



Agenda Item Details

Meeting	Dec 11, 2018 - REGULAR SCHOOL BOARD MEETING
Category	S. Operational Services - Consent
Subject	3. Request for Acceptance of the Energy Conservation Program Quarterly Status Report December 2018
Access	Public
Type	Action (Consent)
Recommended Action	Acceptance of the Energy Conservation Program Quarterly Status Report December 2018
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 December 2018 Energy Program Status Report summarizes the performance results of the Energy Conservation Program for the quarterly period of July 2018 - September 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 July 2018 - September 2018 the Energy Savings Program has resulted in additional costs avoidance for the School District of \$1,118,152. 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 \$49,818,129.

Recommendation:

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

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 December 2018.pdf \(599 KB\)](#)

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 27, 2018 11:51 AM :: Submitted by Cara Pacetti. Routed to Cara Pacetti for approval.
Nov 27, 2018 11:51 AM :: Approved by Cara Pacetti. Routed to Paul Rose for approval.
Nov 27, 2018 12:04 PM :: Approved by Paul Rose. Routed to Vicki Davenport for approval.
Nov 28, 2018 8:46 AM :: Approved by Vicki Davenport. Routed to Cathy Mittelstadt for approval.
Nov 28, 2018 2:07 PM :: Approved by Cathy Mittelstadt. Routed to Vicki Moody for approval.
Dec 3, 2018 11:56 AM :: Approved by Vicki Moody. Routed to Tim Forson for approval.
Dec 4, 2018 1:34 PM :: Final approval by Tim Forson

Last Modified by Tim Forson on December 4, 2018

**ENERGY CONSERVATION PROGRAM
QUARTERLY STATUS REPORT
July 2018 – September 2018**

EXECUTIVE SUMMARY

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

- Cost Avoidance Summary by Site (July 2018 – September 2018): The District realized a total cost avoidance for this quarterly period of \$1,118,152 (or a 41.9% cost avoidance from the baseline period).
- Greenhouse Gas Reduction: Greenhouse Gas Reduction for this quarterly period reduced CO² by 5,608 metric tons.
- Year to Date Monthly Cost Avoidance Summary (July 2018 – September 2018): This reflects the monthly summary of total cost avoidance for the period July 2018 – September 2018.
- Energy Consumption Summary (Cumulative Year to date): Summary breakdown for electricity, water & sewer, and irrigation for January 2018 – September 2018.
- Total cost avoidance for the district from program inception (July 2008 – September 2018): This reflects the total cost avoidance since the implementation of the program. Total cumulative cost avoidance of \$49,818,129.

During the period of July 2018 – September 2018 there were 130 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 energy savings program.

St. Johns County School Board

Cost Avoidance Summary By Building CAP - 01B

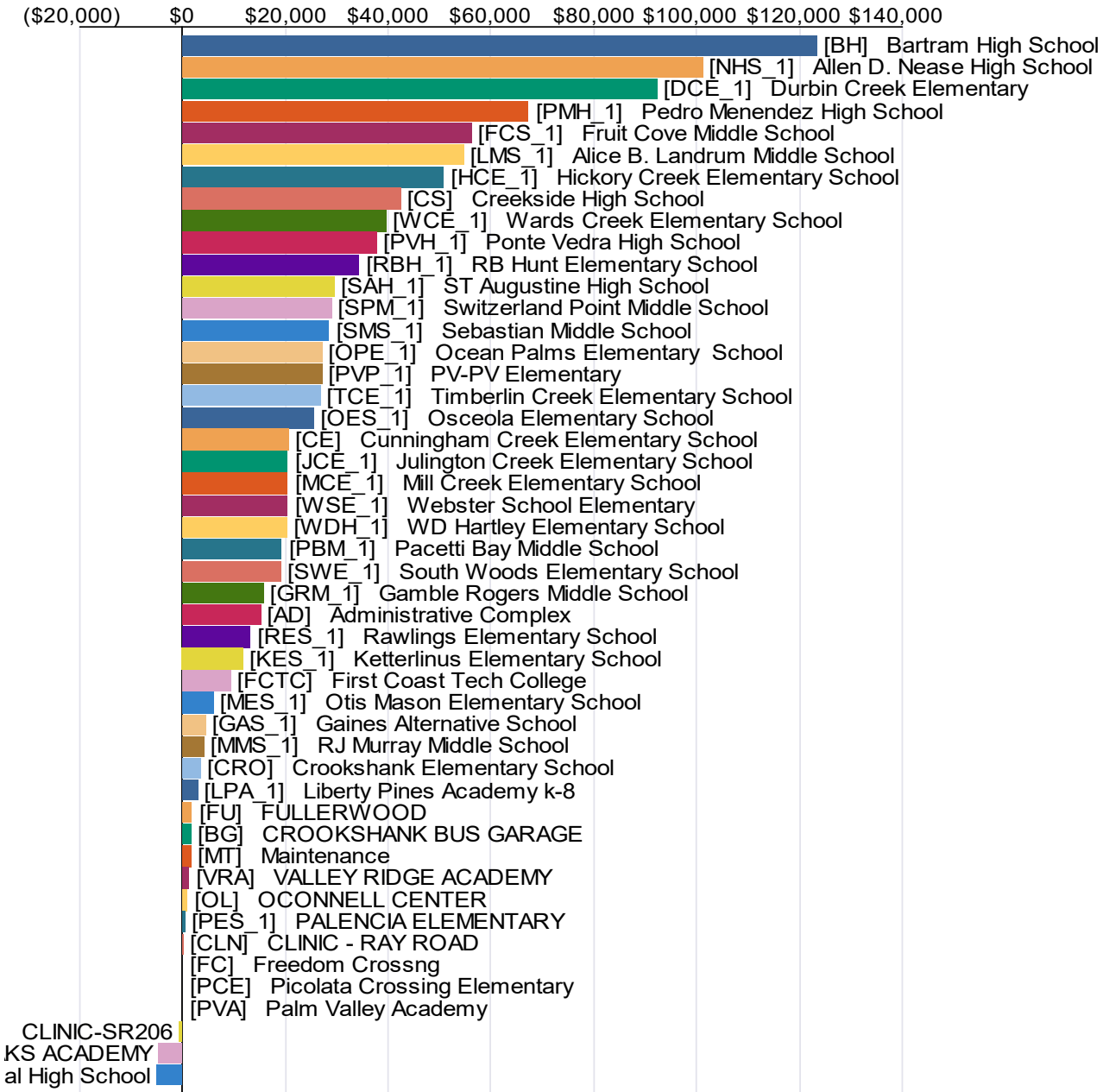
Place	BATCC Cost	Actual Cost	Cost Avoidance	Cost Avoidance %
[AD] Administrative Complex	\$32,240	\$17,197	\$15,043	46.7%
[BG] CROOKSHANK BUS GARAGE	\$4,593	\$2,804	\$1,788	38.9%
[BH] Bartram High School	\$226,846	\$103,339	\$123,508	54.4%
[CE] Cunningham Creek Elementary School	\$51,774	\$31,179	\$20,595	39.8%
[CLN] CLINIC - RAY ROAD	\$707	\$657	\$49	7.0%
[CM] CLINIC-SR206	\$614	\$1,198	(\$584)	-95.1%
[CRO] Crookshank Elementary School	\$20,675	\$17,155	\$3,520	17.0%
[CS] Creekside High School	\$142,965	\$100,553	\$42,412	29.7%
[DCE_1] Durbin Creek Elementary	\$136,757	\$44,439	\$92,318	67.5%
[FC] Freedom Crossng	\$39,784	\$39,784	\$0	0.0%
[FCS_1] Fruit Cove Middle School	\$71,769	\$15,675	\$56,095	78.2%
[FCTC] First Coast Tech College	\$46,427	\$37,039	\$9,387	20.2%
[FU] FULLERWOOD	\$8,782	\$6,955	\$1,826	20.8%
[GAS_1] Gaines Alternative School	\$15,091	\$10,605	\$4,486	29.7%
[GRM_1] Gamble Rogers Middle School	\$38,081	\$22,223	\$15,858	41.6%
[HCE_1] Hickory Creek Elementary School	\$85,972	\$35,196	\$50,776	59.1%
[JCE_1] Julington Creek Elementary School	\$62,344	\$41,803	\$20,541	32.9%
[KES_1] Ketterlinus Elementary School	\$30,712	\$18,828	\$11,885	38.7%
[LMS_1] Alice B. Landrum Middle School	\$108,512	\$53,953	\$54,558	50.3%
[LPA_1] Liberty Pines Academy k-8	\$76,661	\$73,842	\$2,819	3.7%
[MCE_1] Mill Creek Elementary School	\$53,293	\$32,790	\$20,502	38.5%
[MES_1] Otis Mason Elementary School	\$19,753	\$13,836	\$5,917	30.0%
[MMS_1] RJ Murray Middle School	\$31,892	\$27,849	\$4,042	12.7%
[MT] Maintenance	\$3,401	\$1,770	\$1,630	47.9%
[NHS_1] Allen D. Nease High School	\$160,834	\$59,814	\$101,020	62.8%
[OES_1] Osceola Elementary School	\$44,619	\$18,984	\$25,636	57.5%
[OL] OCONNELL CENTER	\$2,064	\$1,142	\$922	44.7%
[OPE_1] Ocean Palms Elementary School	\$62,446	\$35,343	\$27,104	43.4%
[PBM_1] Pacetti Bay Middle School	\$75,089	\$55,827	\$19,262	25.7%
[PCE] Picolata Crossing Elementary	\$12,586	\$12,586	\$0	0.0%
[PES_1] PALENCIA ELEMENTARY	\$18,610	\$18,202	\$408	2.2%
[PMH_1] Pedro Menendez High School	\$121,983	\$54,718	\$67,265	55.1%
[POA] PATRIOT OAKS ACADEMY	\$55,076	\$59,704	(\$4,629)	-8.4%
[PVA] Palm Valley Academy	\$37,047	\$37,047	\$0	0.0%
[PVH_1] Ponte Vedra High School	\$116,369	\$78,545	\$37,824	32.5%
[PVP_1] PV-PV Elementary	\$44,326	\$17,274	\$27,052	61.0%
[RBH_1] RB Hunt Elementary School	\$49,702	\$15,479	\$34,223	68.9%
[RES_1] Rawlings Elementary School	\$29,298	\$16,126	\$13,172	45.0%
[SAH_1] ST Augustine High School	\$69,548	\$39,975	\$29,573	42.5%
[SJT_1] ST Johns Technical High School	\$15,173	\$20,079	(\$4,906)	-32.3%
[SMS_1] Sebastian Middle School	\$56,620	\$28,130	\$28,489	50.3%
[SPM_1] Switzerland Point Middle School	\$63,213	\$34,273	\$28,939	45.8%
[SWE_1] South Woods Elementary School	\$52,139	\$32,937	\$19,202	36.8%
[TCE_1] Timberlin Creek Elementary School	\$65,807	\$38,942	\$26,864	40.8%

Cost Avoidance Summary By Building CAP - 01B

[VRA] VALLEY RIDGE ACADEMY	\$49,294	\$48,082	\$1,212	2.5%
[WCE_1] Wards Creek Elementary School	\$81,812	\$42,105	\$39,708	48.5%
[WDH_1] WD Hartley Elementary School	\$39,797	\$19,454	\$20,343	51.1%
[WSE_1] Webster School Elementary	\$34,000	\$13,506	\$20,494	60.3%

Totals:	\$2,667,093	\$1,548,941	\$1,118,152	41.9%
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Avoided Cost



Requested by: acrutchfield

Client Version:

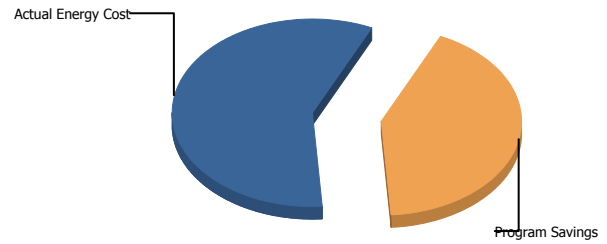
Report version: 7

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

Cumulative Cost Savings

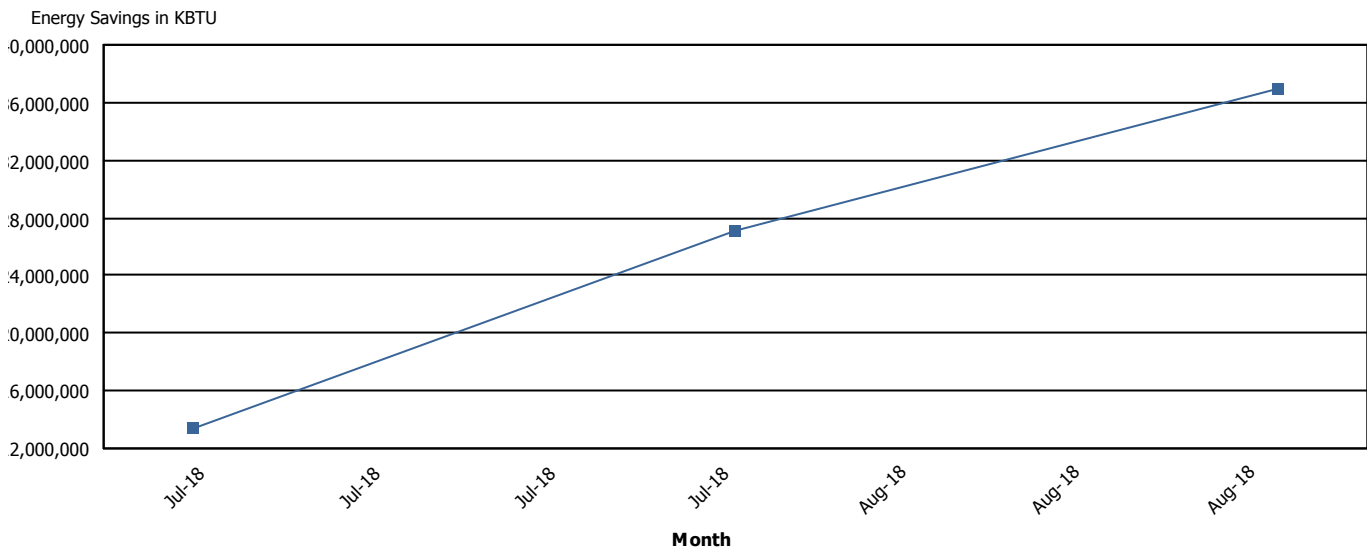
September 2018

Expected Energy Cost	\$2,667,093
Actual Energy Cost	\$1,548,941
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Program Savings	\$1,118,152
Percent Savings	41.9%
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Other Savings	\$0
Total Savings	\$1,118,152



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:	36,945,800 KBTU	5,608 equiv. metric tons of CO2
This is equivalent to the following:		
Passenger cars not driven for one year:	1,168	
Tree seedlings grown for 10 years:	143,795	

Requested by: acrutchfield

Version:

Report Version: 17

Filters: Billing Period Between 201807;201809;Commodity Code Equals ELECTRIC;One Page per Building (Y/N) Equals 0;Account is Active Equals 1;Bill is from External Vendor Equals 1

11/05/2018 1:53:09PM

Monthly Summary

	2018		
	Cost Avoid \$	Cost Avoid %	* Total \$
Jan	435,677	42.5	435,677
Feb	360,223	40.1	360,223
Mar	428,237	47.3	428,237
Apr	286,415	35.2	286,415
May	444,074	53.4	444,074
Jun	378,356	54.5	378,356
Jul	425,595	48.9	425,595
Aug	397,203	36.4	397,203
Sep	304,667	36.4	304,667
Total	3,460,448	43.4	3,460,448

* 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)	70,881,671	39,508,175	31,373,496	44.3	7,446,153	4,072,153	3,373,999	45.3	3,373,999
Water & Sewer (KGAL)	31,138	25,304	5,834	18.7	459,466	386,360	73,107	15.9	73,107
Irrigation (KGAL)	11,927	9,481	2,446	20.5	60,053	46,711	13,342	22.2	13,342
Total (KBTU)	241,919,143	134,841,401	107,077,742	44.3	7,965,672	4,505,224	3,460,448	43.4	3,460,448

Requested by: acrutchfield

Version:

Report Version: 7

Filters: Billing Period Between Jan 2018 and Sep 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	\$100,940,587	877,161,555	\$53,584,973	473,760,488	\$47,355,613	46.9%	403,401,067	46.0%
Irrigation	Kgal	\$665,037	145,752	\$548,356	127,703	\$116,681	17.5%	18,049	12.4%
Water	Kgal	\$55,237	7,834	\$31,537	4,218	\$23,700	42.9%	3,617	46.2%
Water & Sewer	Kgal	\$7,942,318	581,394	\$5,620,182	422,335	\$2,322,135	29.2%	159,060	27.4%
Totals:		\$109,603,178		\$59,785,049		\$49,818,129	45.5%		



Requested by: acrutchfield

Client Version:

Report version: 10

Filters:

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