



Agenda Item Details

Meeting	Dec 13, 2016 - REGULAR SCHOOL BOARD MEETING
Category	S. Operational Services - Consent
Subject	3. Request for Acceptance of the Energy Conservation Program Quarterly Status Report December 2016
Access	Public
Type	Action (Consent)
Recommended Action	Acceptance of the Energy Conservation Program Quarterly Status Report December 2016
Goals	GO-3 Energy Consumption Strategies

Public Content

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 December 2016 Energy Program Status Report summarizes the performance results of the Energy Conservation Program for the quarterly period July 2016 – September 2016. 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 July 2016 – September 2016 the Energy Savings Program has resulted in additional cost avoidance for the School District of \$1,202,884. 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 \$39,852,438.

Recommendation:

Acceptance of the Energy Conservation Program Quarterly Status Report December 2016.

Action Required:

Approval of the Superintendent's recommendation.

Drafted, reviewed and submitted by:

Al Crutchfield, Energy Manager

Paul Rose, Executive Director for Facilities & Operations

Sincerely,

Joseph G. Joyner, Ed.D.

Superintendent of Schools

Acceptance of the Energy Conservation Program Quarterly Status Report December 2016.pdf (424 KB)

Administrative Content

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.

Workflow

Workflow Nov 18, 2016 1:11 PM :: Submitted by Cara Pacetti. Routed to Cara Pacetti for approval.
Nov 22, 2016 6:33 AM :: Approved by Cara Pacetti. Routed to Paul Rose for approval.
Nov 22, 2016 7:38 AM :: Approved by Paul Rose. Routed to Sharon Carcaba for approval.
Nov 28, 2016 9:31 AM :: Approved by Sharon Carcaba. Routed to Vicki Moody for approval.
Dec 1, 2016 7:19 AM :: Approved by Vicki Moody. Routed to Joseph Joyner for approval.
Dec 5, 2016 11:47 AM :: Final approval by Joseph Joyner

Last Modified by Joseph Joyner on December 5, 2016

**ENERGY CONSERVATION PROGRAM
QUARTERLY STATUS REPORT
July 2016 – September 2016**

EXECUTIVE SUMMARY

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

- Cost Avoidance Summary by Site (July 2016 – September 2016): The District realized a total cost avoidance for this quarterly period of \$1,202,885 (or a 41.8% cost avoidance from the baseline period).
- Greenhouse Gas Reduction: Greenhouse Gas Reduction for this quarterly period reduced CO² by 5,989 metric tons.
- Year to Date Monthly Cost Avoidance Summary (January 2016 – September 2016): This reflects the monthly summary of total cost avoidance for the period January 2016 – September 2016.
- Energy Consumption Summary (Cumulative Year to date): Summary breakdown for electricity, water & sewer, and irrigation for January 2016 – September 2016.
- Total cost avoidance for the district from program inception (July 2008 – September 2016): This reflects the total cost avoidance since the implementation of the program. Total cumulative cost avoidance of \$39,852,438.

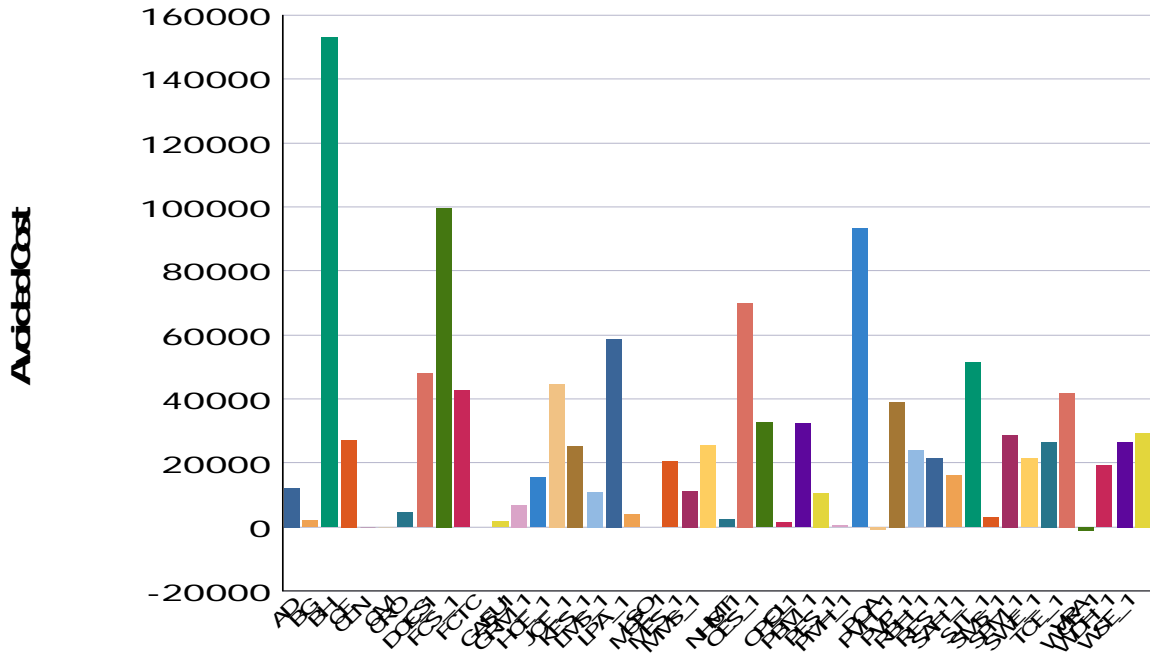
During the period of July 2016 – September 2016 there were 140 energy audits performed at District facilities. The results of these audits demonstrate continued efforts by employees to reduce energy use.

Our district continues to show a high regard in reducing the overall energy consumption. The Summer Operations Program for energy conservation reflects a high yield in cost avoidance for electrical consumption, due to the strategy of avoiding high peak demand between the hours of 3:00pm-6:00pm.

St. Johns County School Board

Cost Avoidance Summary By Building CAP - 01B

Place	BATCC Cost	Actual Cost	Cost Avoidance	Cost Avoidance %
[AD] Administrative Complex	\$29,021	\$17,028	\$11,994	41.3
[BG] CROOKSHANK BUS GARAGE	\$6,535	\$4,517	\$2,018	30.9
[BH] Bartram High School	\$260,359	\$107,465	\$152,895	58.7
[CE] Cunningham Creek Elementary School	\$67,555	\$40,448	\$27,107	40.1
[CLN] CLINIC - RAY ROAD	\$950	\$926	\$24	2.5
[CM] CLINIC-SR206	\$755	\$840	(\$86)	-11.3
[CRO] Crookshank Elementary School	\$29,989	\$25,404	\$4,585	15.3
[CS] Creekside High School	\$153,007	\$105,061	\$47,947	31.3
[DCE_1] Durbin Creek Elementary	\$149,583	\$49,865	\$99,718	66.7
[FCS_1] Fruit Cove Middle School	\$77,853	\$34,995	\$42,857	55.0
[FCTC] First Coast Tech College	\$73,176	\$73,176	\$0	0.0
[FU] FULLERWOOD	\$8,998	\$7,349	\$1,648	18.3
[GAS_1] Gaines Alternative School	\$15,416	\$8,325	\$7,091	46.0
[GRM_1] Gamble Rogers Middle School	\$36,570	\$21,168	\$15,402	42.1
[HCE_1] Hickory Creek Elementary School	\$81,668	\$36,979	\$44,689	54.7
[JCE_1] Julington Creek Elementary School	\$73,817	\$48,585	\$25,232	34.2
[KES_1] Ketterlinus Elementary School	\$30,808	\$19,801	\$11,007	35.7
[LMS_1] Alice B. Landrum Middle School	\$108,872	\$50,171	\$58,701	53.9
[LPA_1] Liberty Pines Academy k-8	\$84,470	\$80,683	\$3,787	4.5
[LSO] Lewis Speedway Offices	\$3,075	\$3,075	\$0	0.0
[MCE_1] Mill Creek Elementary School	\$55,373	\$34,920	\$20,453	36.9
[MES_1] Otis Mason Elementary School	\$30,225	\$18,928	\$11,297	37.4
[MMS_1] RJ Murray Middle School	\$55,169	\$29,624	\$25,545	46.3
[MT] Maintenance	\$4,756	\$2,332	\$2,424	51.0
[NHS_1] Allen D. Nease High School	\$131,593	\$61,440	\$70,154	53.3
[OES_1] Osceola Elementary School	\$59,291	\$26,587	\$32,704	55.2
[OL] OCONNELL CENTER	\$3,295	\$1,821	\$1,474	44.7
[OPE_1] Ocean Palms Elementary School	\$68,541	\$36,224	\$32,317	47.1
[PBM_1] Pacetti Bay Middle School	\$59,120	\$48,537	\$10,583	17.9
[PES_1] PALENCIA ELEMENTARY	\$20,278	\$19,628	\$650	3.2
[PMH_1] Pedro Menendez High School	\$168,397	\$75,033	\$93,364	55.4
[POA] PATRIOT OAKS ACADEMY	\$58,085	\$59,081	(\$995)	-1.7
[PVH_1] Ponte Vedra High School	\$157,561	\$118,621	\$38,939	24.7
[PVP_1] PV-PV Elementary	\$42,251	\$18,405	\$23,846	56.4
[RBH_1] RB Hunt Elementary School	\$31,489	\$10,301	\$21,188	67.3
[RES_1] Rawlings Elementary School	\$46,850	\$30,738	\$16,112	34.4
[SAH_1] ST Augustine High School	\$106,628	\$55,322	\$51,305	48.1
[SJT_1] ST Johns Technical High School	\$14,746	\$11,712	\$3,033	20.6
[SMS_1] Sebastian Middle School	\$52,604	\$23,891	\$28,713	54.6
[SPM_1] Switzerland Point Middle School	\$59,170	\$37,914	\$21,256	35.9
[SWE_1] South Woods Elementary School	\$53,966	\$27,466	\$26,500	49.1
[TCE_1] Timberlin Creek Elementary School	\$87,471	\$45,741	\$41,730	47.7
[VRA] VALLEY RIDGE ACADEMY	\$54,539	\$55,889	(\$1,350)	-2.5
[WCE_1] Wards Creek Elementary School	\$60,705	\$41,423	\$19,283	31.8
Cost Avoidance Summary By Building CAP - 01B				
[WDH_1] WD Hartley Elementary School	\$53,546	\$27,155	\$26,391	49.3
[WSE_1] Webster School Elementary	\$49,055	\$19,704	\$29,350	59.8
Totals:	\$2,877,183	\$1,674,299	\$1,202,884	41.8



Requested by: acrutchfield

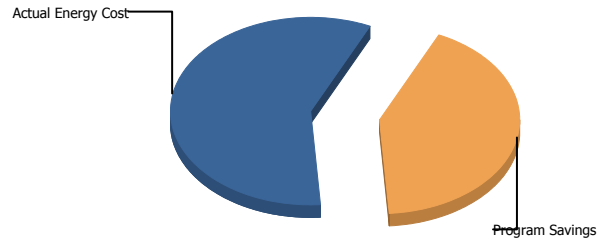
Client Version:

Report version: 5

Filters: Commodity Name Between Electric|Water & Sewer; Billing Period Between Jul 2016 and Sep 2016; ; ; ; ; ; ; ; ; ; ;
 Bill is From a Vendor Equals 1; Bill Account is Active Equals 1;

Cumulative Cost Savings

Expected Energy Cost	\$2,877,184
Actual Energy Cost	\$1,674,299
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Program Savings	\$1,202,885
Percent Savings	41.8%
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Other Savings	\$0
Total Savings	\$1,202,885



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.

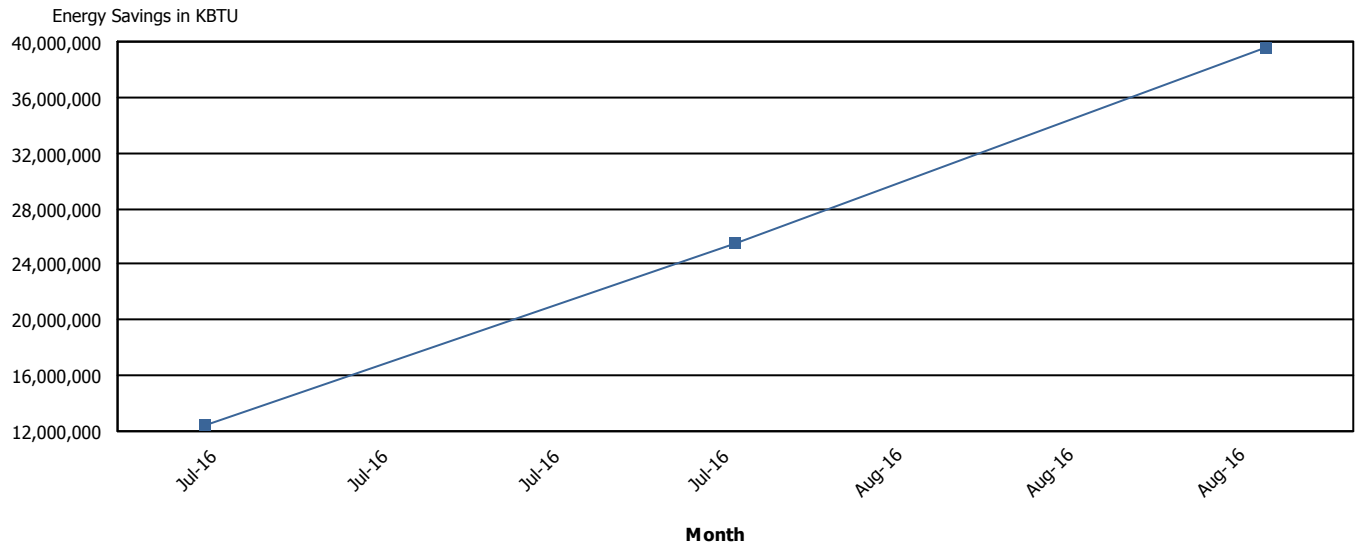
Other Savings

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: 39,563,673 KBTU 5,989 equiv. metric tons of CO2

This is equivalent to the following:

Passenger cars not driven for one year:	1,248
Tree seedlings grown for 10 years:	153,555

Requested by: acrutchfield

Version:

Report Version: 15

Filters: Billing Period Between 201607|201609;Bill Account is Active Equals 1;Bill is From a Vendor Equals 1

Monthly Summary

	2016		
	Cost Avoid \$	Cost Avoid %	* Total \$
Jan	469,438	46.8	469,438
Feb	401,818	44.2	401,818
Mar	422,527	48.1	422,527
Apr	302,241	37.5	302,241
May	353,998	47.0	353,998
Jun	405,984	53.8	405,984
Jul	391,504	45.5	391,504
Aug	381,867	37.7	381,867
Sep	429,513	42.8	429,513
Total	3,558,891	44.6	3,558,891

* 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)	71,293,296	39,434,191	31,859,105	44.7	7,545,271	4,072,141	3,473,130	46.0	3,473,130
Water & Sewer (KGAL)	24,280	19,096	5,184	21.3	375,295	283,377	91,918	24.5	91,918
Irrigation (KGAL)	12,377	13,872	-1,496	-12.1	59,567	65,724	-6,157	-10.3	-6,157
Total (MMBTU)	243,324,019	134,588,894	108,735,125	44.7	7,980,133	4,421,242	3,558,891	44.6	3,558,891

Requested by: acrutchfield**Version:****Report Version:** 7**Filters:** Billing Period Between Jan 2016 and Sep 2016; Commodity Code Greater than BIOMASS; ; ; 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	\$80,993,059	693,589,677	\$43,100,181	375,489,428	\$37,892,878	46.8%	318,100,249	45.9%
Irrigation	Kgal	\$505,215	113,595	\$407,328	98,618	\$97,887	19.4%	14,977	13.2%
Water	Kgal	\$26,676	4,171	\$15,620	2,069	\$11,057	41.4%	2,102	50.4%
Water & Sewer	Kgal	\$5,886,019	451,467	\$4,035,402	320,068	\$1,850,617	31.4%	131,399	29.1%
Totals:		\$87,410,970		\$47,558,532		\$39,852,438	45.6%		

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