



Agenda Item Details

Meeting	Mar 08, 2016 - REGULAR SCHOOL BOARD MEETING
Category	S. Operational Services - Consent
Subject	3. Request for Acceptance of the Energy Conservation Program Quarterly Status Report
Type	Action (Consent)
Goals	GO-3 Energy Consumption Strategies

Background Information:

The School District, through an agreement with Cenergistic – The Energy Conservation Company, implemented an Energy Conservation Program in 2008. Principals, Maintenance Coordinators, and the District Energy Manager work together to monitor and conserve energy consumption at each school site and facility. Quarterly Energy Program Status Reports have been presented to the School Board since April 2009.

The March 2016 Energy Program Status Report summarizes the performance results of the Energy Conservation Program for the quarterly period October 2015 – December 2015. The report reveals data on energy consumption by the District during this period. Also provided is cost avoidance 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.

Educational Impact:

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

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.

Fiscal Impact:

During the quarterly period October 2015 – December 2015 the Energy Savings Program has resulted in additional cost avoidance for the School District of \$1,379,604. The current rate of energy savings significantly exceeds the projected performance of the program. Since inception, the district has realized a total cumulative cost avoidance of \$36,225,504.

Recommendation:

Acceptance of the Energy Conservation Program Quarterly Status Report.

Action Required:

Approval of the Superintendent's recommendation.

Drafted, reviewed and submitted by:

Al Crutchfield, Energy Manager

Paul Rose, Executive Director for Facilities and New Construction

Tim Forson, Deputy Superintendent for Operations

Sincerely,

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

[Energy Conservation Program Quarterly Status Report March 2016.pdf \(874 KB\)](#)

Our adopted rules of Parliamentary Procedure, Robert's Rules, provide for a consent agenda listing several items for approval of the Board by a single motion. Most of the items listed under the consent agenda have gone through Board subcommittee review and recommendation. Documentation concerning these items has been provided to all Board members and the public in advance to assure an extensive and thorough review. Items may be removed from the consent agenda at the request of any board member.

**ENERGY CONSERVATION PROGRAM
QUARTERLY STATUS REPORT
October 2015 – December 2015**

EXECUTIVE SUMMARY

The March 2016 Energy Conservation Program Quarterly Status Report summarizes the performance results for the quarterly period of October 2015 – December 2015 and is comprised of the following:

- Cost Avoidance Summary by Site (October 2015 – December 2015): The District realized a total cost avoidance for this quarterly period of \$1,379,604.00 (or a 49% cost avoidance from the baseline period).
- Greenhouse Gas Reduction: Greenhouse Gas Reduction for this quarterly period reduced CO² by 5,748 metric tons.
- Year to Date Monthly Cost Avoidance Summary (January 2015 – December 2015): This reflects the monthly summary of total cost avoidance for the period January 2015 – December 2015.
- Energy Consumption Summary (Cumulative Year to date): Summary breakdown for electricity, water & sewer, and irrigation for January 2015 – December 2015.
- Total cost avoidance for the district from program inception (July 2008 – December 2015): This reflects the total cost avoidance since the implementation of the program. Total cumulative cost avoidance of \$36,225,504.00.

During the period of October 2015 – December 2015 there were 150 energy audits performed at District facilities. The results of 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. The Energy Star Label application review process is underway for all of our school sites for the 2015 year, and we anticipate to continue to achieve great results.

St. Johns County School Board

Cost Avoidance Summary By Building CAP - 01B

Place	BATCC Cost	Actual Cost	Cost Avoidance	Cost Avoidance %
[AD] Administrative Complex	\$22,855	\$15,297	\$7,557	33.1
[BG] CROOKSHANK BUS GARAGE	\$3,406	\$3,243	\$163	4.8
[BH] Bartram High School	\$271,002	\$89,536	\$181,466	67.0
[CE] Cunningham Creek Elementary School	\$57,734	\$32,739	\$24,995	43.3
[CLN] CLINIC - RAY ROAD	\$1,005	\$945	\$61	6.0
[CM] CLINIC-SR206	\$249	\$227	\$22	8.8
[CRO] Crookshank Elementary School	\$24,314	\$15,478	\$8,836	36.3
[CS] Creekside High School	\$155,686	\$98,240	\$57,446	36.9
[DCE_1] Durbin Creek Elementary	\$170,887	\$49,118	\$121,769	71.3
[FCS_1] Fruit Cove Middle School	\$66,209	\$31,751	\$34,458	52.0
[FU] FULLERWOOD	\$5,778	\$3,480	\$2,297	39.8
[GAS_1] Gaines Alternative School	\$13,387	\$6,358	\$7,029	52.5
[GRM_1] Gamble Rogers Middle School	\$58,390	\$26,854	\$31,536	54.0
[HCE_1] Hickory Creek Elementary School	\$120,001	\$41,534	\$78,467	65.4
[JCE_1] Julington Creek Elementary School	\$72,793	\$57,473	\$15,319	21.0
[KES_1] Ketterlinus Elementary School	\$28,664	\$16,138	\$12,526	43.7
[LMS_1] Alice B. Landrum Middle School	\$90,119	\$46,354	\$43,765	48.6
[LPA_1] Liberty Pines Academy k-8	\$135,263	\$65,037	\$70,226	51.9
[LSO] Lewis Speedway Offices	\$444	\$444	\$0	0.0
[MCE_1] Mill Creek Elementary School	\$48,429	\$26,977	\$21,451	44.3
[MES_1] Otis Mason Elementary School	\$28,343	\$14,434	\$13,909	49.1
[MMS_1] RJ Murray Middle School	\$61,674	\$28,187	\$33,487	54.3
[MT] Maintenance	\$3,875	\$1,973	\$1,902	49.1
[NHS_1] Allen D. Nease High School	\$105,360	\$39,054	\$66,306	62.9
[OES_1] Osceola Elementary School	\$51,092	\$20,387	\$30,705	60.1
[OL] OCONNELL CENTER	\$2,631	\$1,508	\$1,123	42.7
[OPE_1] Ocean Palms Elementary School	\$63,727	\$30,997	\$32,729	51.4
[PBM_1] Pacetti Bay Middle School	\$86,117	\$50,230	\$35,886	41.7
[PES_1] PALENCIA ELEMENTARY	\$16,457	\$17,214	(\$757)	-4.6
[PMH_1] Pedro Menendez High School	\$95,733	\$40,417	\$55,316	57.8
[POA] PATRIOT OAKS ACADEMY	\$52,740	\$54,153	(\$1,413)	-2.7
[PVH_1] Ponte Vedra High School	\$120,820	\$104,028	\$16,792	13.9
[PVP_1] PV-PV Elementary School	\$40,115	\$17,569	\$22,546	56.2
[RBH_1] RB Hunt Elementary School	\$36,380	\$15,429	\$20,952	57.6
[RES_1] Rawlings Elementary School	\$42,271	\$26,298	\$15,973	37.8
[SAH_1] ST Augustine High School	\$84,910	\$50,809	\$34,100	40.2
[SJT_1] ST Johns Technical High School	\$16,231	\$11,020	\$5,211	32.1
[SMS_1] Sebastian Middle School	\$51,673	\$26,941	\$24,732	47.9
[SPM_1] Switzerland Point Middle School	\$71,221	\$35,920	\$35,302	49.6
[SWE_1] South Woods Elementary School	\$84,675	\$32,722	\$51,953	61.4
[TCE_1] Timberlin Creek Elementary School	\$124,826	\$48,420	\$76,406	61.2
[VRA] VALLEY RIDGE ACADEMY	\$60,820	\$62,523	(\$1,704)	-2.8
[WCE_1] Wards Creek Elementary School	\$83,942	\$40,199	\$43,744	52.1
[WDH_1] WD Hartley Elementary School	\$44,598	\$24,729	\$19,869	44.6

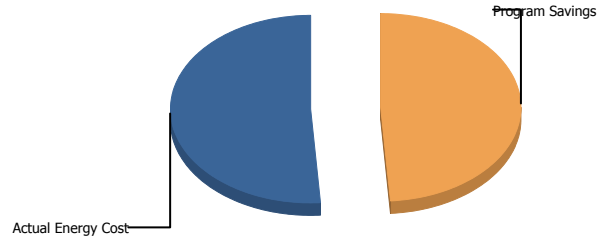
Cost Avoidance Summary By Building CAP - 01B

[WSE_1] Webster School Elementary	\$40,636	\$15,492	\$25,144	61.9
Totals:	\$2,817,479	\$1,437,877	\$1,379,602	49.0

Cumulative Cost Savings

December 2015

Expected Energy Cost	\$2,817,481
Actual Energy Cost	\$1,437,877
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Program Savings	\$1,379,604
Percent Savings	49.0%
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Other Savings	\$0
Total Savings	\$1,379,604



Expected Energy Cost

Anticipated expense without energy management.

Base year usage after adjustments for such variables as changes in weather, equipment, schedules, occupancy and prices.

Actual Energy Cost

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

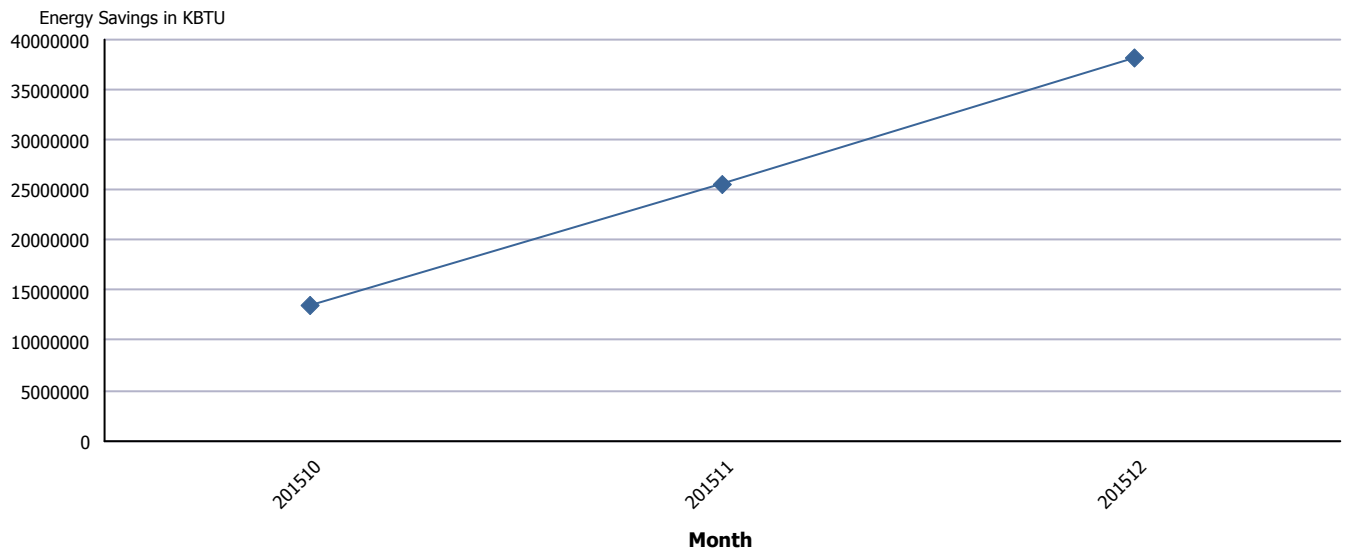
Other Savings

Additional documented savings attributable to Program activities but not the direct result of usage reductions, such as rebates, refunds, tariff changes, etc.

Program Savings

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%.

Cumulative Energy Savings



Cumulative Greenhouse Gas Reduction

Energy Reduction Impact: 38,089,329 KBTU 5,748 equiv. metric tons of CO2

This is equivalent to the following:

Passenger cars not driven for one year:	1,198
Tree seedlings grown for 10 years:	147,386

Requested by: acrutchfield

Version:

Report Version: 14

Filters: Billing Period Between 201510|201512; Bill Account is Active Equals 1; Bill is From a Vendor Equals 1

Monthly Summary

	2015		
	Cost Avoid \$	Cost Avoid %	* Total \$
Jan	469,135	48.0	469,135
Feb	468,324	47.8	468,324
Mar	436,727	50.5	436,727
Apr	300,821	35.7	300,821
May	325,184	39.8	325,184
Jun	447,548	56.3	447,548
Jul	458,992	50.8	458,992
Aug	437,872	41.3	437,872
Sep	435,199	46.4	435,199
Oct	459,588	45.7	459,588
Nov	429,519	46.3	429,519
Dec	490,495	55.5	490,495
Total	5,159,404	46.9	5,159,404

* 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 %	Total Savings \$
Electric (KWH)	89,806,341	46,748,046	43,058,295	47.9	10,244,389	5,275,379	4,969,010	48.5	4,969,010
Water (KGAL)	704	883	-179	-25.4	5,272	6,924	-1,652	-31.3	-1,652
Water & Sewer (KGAL)	47,319	34,936	12,383	26.2	663,469	496,895	166,574	25.1	166,574
Irrigation (KGAL)	16,324	11,744	4,580	28.1	83,869	58,396	25,473	30.4	25,473
Total (MMBTU)	306,509,042	159,551,083	146,957,959	47.9	10,996,998	5,837,594	5,159,404	46.9	5,159,404

Requested by: acrutchfield

Version:

Report Version: 7

Filters: Billing Period Between Jan 2015 and Dec 2015; ; ; Bill Account is Active Equals 1; ; Bill is From a Vendor Equals 1

Commodity		BATCC Cost	BATCC Use	Actual Cost	Actual Use	Cost Avoidance	Cost Avoidance %	Use Avoidance	Use Avoidance %
Electric	kWh	\$73,114,335	617,993,274	\$38,727,060	331,982,967	\$34,387,276	47.0%	286,010,307	46.3%
Irrigation	Kgal	\$445,648	101,217	\$341,604	84,746	\$104,044	23.3%	16,471	16.3%
Water	Kgal	\$26,676	4,171	\$15,620	2,069	\$11,057	41.4%	2,102	50.4%
Water & Sewer	Kgal	\$5,434,806	422,196	\$3,711,678	298,031	\$1,723,129	31.7%	124,165	29.4%
Totals:		\$79,021,466		\$42,795,961		\$36,225,504	45.8%		

Commodity	BATCC Cost	BATCC Use	Actual Cost	Actual Use	Cost Avoidance	Cost Avoidance %	Use Avoidance	Use Avoidance %
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