



### Agenda Item Details

Meeting	Apr 14, 2020 - REGULAR SCHOOL BOARD MEETING
Category	S. Operational Services - Consent
Subject	3. Acceptance of the Energy Conservation Program Quarterly Status Report April 2020
Access	Public
Type	Action (Consent)
Recommended Action	Acceptance of the Energy Conservation Program Quarterly Status Report April 2020
Goals	<a href="#">GO-3 Energy Consumption Strategies</a> <a href="#">GM-1 Mission Statement</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 April 2020 Energy Conservation Program Quarterly Status Report summarizes the performance results of the Energy Conservation Program for the quarterly period of October 2019 - December 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 October 2019 - December 2019 the Energy Conservation Program has resulted in additional costs avoidance for the School

District of \$1,264,459. 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 \$56,088,796.

**Recommendation:**

Acceptance of the Energy Conservation Program Quarterly Status Report for April 2020.

**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 April 2020.pdf \(594 KB\)](#)

**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                      Mar 25, 2020 11:09 AM :: Submitted by Cara Pacetti. Routed to Cara Pacetti for approval.  
Mar 31, 2020 10:26 AM :: Approved by Cara Pacetti. Routed to Paul Rose for approval.  
Mar 31, 2020 10:28 AM :: Approved by Paul Rose. Routed to Vicki Davenport for approval.  
Mar 31, 2020 10:52 AM :: Approved by Vicki Davenport. Routed to Cathy Mittelstadt for approval.  
Apr 1, 2020 4:07 PM :: Approved by Cathy Mittelstadt. Routed to Gina Fallica for approval.  
Apr 3, 2020 10:22 AM :: Approved by Gina Fallica. Routed to Tim Forson for approval.  
Apr 7, 2020 11:11 AM :: Final approval by Tim Forson

Last Modified by Tim Forson on April 7, 2020

**ENERGY CONSERVATION PROGRAM  
QUARTERLY STATUS REPORT  
October 2019 – December 2019**

**EXECUTIVE SUMMARY**

The April 2020 Energy Conservation Program Quarterly Status Report summarizes the performance results for the quarterly period of October 2019 – December 2019 and is comprised of the following:

- Cost Avoidance Summary by Site (October 2019 – December 2019): The District realized a total cost avoidance for this quarterly period of \$1,264,459 (or a 46.7% cost avoidance from the baseline period).
- Greenhouse Gas Reduction: Greenhouse Gas Reduction for this quarterly period reduced CO<sup>2</sup> by 5,861 metric tons.
- Year to Date Monthly Cost Avoidance Summary (January 2019 – December 2019): This reflects the monthly summary of total cost avoidance for the period January 2019 – December 2019.
- Energy Consumption Summary (Cumulative Year to date): Summary breakdown for electricity, water & sewer, and irrigation for January 2019 – December 2019.
- Total cost avoidance for the district from program inception (July 2008 – December 2019): This reflects the total cost avoidance since the implementation of the program. Total cumulative cost avoidance of \$56,088,796.

During the period of October 2019 – December 2019 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 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	\$21,299	\$13,212	\$8,087	38.0%
[BH] Bartram High School	\$201,926	\$83,584	\$118,342	58.6%
[CE] Cunningham Creek Elementary School	\$44,984	\$21,147	\$23,837	53.0%
[CRO] Crookshank Elementary School	\$20,010	\$16,942	\$3,067	15.3%
[CS] Creekside High School	\$128,116	\$87,413	\$40,703	31.8%
[DCE_1] Durbin Creek Elementary	\$159,708	\$33,529	\$126,179	79.0%
[FC] Freedom Crossng	\$32,493	\$32,493	(\$0)	0.0%
[FCS_1] Fruit Cove Middle School	\$55,307	\$36,780	\$18,527	33.5%
[FCTC] First Coast Tech College	\$62,260	\$53,646	\$8,614	13.8%
[FU] FULLERWOOD	\$7,109	\$3,232	\$3,877	54.5%
[GAS_1] Gaines Alternative School	\$7,890	\$6,950	\$940	11.9%
[GRM_1] Gamble Rogers Middle School	\$56,068	\$27,718	\$28,350	50.6%
[HCE_1] Hickory Creek Elementary School	\$123,849	\$39,423	\$84,426	68.2%
[JCE_1] Julington Creek Elementary School	\$64,472	\$47,235	\$17,237	26.7%
[KES_1] Ketterlinus Elementary School	\$26,350	\$14,216	\$12,134	46.0%
[LMS_1] Alice B. Landrum Middle School	\$70,861	\$36,312	\$34,549	48.8%
[LPA_1] Liberty Pines Academy k-8	\$115,059	\$58,587	\$56,473	49.1%
[MCE_1] Mill Creek Elementary School	\$56,017	\$33,800	\$22,218	39.7%
[MES_1] Otis Mason Elementary School	\$25,374	\$16,064	\$9,310	36.7%
[MMS_1] RJ Murray Middle School	\$55,183	\$25,515	\$29,668	53.8%
[NHS_1] Allen D. Nease High School	\$143,656	\$48,298	\$95,358	66.4%
[OES_1] Osceola Elementary School	\$48,844	\$16,083	\$32,761	67.1%
[OPE_1] Ocean Palms Elementary School	\$54,120	\$29,389	\$24,731	45.7%
[PBM_1] Pacetti Bay Middle School	\$92,890	\$56,336	\$36,554	39.4%
[PCE] Picolata Crossing Elementary	\$14,751	\$18,144	(\$3,392)	-23.0%
[PES_1] PALENCIA ELEMENTARY	\$18,685	\$22,275	(\$3,590)	-19.2%
[PMH_1] Pedro Menendez High School	\$130,903	\$59,529	\$71,374	54.5%
[POA] PATRIOT OAKS ACADEMY	\$53,414	\$46,158	\$7,255	13.6%
[PVA] Palm Valley Academy	\$31,534	\$31,534	\$0	0.0%
[PVH_1] Ponte Vedra High School	\$89,223	\$68,731	\$20,492	23.0%
[PVP_1] PV-PV Elementary	\$33,371	\$13,243	\$20,127	60.3%
[RBH_1] RB Hunt Elementary School	\$23,474	\$10,466	\$13,008	55.4%
[RES_1] Rawlings Elementary School	\$36,311	\$19,949	\$16,362	45.1%
[SAH_1] ST Augustine High School	\$55,220	\$34,374	\$20,846	37.8%
[SJT_1] ST Johns Technical High School	\$18,864	\$11,081	\$7,783	41.3%
[SMS_1] Sebastian Middle School	\$44,932	\$22,570	\$22,362	49.8%
[SPM_1] Switzerland Point Middle School	\$57,926	\$31,777	\$26,150	45.1%
[SWE_1] South Woods Elementary School	\$87,823	\$40,201	\$47,622	54.2%
[TCE_1] Timberlin Creek Elementary School	\$113,254	\$45,503	\$67,750	59.8%
[VRA] VALLEY RIDGE ACADEMY	\$50,932	\$47,328	\$3,604	7.1%
[WCE_1] Wards Creek Elementary School	\$95,251	\$41,394	\$53,857	56.5%
[WDH_1] WD Hartley Elementary School	\$41,492	\$24,482	\$17,010	41.0%
[WSE_1] Webster School Elementary	\$33,597	\$13,696	\$19,900	59.2%
<b>Totals:</b>	<b>\$2,704,799</b>	<b>\$1,440,340</b>	<b>\$1,264,459</b>	<b>46.7%</b>

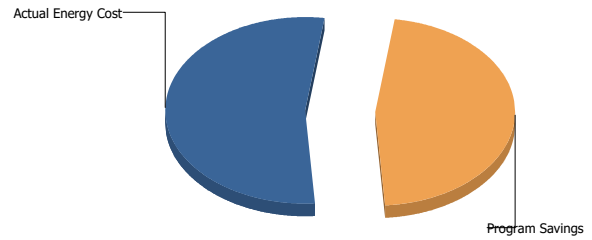
**Cost Avoidance Summary By Building CAP - 01B**



**Cumulative Cost Savings**

December 2019

Expected Energy Cost	\$2,704,799
Actual Energy Cost	\$1,440,340
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Program Savings	\$1,264,459
Percent Savings	46.7%
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Other Savings	\$0
Total Savings	\$1,264,459



**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.

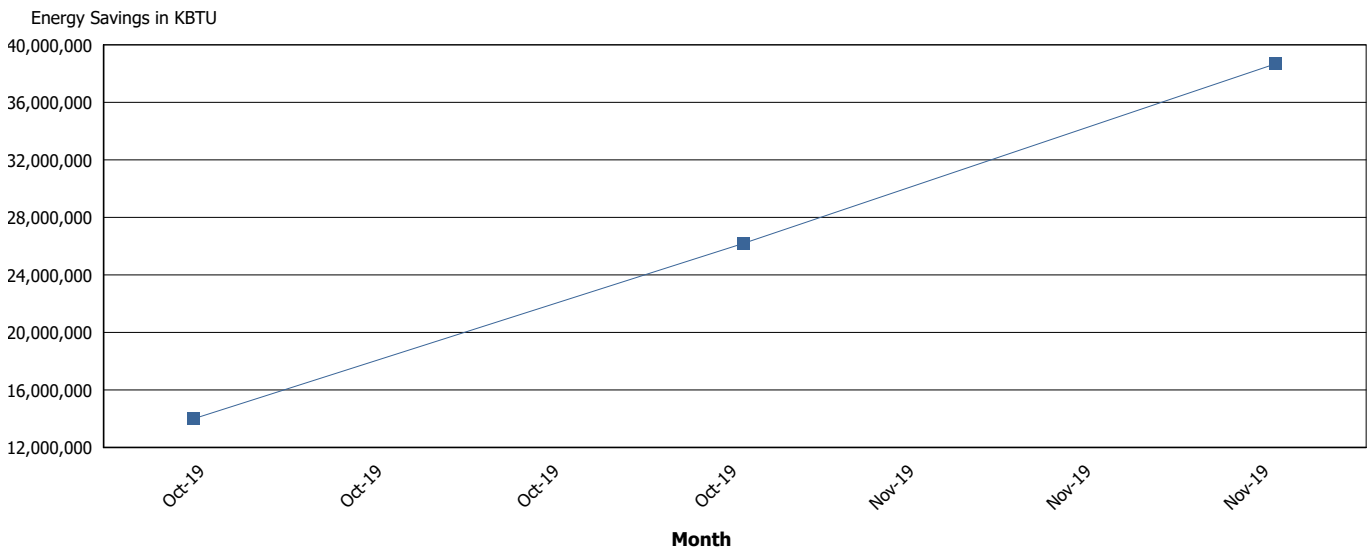
**Other Savings**

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:** 38,684,983 KBTU 5,861 equiv. metric tons of CO2

This is equivalent to the following:

Passenger cars not driven for one year:	1,221
Tree seedlings grown for 10 years:	150,277

**Requested by:** acrutchfield

**Version:**

**Report Version:** 17

**Filters:** Billing Period Between 201910;201912;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>447,283</b>	<b>43.9</b>	<b>447,283</b>
Feb	<b>364,067</b>	<b>40.1</b>	<b>364,067</b>
Mar	<b>418,198</b>	<b>44.2</b>	<b>418,198</b>
Apr	<b>266,463</b>	<b>30.3</b>	<b>266,463</b>
May	<b>366,926</b>	<b>42.4</b>	<b>366,926</b>
Jun	<b>376,036</b>	<b>50.1</b>	<b>376,036</b>
Jul	<b>402,804</b>	<b>44.7</b>	<b>402,804</b>
Aug	<b>389,838</b>	<b>35.4</b>	<b>389,838</b>
Sep	<b>408,481</b>	<b>37.4</b>	<b>408,481</b>
Oct	<b>407,458</b>	<b>40.3</b>	<b>407,458</b>
Nov	<b>404,968</b>	<b>44.3</b>	<b>404,968</b>
Dec	<b>433,352</b>	<b>47.9</b>	<b>433,352</b>
Total	<b>4,685,874</b>	<b>41.5</b>	<b>4,685,874</b>

\* The Total \$ column is the sum of Cost Avoidance Savings and Other Savings.

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**Energy Summary**


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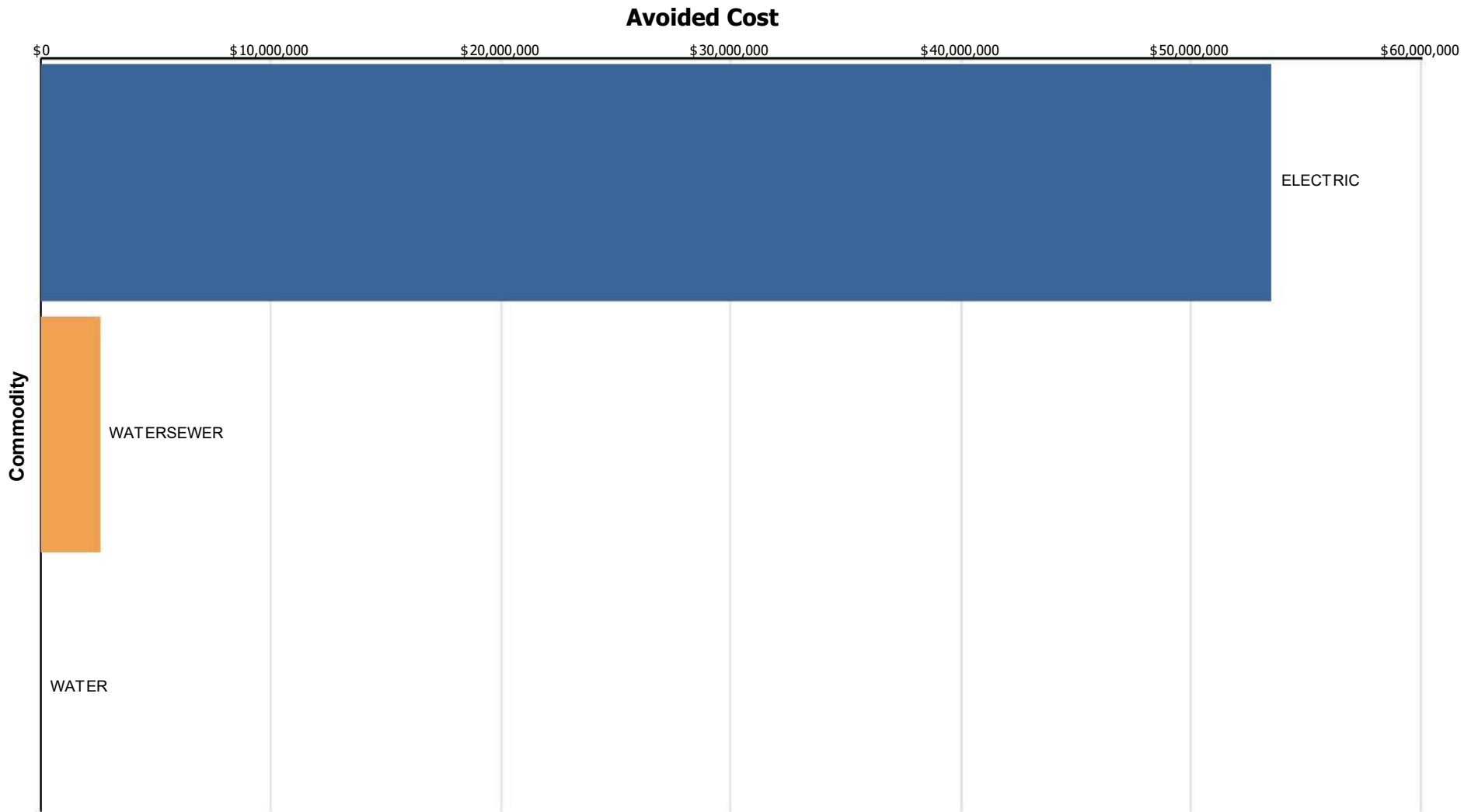
	Use				Cost				
	BATCC	Actual	Avoid	Avoid %	BATCC	Actual	Avoid	Avoid %	Total Savings \$
Electric (KWH)	<b>99,048,079</b>	<b>56,969,730</b>	<b>42,078,349</b>	<b>42.5</b>	<b>10,635,995</b>	<b>5,980,486</b>	<b>4,655,510</b>	<b>43.8</b>	<b>4,655,510</b>
Water & Sewer (KGAL)	<b>37,434</b>	<b>33,235</b>	<b>4,198</b>	<b>11.2</b>	<b>578,507</b>	<b>524,210</b>	<b>54,297</b>	<b>9.4</b>	<b>54,297</b>
Irrigation (KGAL)	<b>16,561</b>	<b>22,703</b>	<b>-6,142</b>	<b>-37.1</b>	<b>81,916</b>	<b>105,849</b>	<b>-23,933</b>	<b>-29.2</b>	<b>-23,933</b>
Total (KBTU)	<b>337,952,046</b>	<b>194,380,719</b>	<b>143,571,327</b>	<b>42.5</b>	<b>11,296,418</b>	<b>6,610,544</b>	<b>4,685,874</b>	<b>41.5</b>	<b>4,685,874</b>

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**Requested by:** acrutchfield
**Version:****Report Version:** 7**Filters:** Billing Period Between Jan 2019 and Dec 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	\$114,698,420	1,003,124,713	\$61,195,412	545,286,221	\$53,503,009	46.6%	457,838,492	45.6%
Water	Kgal	\$71,926	9,758	\$60,733	7,954	\$11,193	15.6%	1,804	18.5%
Water & Sewer	Kgal	\$9,000,083	650,322	\$6,425,489	474,861	\$2,574,594	28.6%	175,460	27.0%
<b>Totals:</b>		<b>\$123,770,430</b>		<b>\$67,681,634</b>		<b>\$56,088,796</b>	<b>45.3%</b>		



**Requested by:** acrutchfield

**Client Version:**

**Report version:** 10

**Filters:**

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