



Agenda Item Details

Meeting	Mar 12, 2019 - REGULAR SCHOOL BOARD MEETING
Category	S. Operational Services - Consent
Subject	3. Request for Acceptance of the Energy Conservation Program Quarterly Status Report March 2019
Access	Public
Type	Action (Consent)
Recommended Action	Acceptance of the Energy Conservation Program Quarterly Status Report March 2019
Goals	GO-1 Improvement of Internal Procedures Facilities/Construction 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 March 2019 Energy Program Status Report summarizes the performance results of the Energy Conservation Program for the quarterly period of October 2018 - December 2018. 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 2018 - December 2018 the Energy Savings Program has resulted in additional costs avoidance for the School District of \$1,393,874. 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 \$51,390,252.

Recommendation:

Acceptance of the Energy Conservation Program Quarterly Status Report for March 2019.

Action Required:

Approval of Superintendent's recommendation.

Drafted, reviewed and submitted by:

Al Crutchfield, Energy Manager

Paul Rose, Executive Director for Facilities and Operations

Cathy Mittelstadt, Deputy Superintendent for Operations

Sincerely,

Tim Forson

Superintendent of Schools



Energy Conservation Program Quarterly Status Report March 2019.pdf (688 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 27, 2019 6:56 AM :: Submitted by Cara Pacetti. Routed to Cara Pacetti for approval.
Feb 27, 2019 7:06 AM :: Approved by Cara Pacetti. Routed to Paul Rose for approval.
Feb 27, 2019 7:17 AM :: Approved by Paul Rose. Routed to Vicki Davenport for approval.
Feb 27, 2019 7:46 AM :: Approved by Vicki Davenport. Routed to Cathy Mittelstadt for approval.
Feb 27, 2019 8:17 AM :: Approved by Cathy Mittelstadt. Routed to Vicki Moody for approval.
Mar 4, 2019 8:40 AM :: Approved by Vicki Moody. Routed to Tim Forson for approval.
Mar 5, 2019 12:38 PM :: Final approval by Tim Forson

Last Modified by Tim Forson on March 5, 2019

**ENERGY CONSERVATION PROGRAM
QUARTERLY STATUS REPORT
October 2018 – December 2018**

EXECUTIVE SUMMARY

The March 2019 Energy Conservation Program Quarterly Status Report summarizes the performance results for the quarterly period of October 2018 – December 2018 and is comprised of the following:

- Cost Avoidance Summary by Site (October 2018 – December 2018): The District realized a total cost avoidance for this quarterly period of \$1,393,874 (or a 48% cost avoidance from the baseline period).
- Greenhouse Gas Reduction: Greenhouse Gas Reduction for this quarterly period reduced CO² by 5,882 metric tons.
- Year to Date Monthly Cost Avoidance Summary (October 2018 – December 2018): This reflects the monthly summary of total cost avoidance for the period October 2018 – December 2018.
- Energy Consumption Summary (Cumulative Year to date): Summary breakdown for electricity, water & sewer, and irrigation for January 2018 – December 2018.
- Total cost avoidance for the district from program inception (July 2008 – December 2018): This reflects the total cost avoidance since the implementation of the program. Total cumulative cost avoidance of \$51,390,252.

During the period of October 2018 – December 2018 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.

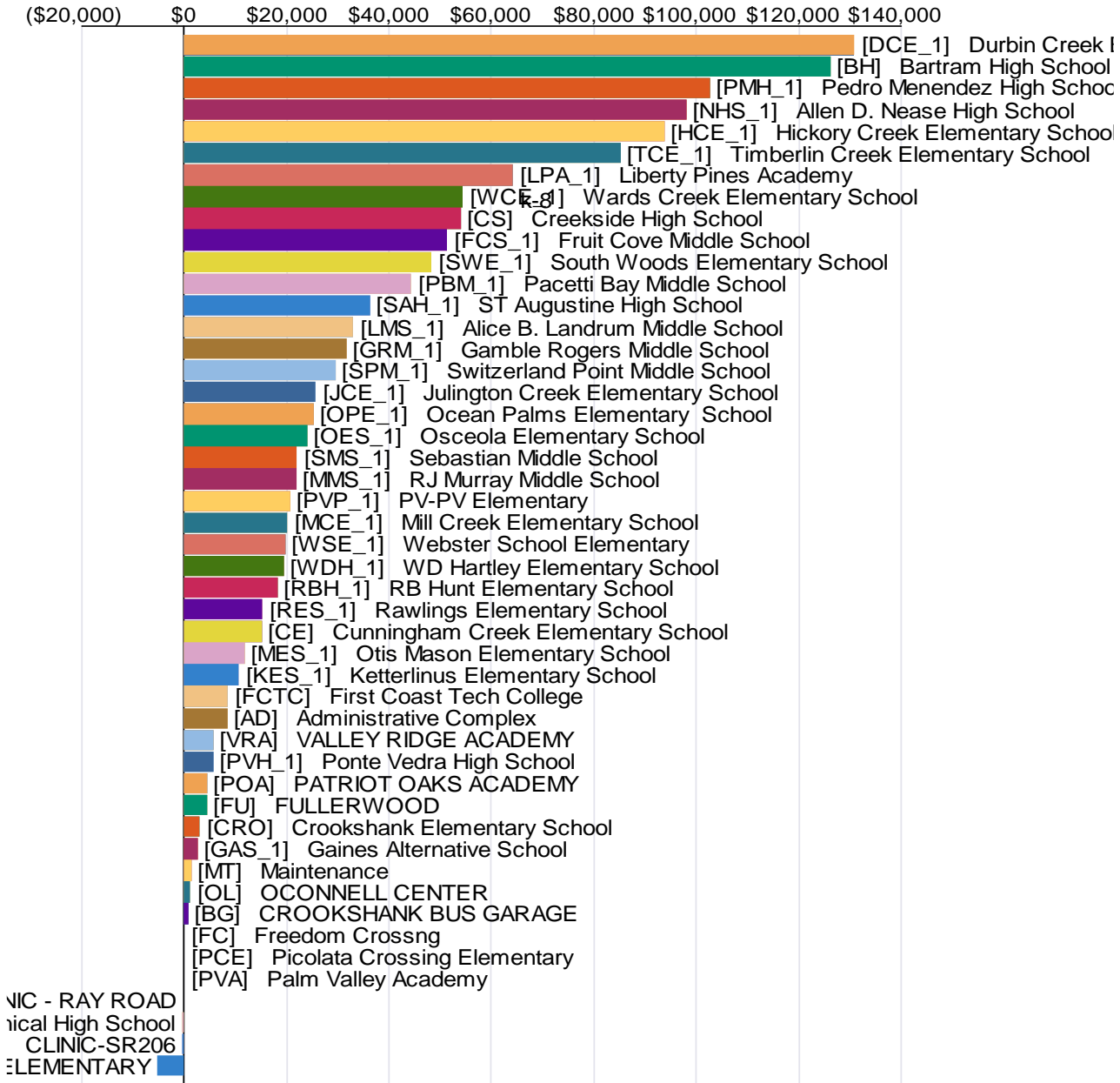
St. Johns County School Board

Cost Avoidance Summary By Building CAP - 01B

Place	BATCC Cost	Actual Cost	Cost Avoidance	Cost Avoidance %
[AD] Administrative Complex	\$23,502	\$15,044	\$8,458	36.0%
[BG] CROOKSHANK BUS GARAGE	\$4,378	\$3,539	\$839	19.2%
[BH] Bartram High School	\$229,434	\$103,137	\$126,297	55.0%
[CE] Cunningham Creek Elementary School	\$39,508	\$24,412	\$15,095	38.2%
[CLN] CLINIC - RAY ROAD	\$862	\$876	(\$14)	-1.6%
[CM] CLINIC-SR206	\$757	\$1,165	(\$408)	-53.8%
[CRO] Crookshank Elementary School	\$20,782	\$17,768	\$3,014	14.5%
[CS] Creekside High School	\$133,217	\$79,134	\$54,083	40.6%
[DCE_1] Durbin Creek Elementary	\$169,450	\$38,527	\$130,923	77.3%
[FC] Freedom Crossing	\$35,694	\$35,694	\$0	0.0%
[FCS_1] Fruit Cove Middle School	\$67,723	\$16,334	\$51,390	75.9%
[FCTC] First Coast Tech College	\$58,644	\$50,081	\$8,562	14.6%
[FU] FULLERWOOD	\$9,144	\$4,771	\$4,373	47.8%
[GAS_1] Gaines Alternative School	\$11,296	\$8,724	\$2,572	22.8%
[GRM_1] Gamble Rogers Middle School	\$57,377	\$25,650	\$31,727	55.3%
[HCE_1] Hickory Creek Elementary School	\$132,866	\$39,102	\$93,764	70.6%
[JCE_1] Julington Creek Elementary School	\$69,036	\$43,371	\$25,665	37.2%
[KES_1] Ketterlinus Elementary School	\$25,462	\$14,744	\$10,718	42.1%
[LMS_1] Alice B. Landrum Middle School	\$79,538	\$46,477	\$33,061	41.6%
[LPA_1] Liberty Pines Academy k-8	\$130,094	\$65,888	\$64,206	49.4%
[MCE_1] Mill Creek Elementary School	\$46,016	\$25,857	\$20,159	43.8%
[MES_1] Otis Mason Elementary School	\$25,414	\$13,618	\$11,796	46.4%
[MMS_1] RJ Murray Middle School	\$50,729	\$28,927	\$21,802	43.0%
[MT] Maintenance	\$3,556	\$2,267	\$1,288	36.2%
[NHS_1] Allen D. Nease High School	\$147,865	\$49,829	\$98,036	66.3%
[OES_1] Osceola Elementary School	\$43,795	\$19,794	\$24,001	54.8%
[OL] OCONNELL CENTER	\$2,848	\$1,627	\$1,221	42.9%
[OPE_1] Ocean Palms Elementary School	\$55,157	\$29,954	\$25,203	45.7%
[PBM_1] Pacetti Bay Middle School	\$103,196	\$58,863	\$44,334	43.0%
[PCE] Picolata Crossing Elementary	\$19,823	\$19,823	\$0	0.0%
[PES_1] PALENCIA ELEMENTARY	\$16,496	\$21,748	(\$5,251)	-31.8%
[PMH_1] Pedro Menendez High School	\$174,264	\$71,704	\$102,560	58.9%
[POA] PATRIOT OAKS ACADEMY	\$49,063	\$44,659	\$4,403	9.0%
[PVA] Palm Valley Academy	\$27,690	\$27,690	\$0	0.0%
[PVH_1] Ponte Vedra High School	\$77,644	\$72,002	\$5,642	7.3%
[PVP_1] PV-PV Elementary	\$35,472	\$14,883	\$20,589	58.0%
[RBH_1] RB Hunt Elementary School	\$35,427	\$17,262	\$18,165	51.3%
[RES_1] Rawlings Elementary School	\$37,023	\$21,713	\$15,309	41.4%
[SAH_1] ST Augustine High School	\$81,113	\$44,939	\$36,174	44.6%
[SJT_1] ST Johns Technical High School	\$17,184	\$17,507	(\$324)	-1.9%
[SMS_1] Sebastian Middle School	\$44,960	\$22,965	\$21,995	48.9%
[SPM_1] Switzerland Point Middle School	\$62,327	\$32,784	\$29,543	47.4%
[SWE_1] South Woods Elementary School	\$87,131	\$38,758	\$48,373	55.5%
[TCE_1] Timberlin Creek Elementary School	\$135,592	\$50,361	\$85,232	62.9%
[VRA] VALLEY RIDGE ACADEMY	\$50,460	\$44,713	\$5,747	11.4%
[WCE_1] Wards Creek Elementary School	\$100,788	\$46,326	\$54,461	54.0%
[WDH_1] WD Hartley Elementary School	\$41,573	\$22,166	\$19,407	46.7%
[WSE_1] Webster School Elementary	\$33,863	\$14,178	\$19,685	58.1%
Totals:	\$2,905,229	\$1,511,355	\$1,393,874	48.0%

Cost Avoidance Summary By Building CAP - 01B

Avoided Cost



Requested by: acrutchfield

Client Version:

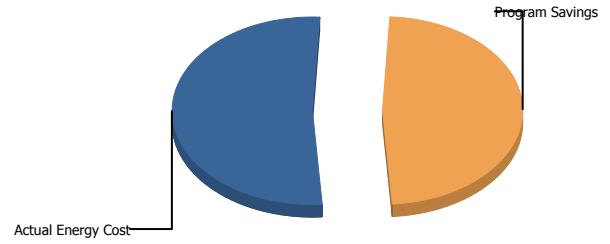
Report version: 7

Filters: Commodity Equals Electric; Billing Period Between Oct 2018 and Dec 2018; ; ; ; ; ; ; ; ; ; ; Bill is from External Vendor Equals 1; Account is Active Equals 1;

Cumulative Cost Savings

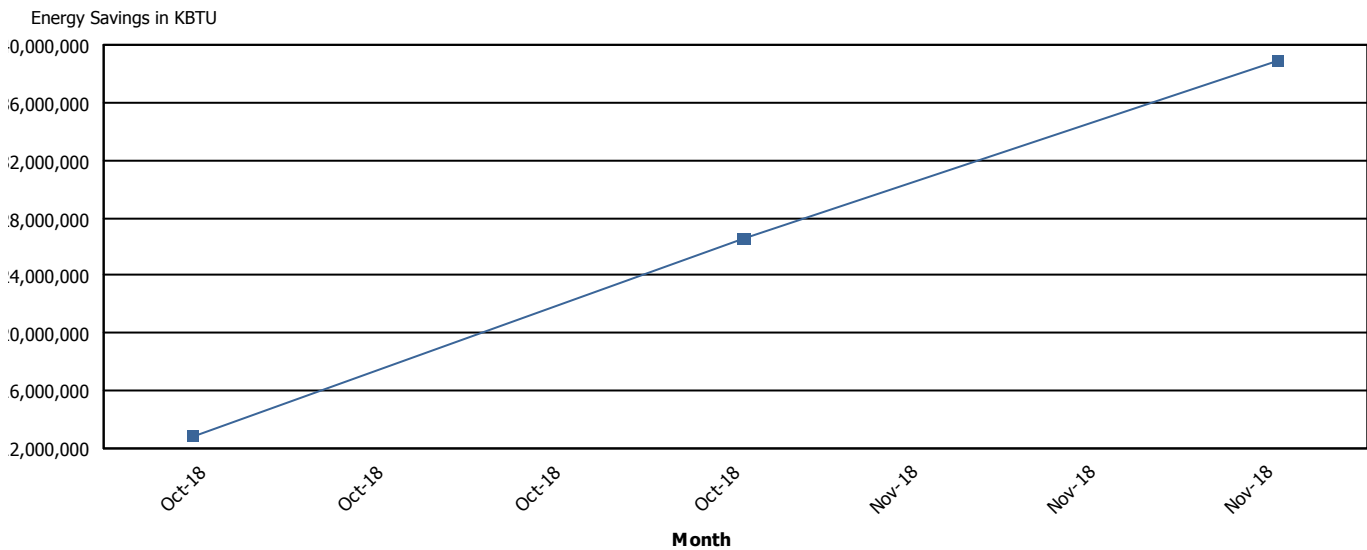
December 2018

Expected Energy Cost	\$2,905,229
Actual Energy Cost	\$1,511,355
<hr/>	
Program Savings	\$1,393,874
Percent Savings	48.0%
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Other Savings	\$0
Total Savings	\$1,393,874



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:	38,903,905 KBTU	5,882 equiv. metric tons of CO2
This is equivalent to the following:		
Passenger cars not driven for one year:	1,225	
Tree seedlings grown for 10 years:	150,808	

Requested by: acrutchfield

Version:

Report Version: 17

Filters: Billing Period Between 201810;201812;Commodity Code Equals ELECTRIC;One Page per Building (Y/N) Equals 0;Account is Active Equals 1;Bill is from External Vendor Equals 1

Monthly Summary

	2018		
	Cost Avoid \$	Cost Avoid %	* Total \$
Jan	436,253	42.3	436,253
Feb	359,786	39.9	359,786
Mar	426,937	47.1	426,937
Apr	285,545	35.0	285,545
May	442,931	53.1	442,931
Jun	370,541	53.1	370,541
Jul	425,696	48.4	425,696
Aug	397,356	36.1	397,356
Sep	400,115	36.2	400,115
Oct	405,458	39.5	405,458
Nov	504,318	48.9	504,318
Dec	498,242	50.8	498,242
Total	4,953,178	43.8	4,953,178

* 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)	98,420,721	54,702,395	43,718,326	44.4	10,624,386	5,760,193	4,864,193	45.8	4,864,193
Water (KGAL)	1,025	3,310	-2,285	-222.9	9,574	25,916	-16,342	-170.7	-16,342
Water & Sewer (KGAL)	39,996	33,590	6,407	16.0	595,334	508,504	86,829	14.6	86,829
Irrigation (KGAL)	16,207	12,739	3,468	21.4	81,203	62,705	18,499	22.8	18,499
Total (KBTU)	335,811,500	186,696,675	149,114,825	44.4	11,310,497	6,357,318	4,953,178	43.8	4,953,178

Requested by: acrutchfield**Version:****Report Version:** 7**Filters:** Billing Period Between Jan 2018 and Dec 2018; Commodity Code Between ELECTRIC;WATERSEWER; ; ; Account is Active Equals 1; ; Bill is from External Vendor Equals 1

Commodity		BATCC Cost	BATCC Use	Actual Cost	Actual Use	Cost Avoidance	Cost Avoidance	Use Avoidance	Use Avoidance %
Electric	kWh	\$104,119,360	904,708,735	\$55,274,918	488,973,419	\$48,844,442	46.9%	415,735,316	46.0%
Irrigation	Kgal	\$686,187	150,032	\$564,349	130,961	\$121,838	17.8%	19,072	12.7%
Water	Kgal	\$71,926	9,758	\$60,733	7,954	\$11,193	15.6%	1,804	18.5%
Water & Sewer	Kgal	\$8,165,081	595,180	\$5,752,301	431,156	\$2,412,780	29.5%	164,024	27.6%
Totals:		\$113,042,554		\$61,652,302		\$51,390,252	45.5%		



Requested by: acrutchfield

Client Version:

Report version: 10

Filters:

Filters: Commodity Between Electric|Water & Sewer; Billing Period Between Jul 2008 and Dec 2018; ; ; ; ; ; Bill is from External Vendor Equals 1; Account is Active Equals 1;