



### Agenda Item Details

Meeting	Dec 13, 2022 - REGULAR SCHOOL BOARD MEETING
Category	S. Operational Services - Consent
Subject	3. Request for Acceptance of the Energy Conservation Program Quarterly Status Report December 2022
Access	Public
Type	Action (Consent)
Recommended Action	Acceptance of the Energy Conservation Program Quarterly Status Report December 2022
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 2022 Energy Conservation Program Quarterly Status Report summarizes the performance results of the Energy Conservation Program for the quarterly period of July 2022 – September 2022. 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 2022 - September 2022 the Energy Conservation Program has resulted in additional energy cost avoidance for the School District of \$1,298,723. 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 \$67,252,912.

#### Recommendation:

Acceptance of the Energy Conservation Program Quarterly Status Report for December 2022.

#### Action Required:

Approval of Superintendent's recommendation.

**Drafted, reviewed and submitted by:**

Val Kovalenko, Energy Manager

Paul Rose, Executive Director for Facilities and Operations

**Sincerely,**

**Tim Forson**

**Superintendent of Schools**

[Energy Conservation Program Quarterly Status Report December 2022.pdf \(614 KB\)](#)

**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 22, 2022 12:48 PM :: Submitted by Cara Pacetti. Routed to Cara Pacetti for approval.  
Dec 1, 2022 9:37 AM :: Approved by Cara Pacetti. Routed to Paul Rose for approval.  
Dec 1, 2022 9:56 AM :: Approved by Paul Rose. Routed to Miriam Testasecca for approval.  
Dec 1, 2022 3:53 PM :: Approved by Miriam Testasecca. Routed to Mike Degutis for approval.  
Dec 2, 2022 9:00 AM :: Approved by Mike Degutis. Routed to Gina Fallica for approval.  
Dec 7, 2022 12:26 PM :: Approved by Gina Fallica. Routed to Tim Forson for approval.  
Dec 7, 2022 1:44 PM :: Final approval by Tim Forson

**Last Modified by Tim Forson on December 7, 2022**

**ENERGY CONSERVATION PROGRAM  
QUARTERLY STATUS REPORT  
July 2022 – September 2022**

**EXECUTIVE SUMMARY**

The December 2022 Energy Conservation Program Quarterly Status Report summarizes the performance results for the quarterly period of July 2022 – September 2022 and is comprised of the following:

- Electric Cost Avoidance Summary by Building (3<sup>rd</sup> Quarter 2022): The District realized a total electric cost avoidance for this quarterly period of \$1,298,723 (or a 36.1% cost avoidance from the baseline period).
- 3<sup>rd</sup> Quarter Electric Cost Savings Summary (3<sup>rd</sup> Quarter 2022): This reflects the monthly summary of total electric cost avoidance for the period July 2022 – September 2022.
- Greenhouse Gas Reduction: Greenhouse Gas Emissions Equivalent for this quarterly period reduced CO<sup>2</sup> by 4,036 metric tons.
- YTD Monthly Utilities Cost Avoidance (through 3<sup>rd</sup> Quarter 2022): This reflects the monthly summary of water, sewer, and electric cost avoidance for the period January 2022 – September 2022.
- Energy/Utilities Consumption Summary YTD: Summarized breakdown for electricity, water and sewer for January 2022 – September 2022 period. Between all tracked utilities, the District realized a total cost avoidance for this year of \$3,558,814.
- Total Cost Avoidance Summary by Commodity (July 2008 – September 2022): This reflects the total cost avoidance since the implementation of the program. Total cumulative cost avoidance is \$67,252,912. Cost avoidance is calculated by comparing current year's data against 2008 Baseline adjusted to current conditions.

During the period of July 2022 – September 2022 there were over 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 for good stewardship and reducing the overall energy consumption. Many thanks to principals, school site managers and our facilities staff district-wide for a successful third quarter of 2022.

For additional details about Energy Management Program and Energy/Utility cost and consumption breakdown please visit our site - <https://www.stjohns.k12.fl.us/energy/>

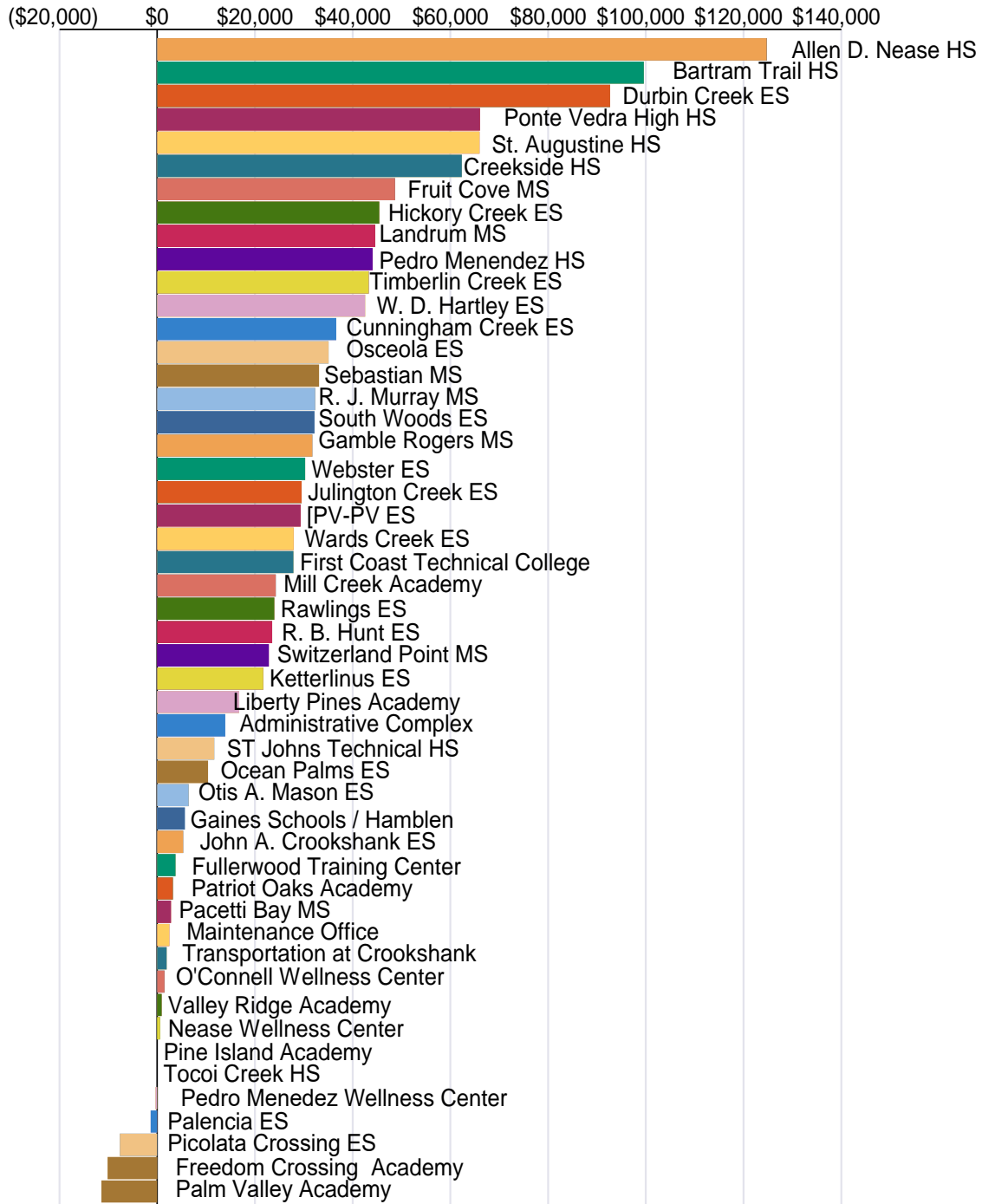
## Electric Cost Avoidance Summary By Building

St. Johns County School Board

July 2022 - September 2022

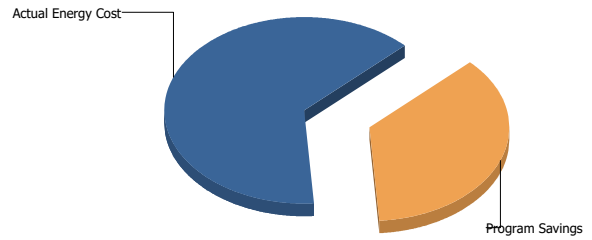
Place	BATCC Cost	Actual Cost	Cost Avoidance	Cost Avoidance %
[0021] John A. Crookshank Elementary	\$33,044	\$27,727	\$5,318	16.1%
[0032] Gaines Schools at Evelyn B Hamblen	\$19,677	\$14,047	\$5,630	28.6%
[0091] Ketterlinus Elementary School	\$42,906	\$21,211	\$21,695	50.6%
[0161] R. B. Hunt Elementary	\$43,268	\$19,741	\$23,528	54.4%
[0171] R. J. Murray Middle	\$67,303	\$34,958	\$32,346	48.1%
[0181] St. Augustine High	\$134,678	\$68,712	\$65,966	49.0%
[0201] Webster Elementary	\$54,095	\$23,830	\$30,265	55.9%
[0231] First Coast Technical College	\$104,784	\$76,899	\$27,885	26.6%
[0241] Julington Creek Elementary	\$86,979	\$57,418	\$29,561	34.0%
[0251] Allen D. Nease High	\$203,121	\$78,390	\$124,731	61.4%
[0261] W. D. Hartley Elementary	\$69,080	\$26,536	\$42,544	61.6%
[0301] Sebastian Middle	\$64,481	\$31,374	\$33,107	51.3%
[0311] Alice B. Landrum Middle	\$104,130	\$59,530	\$44,600	42.8%
[0321] Switzerland Point Middle	\$65,422	\$42,562	\$22,860	34.9%
[0331] Osceola Elementary	\$64,406	\$29,357	\$35,049	54.4%
[0341] Mill Creek Academy	\$86,261	\$61,984	\$24,277	28.1%
[0351P] PV-PV Elementary	\$47,267	\$17,940	\$29,327	62.0%
[0351R] Rawlings Elementary	\$52,812	\$28,841	\$23,970	45.4%
[0361] Otis A. Mason Elementary	\$30,673	\$24,232	\$6,442	21.0%
[0371] Gamble Rogers Middle	\$62,594	\$30,853	\$31,741	50.7%
[0381] Cunningham Creek Elementary	\$79,223	\$42,570	\$36,653	46.3%
[0391] Ocean Palms Elementary	\$62,474	\$52,066	\$10,409	16.7%
[0401] Pedro Menendez High	\$114,280	\$70,222	\$44,058	38.6%
[0411] Bartram Trail High	\$205,064	\$105,472	\$99,592	48.6%
[0441] Durbin Creek Elementary	\$170,348	\$77,640	\$92,708	54.4%
[0451] Timberlin Creek Elementary	\$97,150	\$53,842	\$43,307	44.6%
[0461] South Woods Elementary	\$71,379	\$39,189	\$32,189	45.1%
[0471] Patriot Oaks Academy	\$73,869	\$70,664	\$3,206	4.3%
[0472] Liberty Pines Academy	\$119,543	\$102,754	\$16,789	14.0%
[0481] Pacetti Bay Middle	\$90,975	\$88,186	\$2,789	3.1%
[0482] Wards Creek Elementary	\$82,944	\$55,008	\$27,936	33.7%
[0491] Fruit Cove Middle	\$109,369	\$60,688	\$48,681	44.5%
[0492] Ponte Vedra High	\$144,437	\$78,383	\$66,055	45.7%
[0493] Creekside High	\$208,790	\$146,476	\$62,314	29.8%
[0501] Hickory Creek Elementary	\$103,045	\$57,607	\$45,438	44.1%
[0502] Valley Ridge Academy	\$70,188	\$69,268	\$920	1.3%
[0511] Palencia Elementary	\$28,021	\$29,384	(\$1,363)	-4.9%
[0521] Picolata Crossing Elementary	\$18,335	\$26,014	(\$7,679)	-41.9%
[0531] Freedom Crossing Academy	\$67,888	\$78,061	(\$10,173)	-15.0%
[0541] Palm Valley Academy	\$38,748	\$50,160	(\$11,412)	-29.5%
[0551] Pine Island Academy	\$42,176	\$42,176	\$0	0.0%
[0552] Toco Creek High School	\$56,550	\$56,550	\$0	0.0%
[9061] Fullerwood Training Center	\$11,968	\$8,214	\$3,754	31.4%
[9721A] Administrative Complex	\$37,629	\$23,721	\$13,908	37.0%
[9780C] Transportation at Crookshank	\$7,889	\$5,934	\$1,955	24.8%
[9810] Maintenance Office	\$5,478	\$2,988	\$2,490	45.4%
[NCLN] Nease Wellness Center	\$1,253	\$681	\$572	45.6%
[OCLN] O'Connell Wellness Center	\$3,447	\$1,975	\$1,472	42.7%
[PCLN] Pedro Menendez Wellness Center	\$926	\$1,301	(\$375)	-40.5%
[SJT_1] ST Johns Technical High School	\$32,338	\$20,649	\$11,689	36.1%
<b>Totals:</b>	<b>\$3,592,706</b>	<b>\$2,293,983</b>	<b>\$1,298,723</b>	<b>36.1%</b>

## Avoided Cost



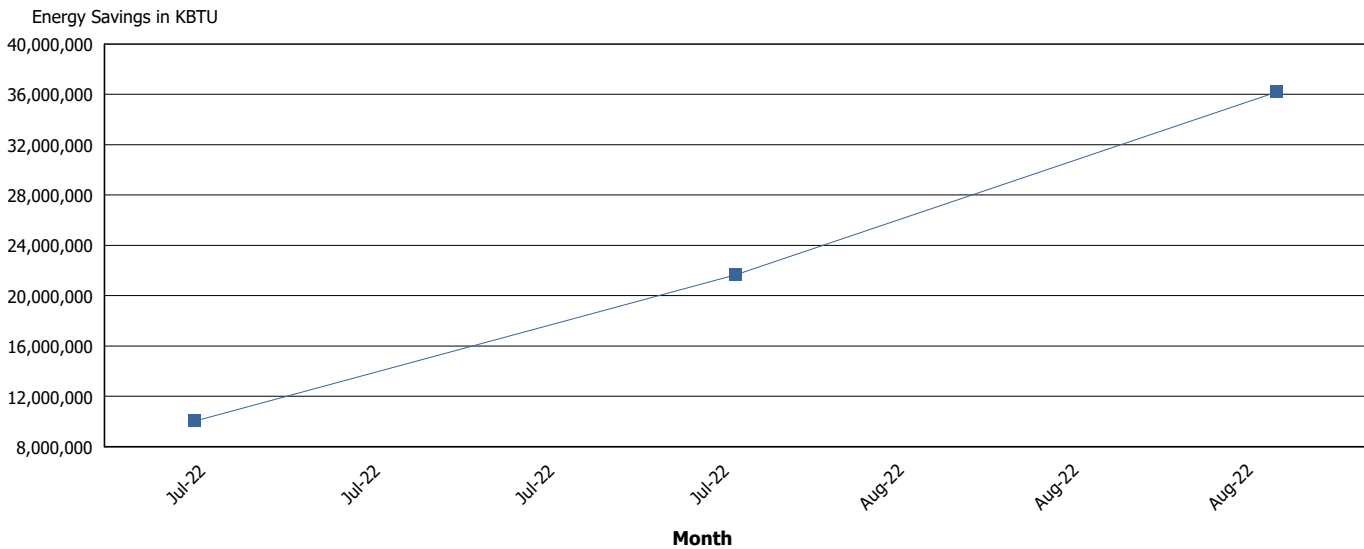
### 3rd Quarter 2022 Electric Cost Savings

Expected Energy Cost	\$3,592,706
Actual Energy Cost	\$2,293,983
<hr/>	
Program Savings	\$1,298,723
Percent Savings	36.1%
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Other Savings	\$0
Total Savings	\$1,298,723



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.	<b>Other Savings</b> Additional documented savings attributable to Program activities but not the direct result of usage reductions, such as rebates, refunds, tariff changes, etc.	

### 3rd Quarter 2022 Energy Savings



### 3rd Quarter 2022 Greenhouse Gas Reduction

<b>Energy Reduction Impact:</b>	36,197,782 KBTU	4,036 equiv. metric tons of CO2
This is equivalent to the following:		
Passenger cars not driven for one year:	841	
Tree seedlings grown for 10 years:	103,494	

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## YTD Monthly Cost Avoidance Summary

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	2022		
	Cost Avoid \$	Cost Avoid %	* Total \$
Jan	<b>498,126</b>	<b>41.1</b>	<b>498,126</b>
Feb	<b>398,162</b>	<b>36.9</b>	<b>398,162</b>
Mar	<b>430,023</b>	<b>39.5</b>	<b>430,023</b>
Apr	<b>282,405</b>	<b>28.6</b>	<b>282,405</b>
May	<b>260,097</b>	<b>25.0</b>	<b>260,097</b>
Jun	<b>348,855</b>	<b>35.9</b>	<b>348,855</b>
Jul	<b>359,464</b>	<b>33.6</b>	<b>359,464</b>
Aug	<b>412,643</b>	<b>29.2</b>	<b>412,643</b>
Sep	<b>569,040</b>	<b>39.7</b>	<b>569,040</b>
Total	<b>3,558,814</b>	<b>34.6</b>	<b>3,558,814</b>

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

## Energy/Utilities Consumption Summary YTD (through 3rd Quarter)

	Use				Cost				
	BATCC	Actual	Avoid	Avoid %	BATCC	Actual	Avoid	Avoid %	Total Savings \$
Electric (KWH)	<b>76,595,707</b>	<b>49,343,731</b>	<b>27,251,976</b>	<b>35.6</b>	<b>9,358,696</b>	<b>5,918,790</b>	<b>3,439,905</b>	<b>36.8</b>	<b>3,439,905</b>
Water (KGAL)	<b>729</b>	<b>1,509</b>	<b>-780</b>	<b>-107.0</b>	<b>7,929</b>	<b>13,494</b>	<b>-5,565</b>	<b>-70.2</b>	<b>-5,565</b>
Water & Sewer (KGAL)	<b>51,999</b>	<b>45,271</b>	<b>6,728</b>	<b>12.9</b>	<b>865,417</b>	<b>748,399</b>	<b>117,018</b>	<b>13.5</b>	<b>117,018</b>
Irrigation (KGAL)	<b>30,530</b>	<b>29,932</b>	<b>598</b>	<b>2.0</b>	<b>66,422</b>	<b>58,967</b>	<b>7,455</b>	<b>11.2</b>	<b>7,455</b>
Total (KBTU)	<b>261,344,552</b>	<b>168,360,810</b>	<b>92,983,742</b>	<b>35.6</b>	<b>10,298,464</b>	<b>6,739,650</b>	<b>3,558,814</b>	<b>34.6</b>	<b>3,558,814</b>



# Cost Avoidance Summary by Commodity July 2008 - September 2022

**St. Johns County School Board**

Commodity		BATCC Cost	BATCC Use	Actual Cost	Actual Use	Cost Avoidance	Cost Avoidance %	Use Avoidance	Use Avoidance %
Electric	kWh	\$142,055,066	1,252,748,186	\$78,322,324	702,733,581	\$63,732,742	44.9%	550,014,605	43.9%
Water	Kgal	\$147,687	17,092	\$122,455	15,146	\$25,231	17.1%	1,947	11.4%
Water & Sewer	Kgal	\$13,010,104	880,848	\$9,515,166	662,032	\$3,494,939	26.9%	218,816	24.8%
<b>Totals:</b>		<b>\$155,212,857</b>		<b>\$87,959,945</b>		<b>\$67,252,912</b>	<b>43.3%</b>		

