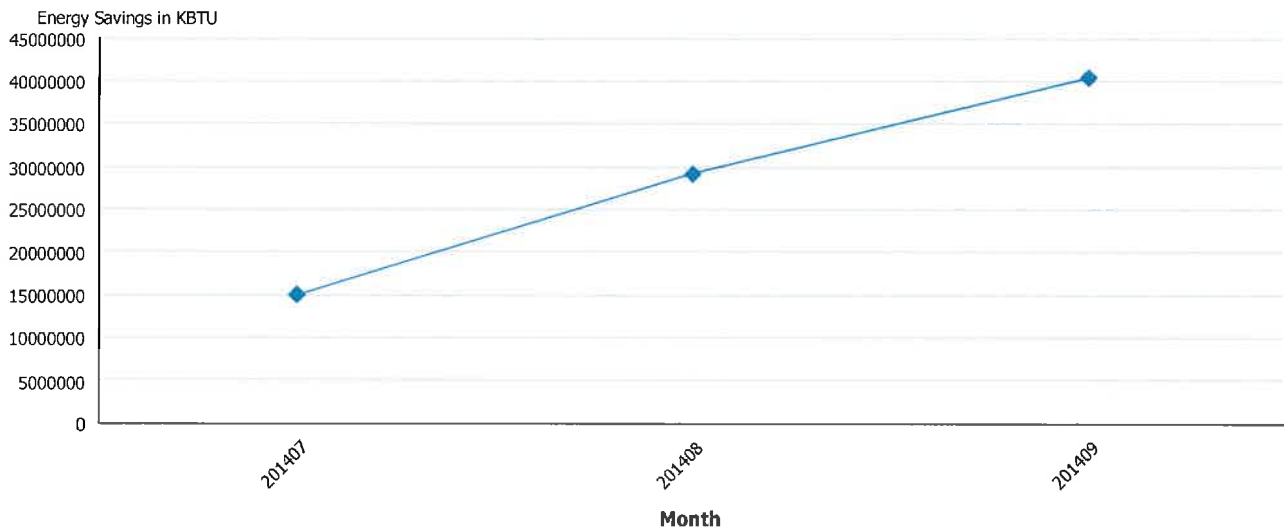
Cumulative Cost Savings

| | |
|----------------------|-------------|
| Expected Energy Cost | \$3,115,429 |
| Actual Energy Cost | \$1,519,129 |
| Program Savings | \$1,596,300 |
| Percent Savings | 51.24% |
| Other Savings | \$0 |
| Total Savings | \$1,596,300 |



| Expected Energy Cost | Actual Energy Cost | Program Savings |
|---|--|---|
| Anticipated expense without energy management. | Actual utility costs for electricity, gas, water, sewer, etc. obtained directly from bills. | The difference between Expected and Actual Cost, 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%. |
| Base year usage after adjustments for such variables as changes in weather, equipment, schedules, occupancy and prices. | Other Savings Additional documented savings attributable to Program activities but not the direct result of usage reductions, such as rebates, refunds, tariff changes, etc. | |

Cumulative Energy Savings



Cumulative Greenhouse Gas Reduction

| | | |
|---|-----------------|---------------------------------|
| Energy Reduction Impact: | 40,413,797 KBTU | 6,104 equiv. metric tons of CO2 |
| This is equivalent to the following: | | |
| Passenger cars not driven for one year: | 1,272 | |
| Tree seedlings grown for 10 years: | 156,523 | |

Requested by: acrutchfield
Version:
Report Version: 11
Filters: Billing Period Between Jul 2014 and Sep 2014

Monthly Summary

| | 2014 | | | |
|-------|------------------|--------------|---------------|------------------|
| | Cost Avoid \$ | Cost Avoid % | Other Savings | * Total \$ |
| Jan | 495,501 | 49.2 | 0 | 495,501 |
| Feb | 449,154 | 48.9 | 0 | 449,154 |
| Mar | 491,592 | 53.1 | 0 | 491,592 |
| Apr | 313,302 | 38.0 | 245 | 313,547 |
| May | 314,743 | 42.1 | 0 | 314,743 |
| Jun | 491,882 | 57.2 | 0 | 491,882 |
| Jul | 564,713 | 59.6 | 0 | 564,713 |
| Aug | 508,724 | 46.6 | 0 | 508,724 |
| Sep | 522,863 | 48.5 | 0 | 522,863 |
| Total | 4,152,475 | 49.4 | 245 | 4,152,720 |

* The Total \$ column is the sum of Cost Avoidance Savings and Other Savings.

Energy Summary

| | Use | | | | Cost | | | | | |
|----------------------|-------------|-------------|-------------|---------|-----------|-----------|-----------|---------|---------------|------------------|
| | BATCC | Actual | Avoid | Avoid % | BATCC | Actual | Avoid | Avoid % | Other Savings | Total Savings \$ |
| Electric (KWH) | 64,117,894 | 33,022,337 | 31,095,557 | 48.5 | 7,701,845 | 3,793,373 | 3,908,471 | 50.7 | 245 | 3,908,716 |
| Water (KGAL) | 751 | 418 | 333 | 44.3 | 4,584 | 3,967 | 617 | 13.5 | 0 | 617 |
| Water & Sewer (KGAL) | 43,629 | 38,825 | 4,805 | 11.0 | 627,256 | 408,883 | 218,372 | 34.8 | 0 | 218,372 |
| Irrigation (KGAL) | 11,640 | 7,372 | 4,268 | 36.7 | 66,430 | 41,416 | 25,015 | 37.7 | 0 | 25,015 |
| Total (MMBTU) | 218,834,372 | 112,705,236 | 106,129,136 | 48.5 | 8,400,115 | 4,247,639 | 4,152,475 | 49.4 | 245 | 4,152,720 |

Requested by: acrutchfield

Version:

Report Version: 7

Filters: Billing Period Between Jan 2014 and Sep 2014

St. Johns County School Board

Cost Avoidance Summary By Commodity CAP - 01C

| Commodity | | BATCC Cost | BATCC Use | Actual Cost | Actual Use | Cost Avoidance | Cost Avoidance % | Use Avoidance | Use Avoidance % |
|----------------|------|---------------------|-------------|---------------------|-------------|---------------------|------------------|---------------|-----------------|
| Electric | kWh | \$59,877,625 | 505,538,342 | \$31,969,724 | 274,861,678 | \$27,907,901 | 46.6% | 230,676,664 | 45.6% |
| Irrigation | Kgal | \$342,261 | 81,051 | \$269,891 | 70,362 | \$72,370 | 21.1% | 10,689 | 13.2% |
| Water | Kgal | \$13,921 | 2,265 | \$7,847 | 1,047 | \$6,074 | 43.6% | 1,218 | 53.8% |
| Water & Sewer | Kgal | \$4,492,715 | 349,252 | \$3,059,940 | 253,241 | \$1,432,776 | 31.9% | 96,011 | 27.5% |
| Totals: | | \$64,726,523 | | \$35,307,401 | | \$29,419,122 | 45.5% | | |

| Commodity | BATCC Cost | BATCC Use | Actual Cost | Actual Use | Cost Avoidance | Cost Avoidance % | Use Avoidance | Use Avoidance % |
|-----------|------------|-----------|-------------|------------|----------------|------------------|---------------|-----------------|
|-----------|------------|-----------|-------------|------------|----------------|------------------|---------------|-----------------|

