



### Agenda Item Details

Meeting	Dec 10, 2019 - REGULAR SCHOOL BOARD MEETING
Category	T. Operational Services - Action
Subject	3. Request for Acceptance of the Energy Conservation Program Quarterly Status Report December 2019
Access	Public
Type	Action
Recommended Action	Acceptance of the Energy Conservation Program Quarterly Status Report December 2019
Goals	<a href="#">GM-1 Mission Statement</a> <a href="#">GO-3 Energy Consumption Strategies</a>

### 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 Conservation Program Status Reports have been presented to the School Board since April 2009.

The December 2019 Energy Conservation Program Quarterly Status Report summarizes the performance results of the Energy Conservation Program for the quarterly period of July 2019 - September 2019. 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 2019 - September 2019 the Energy Conservation Program has resulted in additional costs avoidance for the School District of \$1,149,256. 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 \$54,710,381.

**Recommendation:**

Acceptance of the Energy Conservation Program Quarterly Status Report for December 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 December 2019.pdf \(670 KB\)](#)

**Administrative Content****Workflow**

Workflow                      Nov 19, 2019 2:21 PM :: Submitted by Cara Pacetti. Routed to Cara Pacetti for approval.  
Nov 19, 2019 2:32 PM :: Approved by Cara Pacetti. Routed to Paul Rose for approval.  
Nov 19, 2019 2:44 PM :: Approved by Paul Rose. Routed to Vicki Davenport for approval.  
Nov 19, 2019 4:02 PM :: Approved by Vicki Davenport. Routed to Cathy Mittelstadt for approval.  
Nov 21, 2019 9:42 AM :: Approved by Cathy Mittelstadt. Routed to Vicki Moody for approval.  
Dec 3, 2019 10:22 AM :: Approved by Vicki Moody. Routed to Tim Forson for approval.  
Dec 3, 2019 2:44 PM :: Final approval by Tim Forson

**Motion & Voting**

Acceptance of the Energy Conservation Program Quarterly Status Report December 2019

Motion by Kelly Barrera, second by Patrick Canan.

Final Resolution: Motion Carries

Yea: Kelly Barrera, Tommy Allen, Patrick Canan, Bill Mignon, Bev Slough

Last Modified by Sarah Wilcox on December 10, 2019

**ENERGY CONSERVATION PROGRAM  
QUARTERLY STATUS REPORT  
July 2019 – September 2019**

**EXECUTIVE SUMMARY**

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

- **Cost Avoidance Summary by Site (July 2019 – September 2019):** The District realized a total cost avoidance for this quarterly period of \$1,149,256 (or a 41.8% cost avoidance from the baseline period).
- **Greenhouse Gas Reduction:** Greenhouse Gas Reduction for this quarterly period reduced CO<sup>2</sup> by 5,813 metric tons.
- **Year to Date Monthly Cost Avoidance Summary (January 2019 – September 2019):** This reflects the monthly summary of total cost avoidance for the period January 2019 – September 2019.
- **Energy Consumption Summary (Cumulative Year to date):** Summary breakdown for electricity, water & sewer, and irrigation for January 2019 – September 2019.
- **Total cost avoidance for the district from program inception (July 2008 – September 2019):** This reflects the total cost avoidance since the implementation of the program. Total cumulative cost avoidance of \$54,710,381.

During the period of July 2019 – September 2019 there were 125 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**

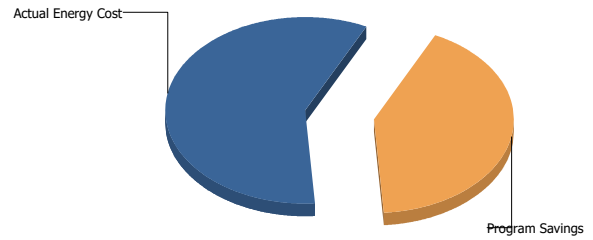
Place	BATCC Cost	Actual Cost	Cost Avoidance	Cost Avoidance %
[AD] Administrative Complex	\$33,890	\$18,913	\$14,977	44.2%
[BG] CROOKSHANK BUS GARAGE	\$6,672	\$4,228	\$2,443	36.6%
[BH] Bartram High School	\$194,030	\$89,029	\$105,001	54.1%
[CE] Cunningham Creek Elementary School	\$53,004	\$28,540	\$24,463	46.2%
[CLN] CLINIC - RAY ROAD	\$642	\$995	(\$353)	-54.9%
[CM] CLINIC-SR206	\$152	\$333	(\$182)	-119.9%
[CRO] Crookshank Elementary School	\$31,671	\$25,981	\$5,690	18.0%
[CS] Creekside High School	\$142,766	\$97,676	\$45,090	31.6%
[DCE_1] Durbin Creek Elementary	\$152,876	\$42,314	\$110,562	72.3%
[FC] Freedom Crossng	\$39,895	\$39,895	(\$0)	0.0%
[FCS_1] Fruit Cove Middle School	\$72,913	\$48,880	\$24,033	33.0%
[FCTC] First Coast Tech College	\$61,747	\$27,694	\$34,053	55.1%
[FU] FULLERWOOD	\$10,464	\$6,415	\$4,049	38.7%
[GAS_1] Gaines Alternative School	\$19,167	\$12,721	\$6,445	33.6%
[GRM_1] Gamble Rogers Middle School	\$60,291	\$34,178	\$26,113	43.3%
[HCE_1] Hickory Creek Elementary School	\$84,345	\$35,652	\$48,692	57.7%
[JCE_1] Julington Creek Elementary School	\$61,111	\$46,997	\$14,114	23.1%
[KES_1] Ketterlinus Elementary School	\$33,867	\$20,631	\$13,236	39.1%
[LMS_1] Alice B. Landrum Middle School	\$95,363	\$46,881	\$48,482	50.8%
[LPA_1] Liberty Pines Academy k-8	\$81,493	\$73,635	\$7,858	9.6%
[MCE_1] Mill Creek Elementary School	\$16,753	\$9,968	\$6,786	40.5%
[MES_1] Otis Mason Elementary School	\$30,317	\$21,798	\$8,520	28.1%
[MMS_1] RJ Murray Middle School	\$56,805	\$34,151	\$22,654	39.9%
[NHS_1] Allen D. Nease High School	\$164,922	\$62,502	\$102,421	62.1%
[OES_1] Osceola Elementary School	\$67,688	\$26,721	\$40,966	60.5%
[OPE_1] Ocean Palms Elementary School	\$55,300	\$34,245	\$21,055	38.1%
[PBM_1] Pacetti Bay Middle School	\$73,194	\$57,824	\$15,370	21.0%
[PCE] Picolata Crossing Elementary	\$12,999	\$12,790	\$209	1.6%
[PES_1] PALENCIA ELEMENTARY	\$21,231	\$23,950	(\$2,719)	-12.8%
[PMH_1] Pedro Menendez High School	\$118,240	\$63,999	\$54,241	45.9%
[POA] PATRIOT OAKS ACADEMY	\$51,789	\$60,772	(\$8,983)	-17.3%
[PVA] Palm Valley Academy	\$30,996	\$30,996	\$0	0.0%
[PVH_1] Ponte Vedra High School	\$133,621	\$80,459	\$53,163	39.8%
[PVP_1] PV-PV Elementary	\$40,692	\$14,488	\$26,203	64.4%
[RBH_1] RB Hunt Elementary School	\$38,573	\$11,264	\$27,310	70.8%
[RES_1] Rawlings Elementary School	\$42,844	\$21,555	\$21,290	49.7%
[SAH_1] ST Augustine High School	\$96,901	\$57,367	\$39,534	40.8%
[SJT_1] ST Johns Technical High School	\$4,726	\$3,856	\$870	18.4%
[SMS_1] Sebastian Middle School	\$59,886	\$32,049	\$27,837	46.5%
[SPM_1] Switzerland Point Middle School	\$54,295	\$30,163	\$24,132	44.4%
[SWE_1] South Woods Elementary School	\$55,488	\$37,175	\$18,313	33.0%
[TCE_1] Timberlin Creek Elementary School	\$75,671	\$40,844	\$34,827	46.0%
[VRA] VALLEY RIDGE ACADEMY	\$51,116	\$51,739	(\$623)	-1.2%
[WCE_1] Wards Creek Elementary School	\$76,895	\$40,989	\$35,907	46.7%
<b>Cost Avoidance Summary By Building CAP - 01B</b>				
[WDH_1] WD Hartley Elementary School	\$36,413	\$20,384	\$16,029	44.0%
[WSE_1] Webster School Elementary	\$47,626	\$18,448	\$29,178	61.3%
<b>Totals:</b>	<b>\$2,751,340</b>	<b>\$1,602,085</b>	<b>\$1,149,256</b>	<b>41.8%</b>



**Cumulative Cost Savings**

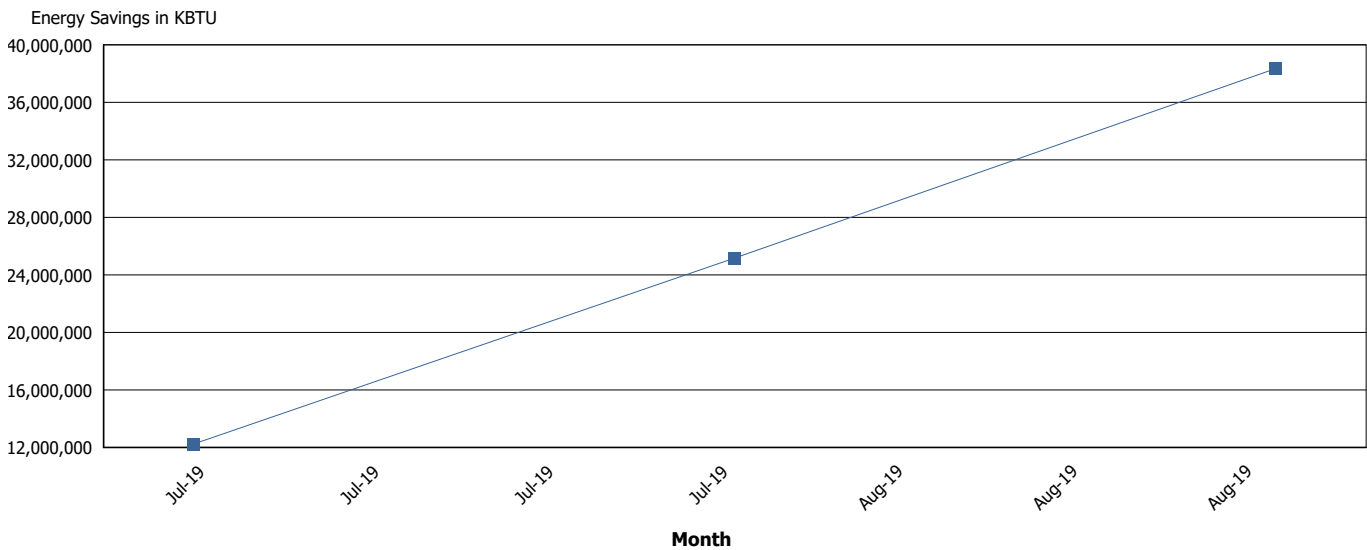
September 2019

Expected Energy Cost	\$2,751,340
Actual Energy Cost	\$1,602,085
<hr/>	
Program Savings	\$1,149,256
Percent Savings	41.8%
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Other Savings	\$0
Total Savings	\$1,149,256



Expected Energy Cost	Actual Energy Cost	Program Savings
Anticipated expense without energy management.  Base year usage after adjustments for such variables as changes in weather, equipment, schedules, occupancy and prices.	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%.
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**

<b>Energy Reduction Impact:</b>	38,348,335 KBTU	5,813 equiv. metric tons of CO2
This is equivalent to the following:		
Passenger cars not driven for one year:	1,211	
Tree seedlings grown for 10 years:	149,041	

Requested by: acrutchfield

Version:

Report Version: 17

Filters: Billing Period Between 201907;201909;Commodity Code Equals ELECTRIC;One Page per Building (Y/N) Equals 0;Account is Active Equals 1;Bill is from External Vendor Equals 1

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**Monthly Summary**

	2019		
	Cost Avoid \$	Cost Avoid %	* Total \$
Jan	<b>449,064</b>	<b>44.1</b>	<b>449,064</b>
Feb	<b>365,412</b>	<b>40.3</b>	<b>365,412</b>
Mar	<b>418,914</b>	<b>44.3</b>	<b>418,914</b>
Apr	<b>262,625</b>	<b>30.4</b>	<b>262,625</b>
May	<b>368,797</b>	<b>42.5</b>	<b>368,797</b>
Jun	<b>379,400</b>	<b>50.4</b>	<b>379,400</b>
Jul	<b>363,528</b>	<b>44.6</b>	<b>363,528</b>
Aug	<b>381,421</b>	<b>36.2</b>	<b>381,421</b>
Sep	<b>385,524</b>	<b>38.4</b>	<b>385,524</b>
Total	<b>3,374,686</b>	<b>41.0</b>	<b>3,374,686</b>

\* 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)	72,831,993	42,799,209	30,032,784	41.2	7,744,949	4,414,443	3,330,506	43.0	3,330,506
Water & Sewer (KGAL)	26,826	23,784	3,043	11.3	420,321	379,179	41,142	9.8	41,142
Irrigation (KGAL)	12,218	12,366	-148	-1.2	62,242	59,203	3,039	4.9	3,039
Total (KBTU)	248,502,760	146,030,901	102,471,859	41.2	8,227,512	4,852,825	3,374,686	41.0	3,374,686

**Requested by:** acrutchfield

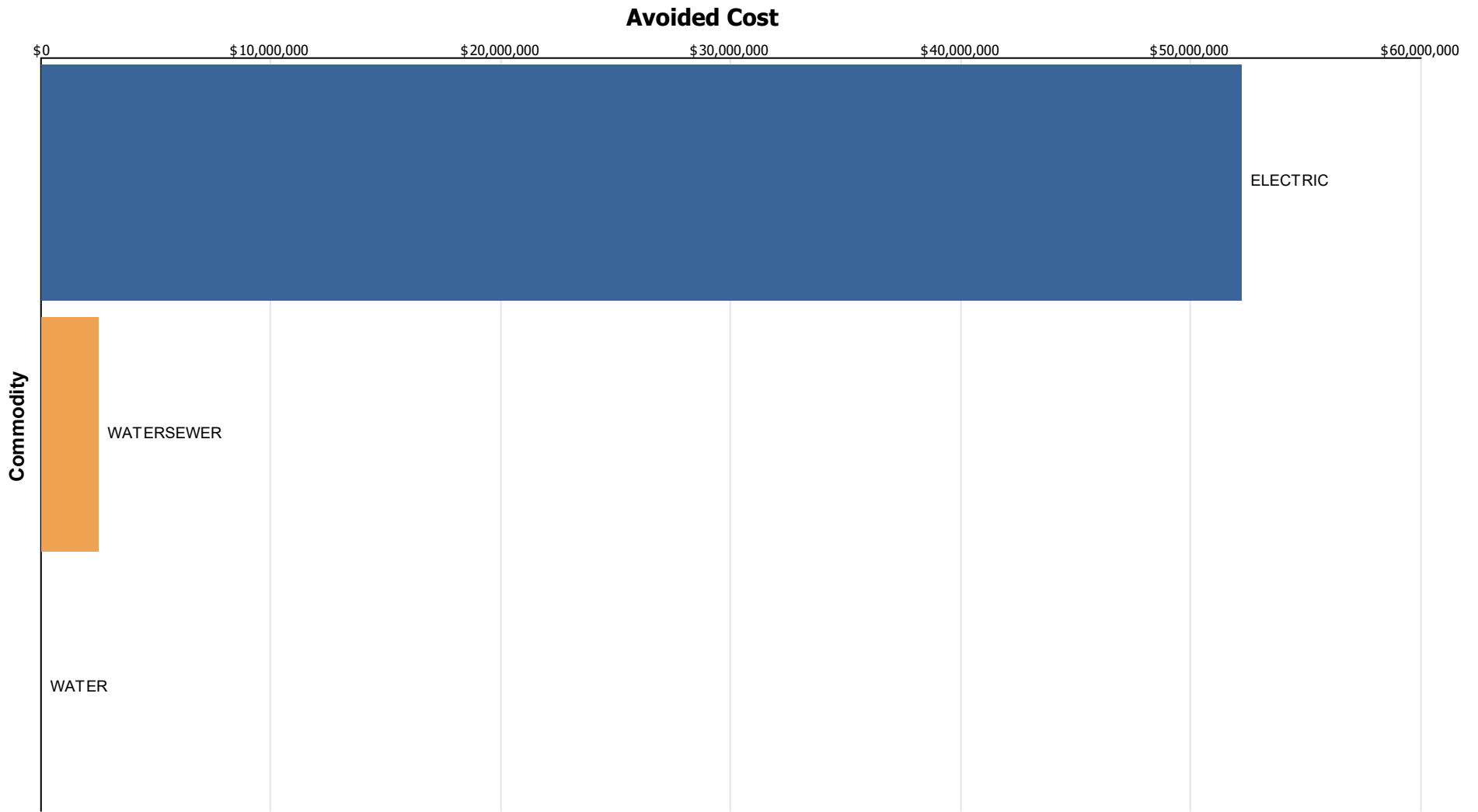
**Version:**

**Report Version:** 7

**Filters:** Billing Period Between Jan 2019 and Sep 2019; ; ; 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	\$111,808,665	976,924,144	\$59,630,687	531,131,540	\$52,177,978	46.7%	445,792,604	45.6%
Water	Kgal	\$71,926	9,758	\$60,733	7,954	\$11,193	15.6%	1,804	18.5%
Water & Sewer	Kgal	\$8,754,299	635,531	\$6,233,089	463,236	\$2,521,210	28.8%	172,295	27.1%
<b>Totals:</b>		<b>\$120,634,890</b>		<b>\$65,924,509</b>		<b>\$54,710,381</b>	<b>45.4%</b>		



**Requested by:** acrutchfield

**Client Version:**

**Report version:** 10

**Filters:**

Filters: Commodity One of Electric|Water & Sewer|Water; Billing Period Between Jul 2008 and Sep 2019; ; ; ; ; ; ; Bill is from External Vendor Equals 1; Account is Active Equals 1;