



Agenda Item Details

Meeting	Mar 13, 2018 - REGULAR SCHOOL BOARD MEETING
Category	S. Operational Services - Consent
Subject	3. Request for Acceptance of the Energy Conservation Program Quarterly Status Report March 2018
Access	Public
Type	Action (Consent)
Recommended Action	Acceptance of the Energy Conservation Program Quarterly Status Report March 2018
Goals	GM-1 Mission Statement 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 March 2018 Energy Program Status Report summarizes the performance results of the Energy Conservation Program for the quarterly period of October 2017 - December 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 life long learning in all students, creating educated and caring contributors to the world.

Fiscal Impact:

During the quarterly period October 2017 - December 2017 the Energy Savings Program has resulted in additional costs avoidance for the School District of \$1,333,169. 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 \$46,182,105.

Recommendation:

Acceptance of the Energy Conservation Program Quarterly Status Report for March 2018.

Action Required:

Approval of 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 March 2018.pdf \(530 KB\)](#)

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 Feb 28, 2018 9:34 AM :: Submitted by Cara Pacetti. Routed to Cara Pacetti for approval.
Feb 28, 2018 10:12 AM :: Approved by Cara Pacetti. Routed to Paul Rose for approval.
Feb 28, 2018 10:20 AM :: Approved by Paul Rose. Routed to Vicki Davenport for approval.
Feb 28, 2018 11:40 AM :: Approved by Vicki Davenport. Routed to Cathy Mittelstadt for approval.
Feb 28, 2018 3:26 PM :: Approved by Cathy Mittelstadt. Routed to Vicki Moody for approval.
Mar 2, 2018 1:59 PM :: Approved by Vicki Moody. Routed to Tim Forson for approval.
Mar 6, 2018 12:52 PM :: Final approval by Tim Forson

Last Modified by Tim Forson on March 6, 2018

**ENERGY CONSERVATION PROGRAM
QUARTERLY STATUS REPORT
October 2017 – December 2017**

EXECUTIVE SUMMARY

The March 2018 Energy Conservation Program Quarterly Status Report summarizes the performance results for the quarterly period of October 2017 – December 2017 and is comprised of the following:

- Cost Avoidance Summary by Site (October 2017 – December 2017): The District realized a total cost avoidance for this quarterly period of \$1,333,169 (or a 47% cost avoidance from the baseline period).
- Greenhouse Gas Reduction: Greenhouse Gas Reduction for this quarterly period reduced CO² by 5,746 metric tons.
- Year to Date Monthly Cost Avoidance Summary (January 2017 – December 2017): This reflects the monthly summary of total cost avoidance for the period January 2017 – December 2017.
- Energy Consumption Summary (Cumulative Year to date): Summary breakdown for electricity, water & sewer, and irrigation for January 2017 – December 2017.
- Total cost avoidance for the district from program inception (July 2008 – December 2017): This reflects the total cost avoidance since the implementation of the program. Total cumulative cost avoidance of \$46,182,105.

During the period of October 2017 – December 2017 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. Many thanks to principals and our facilities staff district-wide for a very successful winter break shutdown.

St. Johns County School Board

Cost Avoidance Summary By Building CAP - 01B

Place	BATCC Cost	Actual Cost	Cost Avoidance	Cost Avoidance %
[AD] Administrative Complex	\$24,029	\$16,999	\$7,030	29.3
[BG] CROOKSHANK BUS GARAGE	\$5,055	\$3,790	\$1,265	25.0
[BH] Bartram High School	\$244,953	\$94,071	\$150,881	61.6
[CE] Cunningham Creek Elementary School	\$42,138	\$29,328	\$12,810	30.4
[CLN] CLINIC - RAY ROAD	\$1,139	\$1,243	(\$104)	-9.1
[CRO] Crookshank Elementary School	\$23,064	\$20,184	\$2,879	12.5
[CS] Creekside High School	\$136,699	\$93,764	\$42,935	31.4
[DCE_1] Durbin Creek Elementary	\$159,577	\$43,607	\$115,970	72.7
[FCS_1] Fruit Cove Middle School	\$59,932	\$11,009	\$48,923	81.6
[FCTC] First Coast Tech College	\$62,181	\$60,523	\$1,659	2.7
[FU] FULLERWOOD	\$8,426	\$4,918	\$3,508	41.6
[GAS_1] Gaines Alternative School	\$10,662	\$8,433	\$2,229	20.9
[GRM_1] Gamble Rogers Middle School	\$59,508	\$33,267	\$26,241	44.1
[HCE_1] Hickory Creek Elementary School	\$155,784	\$38,927	\$116,857	75.0
[JCE_1] Julington Creek Elementary School	\$64,429	\$43,682	\$20,747	32.2
[KES_1] Ketterlinus Elementary School	\$26,047	\$15,231	\$10,817	41.5
[LMS_1] Alice B. Landrum Middle School	\$83,950	\$44,079	\$39,871	47.5
[LPA_1] Liberty Pines Academy k-8	\$116,858	\$61,969	\$54,889	47.0
[MCE_1] Mill Creek Elementary School	\$44,257	\$29,743	\$14,515	32.8
[MES_1] Otis Mason Elementary School	\$26,558	\$15,369	\$11,189	42.1
[MMS_1] RJ Murray Middle School	\$58,405	\$27,489	\$30,916	52.9
[MT] Maintenance	\$3,994	\$2,353	\$1,640	41.1
[NHS_1] Allen D. Nease High School	\$116,020	\$52,558	\$63,463	54.7
[OES_1] Osceola Elementary School	\$48,318	\$20,151	\$28,166	58.3
[OL] OCONNELL CENTER	\$3,769	\$1,898	\$1,871	49.6
[OPE_1] Ocean Palms Elementary School	\$59,989	\$34,566	\$25,422	42.4
[PBM_1] Pacetti Bay Middle School	\$90,906	\$56,967	\$33,939	37.3
[PCE] Picolata Crossing Elementary	\$20,070	\$20,070	\$0	0.0
[PES_1] PALENCIA ELEMENTARY	\$18,796	\$20,719	(\$1,923)	-10.2
[PMH_1] Pedro Menendez High School	\$157,125	\$67,463	\$89,662	57.1
[POA] PATRIOT OAKS ACADEMY	\$43,973	\$49,926	(\$5,953)	-13.5
[PVH_1] Ponte Vedra High School	\$88,001	\$74,449	\$13,551	15.4
[PVP_1] PV-PV Elementary	\$32,198	\$15,952	\$16,245	50.5
[RBH_1] RB Hunt Elementary School	\$33,775	\$16,107	\$17,669	52.3
[RES_1] Rawlings Elementary School	\$36,042	\$27,589	\$8,453	23.5
[SAH_1] ST Augustine High School	\$77,032	\$48,332	\$28,700	37.3
[SJT_1] ST Johns Technical High School	\$20,510	\$10,390	\$10,120	49.3
[SMS_1] Sebastian Middle School	\$49,490	\$22,345	\$27,145	54.8
[SPM_1] Switzerland Point Middle School	\$64,067	\$31,782	\$32,284	50.4
[SWE_1] South Woods Elementary School	\$81,124	\$40,623	\$40,501	49.9
[TCE_1] Timberlin Creek Elementary School	\$138,386	\$53,445	\$84,941	61.4
[VRA] VALLEY RIDGE ACADEMY	\$57,556	\$54,421	\$3,135	5.4
[WCE_1] Wards Creek Elementary School	\$99,155	\$41,393	\$57,762	58.3
[WDH_1] WD Hartley Elementary School	\$45,800	\$25,524	\$20,276	44.3

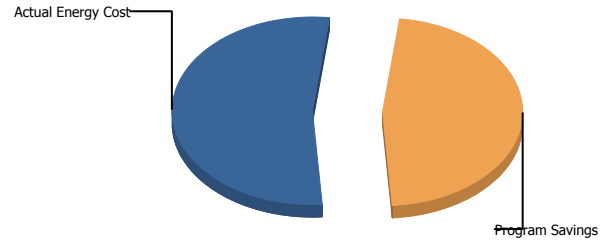
Cost Avoidance Summary By Building CAP - 01B

[WSE_1] Webster School Elementary	\$35,925	\$15,851	\$20,074	55.9
Totals:	\$2,835,672	\$1,502,503	\$1,333,169	47.0

Cumulative Cost Savings

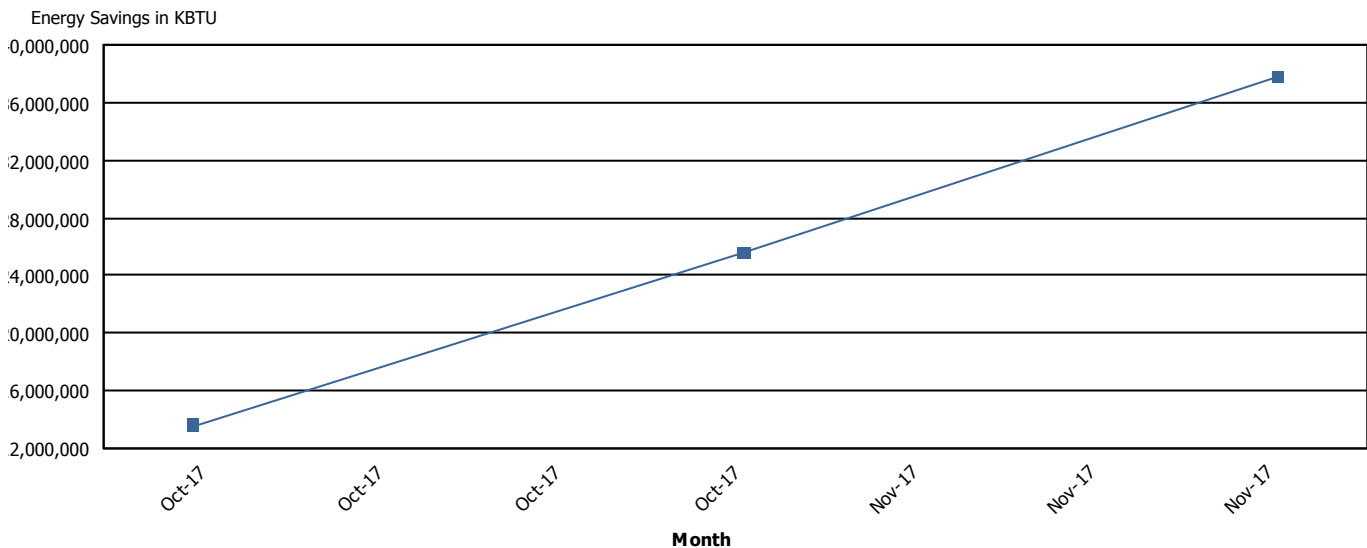
December 2017

Expected Energy Cost	\$2,835,672
Actual Energy Cost	\$1,502,503
<hr/>	
Program Savings	\$1,333,169
Percent Savings	47.0%
<hr/>	
Other Savings	\$0
Total Savings	\$1,333,169



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:	37,743,609 KBTU	5,746 equiv. metric tons of CO2
This is equivalent to the following:		
Passenger cars not driven for one year:	1,197	
Tree seedlings grown for 10 years:	147,328	

Requested by: acrutchfield

Version:

Report Version: 16

Filters: Billing Period Between 201710;201712;Commodity Code Equals ELECTRIC;One Page per Building (Y/N) Equals 0;Account is Active Equals 1;Vendor Bill Equals 1

02/08/2018 12:38:21PM

Monthly Summary

	2017		
	Cost Avoid \$	Cost Avoid %	* Total \$
Jan	372,026	41.8	372,026
Feb	354,429	41.2	354,429
Mar	428,645	45.7	428,645
Apr	281,368	33.5	281,368
May	350,925	46.5	350,925
Jun	377,257	52.4	377,257
Jul	398,258	46.5	398,258
Aug	399,000	39.2	399,000
Sep	495,869	44.4	495,869
Oct	453,442	42.9	453,442
Nov	421,337	45.3	421,337
Dec	477,650	48.8	477,650
Total	4,810,205	43.9	4,810,205

* 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)	93,652,492	51,771,443	41,881,049	44.7	10,242,212	5,583,733	4,658,479	45.5	4,658,479
Water (KGAL)	935	847	88	9.4	7,261	6,492	769	10.6	769
Water & Sewer (KGAL)	37,270	28,329	8,942	24.0	629,091	483,217	145,874	23.2	145,874
Irrigation (KGAL)	16,253	15,694	559	3.4	80,583	75,500	5,083	6.3	5,083
Total (KBTU)	319,635,955	176,695,935	142,940,020	44.7	10,959,146	6,148,941	4,810,205	43.9	4,810,205

Requested by: acrutchfield

Version:

Report Version: 7

Filters: Billing Period Between Jan 2017 and Dec 2017; Commodity Code Between ELECTRIC;WATERSEWER; ; ; Account is Active Equals 1; ; Vendor Bill Equals 1

Commodity		BATCC Cost	BATCC Use	Actual Cost	Actual Use	Cost Avoidance	Cost Avoidance %	Use Avoidance	Use Avoidance %
Electric	kWh	\$93,385,997	805,489,709	\$49,470,801	433,899,135	\$43,915,196	47.0%	371,590,574	46.1%
Irrigation	Kgal	\$604,984	133,825	\$501,645	118,222	\$103,339	17.1%	15,603	11.7%
Water	Kgal	\$55,237	7,834	\$31,537	4,218	\$23,700	42.9%	3,617	46.2%
Water & Sewer	Kgal	\$7,039,993	517,859	\$4,900,123	370,780	\$2,139,871	30.4%	147,079	28.4%
Totals:		\$101,086,211		\$54,904,105		\$46,182,105	45.7%		

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

