



Agenda Item Details

Meeting	Dec 12, 2017 - REGULAR SCHOOL BOARD MEETING
Category	S. Operational Services - Consent
Subject	3. Request for Acceptance of the Energy Conservation Program Quarterly Status Report December 2017
Access	Public
Type	Action (Consent)
Recommended Action	Acceptance of the Energy Conservation Program Quarterly Status Report December 2017
Goals	GO-3 Energy Consumption Strategies GM-1 Mission Statement

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 2017 Energy Program Status Report summarizes the performance results of the Energy Conservation Program for the quarterly period July 2017 - September 2017. 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 2017 - September 2017 the Energy Savings Program has resulted in additional costs avoidance for the School District of \$1,031,352. 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 \$44,414,491.

Recommendation:

Acceptance of the Energy Conservation Program Quarterly Status Report for December 2017.

Action Required:

Approval of the Superintendent's recommendation.

Drafted, reviewed and submitted by:

Al Crutchfield, Energy Manager

Paul Rose, Executive Director for Facilities & Operations

Cathy Mittelstadt, Deputy Superintendent for Operations

Sincerely,

Tim Forson

Superintendent of Schools

Energy Conservation Program Quarterly Status Report December 2017.pdf (854 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 20, 2017 1:43 PM :: Submitted by Cara Pacetti. Routed to Cara Pacetti for approval.
Nov 20, 2017 2:08 PM :: Approved by Cara Pacetti. Routed to Paul Rose for approval.
Nov 27, 2017 2:13 PM :: Approved by Paul Rose. Routed to Vicki Davenport for approval.
Nov 27, 2017 2:37 PM :: Approved by Vicki Davenport. Routed to Cathy Mittelstadt for approval.
Nov 29, 2017 3:22 PM :: Approved by Cathy Mittelstadt. Routed to Vicki Moody for approval.
Dec 1, 2017 8:39 AM :: Approved by Vicki Moody. Routed to Tim Forson for approval.
Dec 5, 2017 2:33 PM :: Final approval by Tim Forson

Last Modified by Tim Forson on December 5, 2017

**ENERGY CONSERVATION PROGRAM
QUARTERLY STATUS REPORT
July 2017 – September 2017**

EXECUTIVE SUMMARY

The December 2017 Energy Conservation Program Quarterly Status Report summarizes the performance results for the quarterly period of July 2017 – September 2017 and is comprised of the following:

- Cost Avoidance Summary by Site (July 2017 – September 2017): The District realized a total cost avoidance for this quarterly period of \$1,031,352 (or a 45.2% cost avoidance from the baseline period).
- Greenhouse Gas Reduction: Greenhouse Gas Reduction for this quarterly period reduced CO² by 4,869 metric tons.
- Year to Date Monthly Cost Avoidance Summary (January 2017 – September 2017): This reflects the monthly summary of total cost avoidance for the period January 2017 – September 2017.
- Energy Consumption Summary (Cumulative Year to date): Summary breakdown for electricity, water & sewer, and irrigation for January 2017 – September 2017.
- Total cost avoidance for the district from program inception (July 2008 – September 2017): This reflects the total cost avoidance since the implementation of the program. Total cumulative cost avoidance of \$44,414,491.

During the period of July 2017 – September 2017 there were 120 energy audits performed at District facilities. The results of these audits demonstrate continued efforts by employees to reduce energy use.

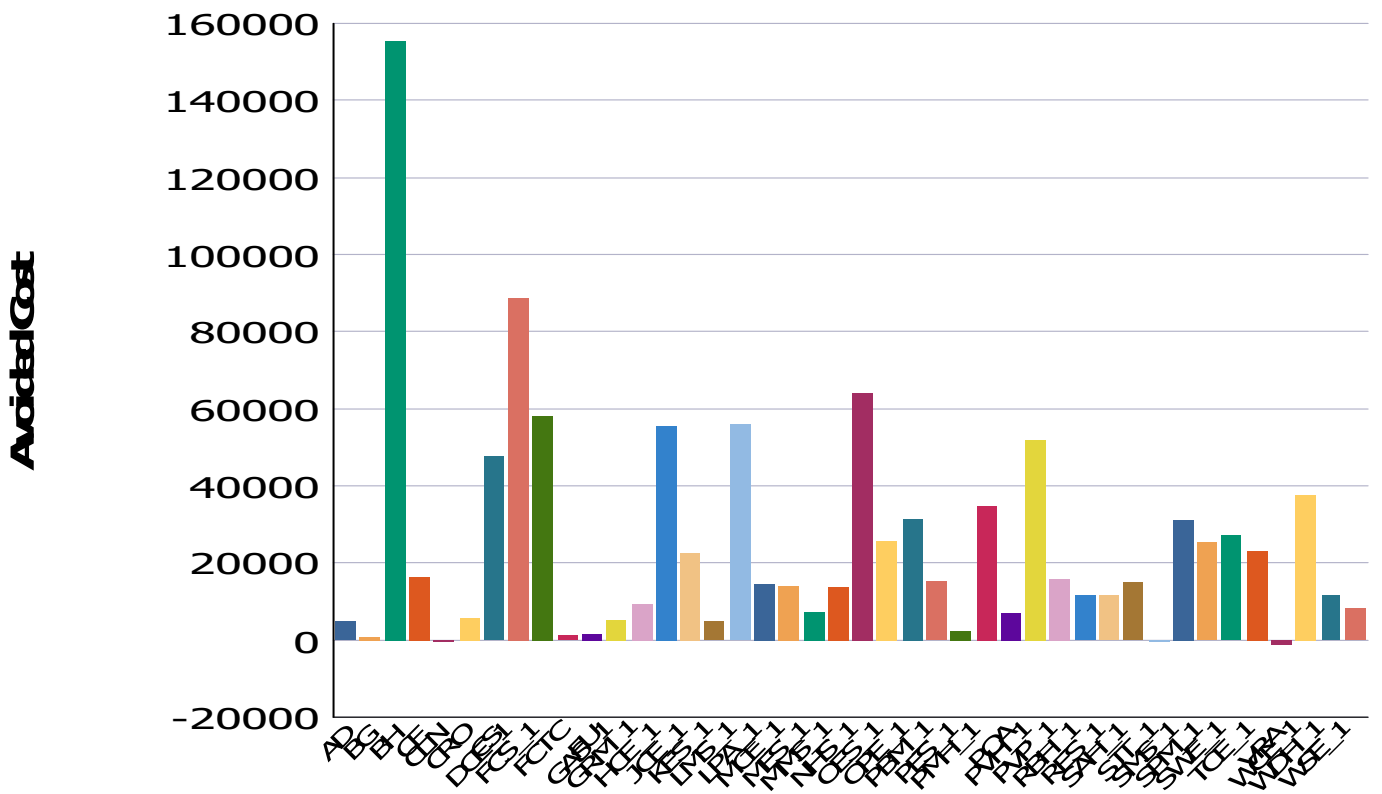
Our district continues to show a high regard in reducing the overall energy consumption. Many thanks to principals and our facilities staff district-wide for a very successful summer for the Energy Conservation Program.

St. Johns County School Board

Cost Avoidance Summary By Building CAP - 01B

Place	BATCC Cost	Actual Cost	Cost Avoidance	Cost Avoidance %
[AD] Administrative Complex	\$12,652	\$7,867	\$4,785	37.8
[BG] CROOKSHANK BUS GARAGE	\$2,388	\$1,510	\$878	36.8
[BH] Bartram High School	\$247,535	\$91,978	\$155,557	62.8
[CE] Cunningham Creek Elementary School	\$52,150	\$35,700	\$16,450	31.5
[CLN] CLINIC - RAY ROAD	\$900	\$1,243	(\$343)	-38.1
[CRO] Crookshank Elementary School	\$21,903	\$16,291	\$5,612	25.6
[CS] Creekside High School	\$141,618	\$94,111	\$47,508	33.5
[DCE_1] Durbin Creek Elementary	\$136,882	\$48,177	\$88,705	64.8
[FCS_1] Fruit Cove Middle School	\$72,809	\$14,854	\$57,955	79.6
[FCTC] First Coast Tech College	\$53,707	\$52,535	\$1,172	2.2
[FU] FULLERWOOD	\$6,807	\$5,301	\$1,506	22.1
[GAS_1] Gaines Alternative School	\$15,378	\$10,256	\$5,123	33.3
[GRM_1] Gamble Rogers Middle School	\$20,938	\$11,581	\$9,357	44.7
[HCE_1] Hickory Creek Elementary School	\$91,082	\$35,315	\$55,767	61.2
[JCE_1] Julington Creek Elementary School	\$63,328	\$40,871	\$22,457	35.5
[KES_1] Ketterlinus Elementary School	\$9,322	\$4,565	\$4,757	51.0
[LMS_1] Alice B. Landrum Middle School	\$107,181	\$51,269	\$55,913	52.2
[LPA_1] Liberty Pines Academy k-8	\$91,636	\$76,892	\$14,744	16.1
[MCE_1] Mill Creek Elementary School	\$35,838	\$21,783	\$14,055	39.2
[MES_1] Otis Mason Elementary School	\$20,140	\$13,014	\$7,125	35.4
[MMS_1] RJ Murray Middle School	\$36,506	\$22,806	\$13,700	37.5
[NHS_1] Allen D. Nease High School	\$126,218	\$62,001	\$64,217	50.9
[OES_1] Osceola Elementary School	\$44,396	\$18,736	\$25,660	57.8
[OPE_1] Ocean Palms Elementary School	\$67,904	\$36,531	\$31,373	46.2
[PBM_1] Pacetti Bay Middle School	\$69,554	\$54,313	\$15,240	21.9
[PES_1] PALENCIA ELEMENTARY	\$18,697	\$16,375	\$2,321	12.4
[PMH_1] Pedro Menendez High School	\$58,413	\$23,626	\$34,787	59.6
[POA] PATRIOT OAKS ACADEMY	\$53,638	\$46,737	\$6,900	12.9
[PVH_1] Ponte Vedra High School	\$124,310	\$72,514	\$51,795	41.7
[PVP_1] PV-PV Elementary	\$26,543	\$10,685	\$15,858	59.7
[RBH_1] RB Hunt Elementary School	\$13,677	\$2,233	\$11,444	83.7
[RES_1] Rawlings Elementary School	\$29,143	\$17,698	\$11,445	39.3
[SAH_1] ST Augustine High School	\$31,278	\$16,238	\$15,040	48.1
[SJT_1] ST Johns Technical High School	\$3,808	\$4,263	(\$455)	-12.0
[SMS_1] Sebastian Middle School	\$57,251	\$26,012	\$31,239	54.6
[SPM_1] Switzerland Point Middle School	\$57,948	\$32,511	\$25,436	43.9
[SWE_1] South Woods Elementary School	\$51,290	\$24,279	\$27,011	52.7
[TCE_1] Timberlin Creek Elementary School	\$48,966	\$25,660	\$23,305	47.6
[VRA] VALLEY RIDGE ACADEMY	\$47,315	\$48,676	(\$1,362)	-2.9
[WCE_1] Wards Creek Elementary School	\$75,172	\$37,640	\$37,532	49.9
[WDH_1] WD Hartley Elementary School	\$20,526	\$9,055	\$11,471	55.9
[WSE_1] Webster School Elementary	\$15,576	\$7,267	\$8,309	53.3
Totals:	\$2,282,323	\$1,250,970	\$1,031,352	45.2

Cost Avoidance Summary By Building CAP - 01B



Requested by: acrutchfield

Client Version:

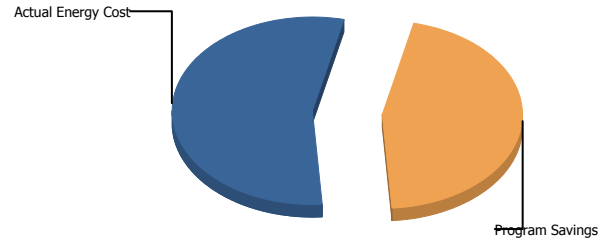
Report version: 5

Filters: Commodity Name Equals Electric; Billing Period Between Jul 2017 and Sep 2017; ; ; ; ; ; ; ; ; ; Bill is From a Vendor Equals 1; Bill Account is Active Equals 1;

Cumulative Cost Savings

September 2017

Expected Energy Cost	\$2,282,323
Actual Energy Cost	\$1,250,970
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Program Savings	\$1,031,352
Percent Savings	45.2%
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Other Savings	\$0
Total Savings	\$1,031,352



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.

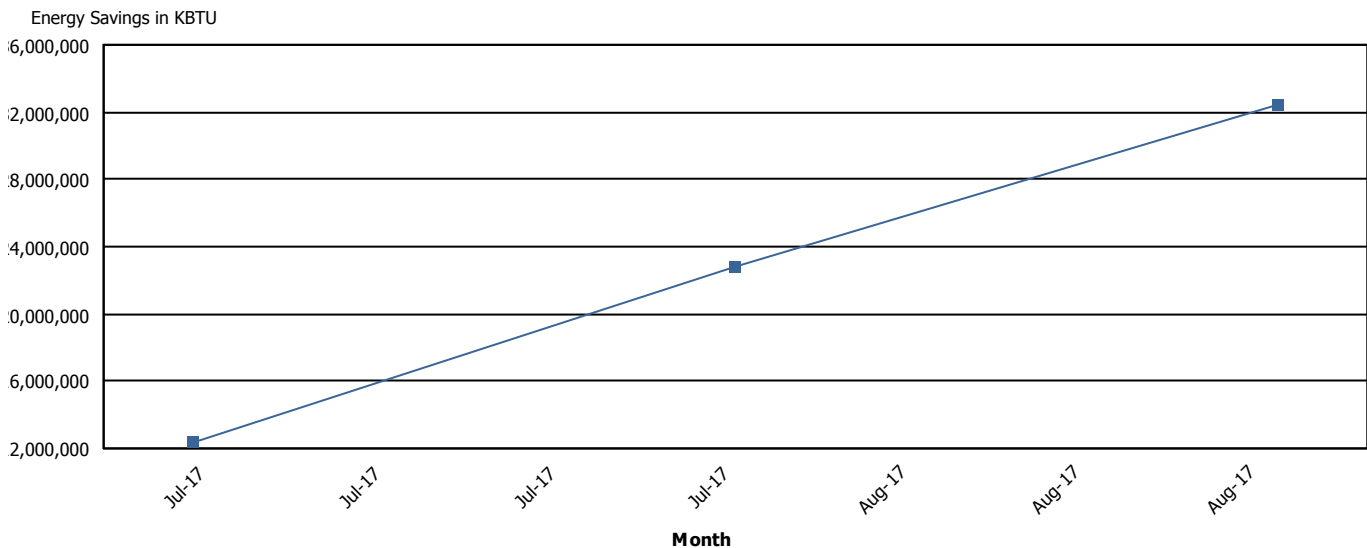
Other Savings

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: 32,394,380 KBTU 4,869 equiv. metric tons of CO2

This is equivalent to the following:

Passenger cars not driven for one year:	1,014
Tree seedlings grown for 10 years:	124,859

Requested by: acrutchfield

Version:

Report Version: 16

Filters: Billing Period Between 201707;201709;Commodity Code Equals ELECTRIC;One Page per Building (Y/N) Equals 0;Bill Account is Active Equals 1;Bill is From a Vendor Equals 1

11/07/2017 2:28:10PM

Monthly Summary

	2017		
	Cost Avoid \$	Cost Avoid %	* Total \$
Jan	363,741	41.9	363,741
Feb	349,327	41.5	349,327
Mar	418,949	45.8	418,949
Apr	280,803	34.1	280,803
May	338,858	46.5	338,858
Jun	370,082	52.8	370,082
Jul	390,579	46.8	390,579
Aug	321,618	37.5	321,618
Sep	336,573	47.5	336,573
Total	3,170,529	43.6	3,170,529

* 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)	64,557,777	35,752,203	28,805,574	44.6	6,886,084	3,779,705	3,106,379	45.1	3,106,379
Water & Sewer (KGAL)	20,927	16,495	4,432	21.2	329,482	267,925	61,557	18.7	61,557
Irrigation (KGAL)	11,904	11,833	71	0.6	59,488	56,895	2,593	4.4	2,593
Total (MMBTU)	220,335,693	122,022,269	98,313,424	44.6	7,275,055	4,104,525	3,170,529	43.6	3,170,529

Requested by: acrutchfield**Version:****Report Version:** 7**Filters:** Billing Period Between Jan 2017 and Sep 2017; Commodity Code Between ELECTRIC;WATERSEWER; ; ; ; 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	\$90,029,074	776,389,978	\$47,665,638	417,872,345	\$42,363,436	47.1%	358,517,633	46.2%
Irrigation	Kgal	\$583,889	129,478	\$483,040	114,361	\$100,849	17.3%	15,117	11.7%
Water	Kgal	\$26,676	4,171	\$15,620	2,069	\$11,057	41.4%	2,102	50.4%
Water & Sewer	Kgal	\$6,408,853	485,288	\$4,469,703	348,668	\$1,939,150	30.3%	136,620	28.2%
Totals:		\$97,048,492		\$52,634,001		\$44,414,491	45.8%		

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