



### Agenda Item Details

Meeting	Dec 14, 2021 - REGULAR SCHOOL BOARD MEETING
Category	S. Operational Services - Consent
Subject	3. Request for Acceptance of the Energy Conservation Program Quarterly Status Report December 2021
Access	Public
Type	Action (Consent)
Recommended Action	Acceptance of the Energy Conservation Program Quarterly Status Report December 2021
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 2021 Energy Conservation Program Quarterly Status Report summarizes the performance results of the Energy Conservation Program for the quarterly period of July 2021 – September 2021. 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 2021 - September 2021 the Energy Conservation Program has resulted in additional energy cost avoidance for the School District of \$1,135,337. 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 \$62,371,370.

#### Recommendation:

Acceptance of the Energy Conservation Program Quarterly Status Report for December 2021.

#### Action Required:

Approval of Superintendent's recommendation.

**Drafted, reviewed and submitted by:**

Val Kovalenko, Energy Manager

Paul Rose, Executive Director for Facilities and Operations

Michael Degutis, Chief of Staff

**Sincerely,**

**Tim Forson**

**Superintendent of Schools**

[Energy Conservation Program Quarterly Status Report December 2021.pdf \(127 KB\)](#)

**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 30, 2021 3:36 PM :: Submitted by Cara Pacetti. Routed to Cara Pacetti for approval.  
Dec 1, 2021 3:46 PM :: Approved by Cara Pacetti. Routed to Paul Rose for approval.  
Dec 1, 2021 3:48 PM :: Approved by Paul Rose. Routed to Miriam Testasecca for approval.  
Dec 2, 2021 9:46 AM :: Approved by Miriam Testasecca. Routed to Mike Degutis for approval.  
Dec 2, 2021 11:46 AM :: Approved by Mike Degutis. Routed to Gina Fallica for approval.  
Dec 2, 2021 8:52 PM :: Approved by Gina Fallica. Routed to Tim Forson for approval.  
Dec 8, 2021 1:33 PM :: Final approval by Tim Forson

Last Modified by Tim Forson on December 8, 2021

**ENERGY CONSERVATION PROGRAM  
QUARTERLY STATUS REPORT  
July 2021 – September 2021**

**EXECUTIVE SUMMARY**

The September 2021 Energy Conservation Program Quarterly Status Report summarizes the performance results for the quarterly period of July 2021 – September 2021 and is comprised of the following:

- Electric Cost Avoidance Summary by Building (3rd Quarter 2021): The District realized a total electric cost avoidance for this quarterly period of \$1,135,337 (or a 39.1% cost avoidance from the baseline period).
- 3rd Quarter Electric Cost Savings Summary (3rd Quarter 2021): This reflects the monthly summary of total electric cost avoidance for the period July 2021 – September 2021.
- Greenhouse Gas Reduction: Greenhouse Gas Emissions Equivalent for this quarterly period reduced CO<sup>2</sup> by 6,151 metric tons. This is equivalent to 1,281 passenger cars not driven for one year.
- (YTD) Monthly Utilities Cost Avoidance (3rd Quarter 2021): This reflects the monthly summary of water, sewer and electric cost avoidance for the period January 2021 – September 2021.
- Energy/Utilities Consumption YTD Summary: Summary breakdown for electricity, water and sewer for January 2021 – September 2021 period. Between all tracked utilities, the District realized a total cost avoidance for this year of \$2,006,565
- Total Cost Avoidance Summary by Commodity (July 2008 – September 2021): This reflects the total cost avoidance since the implementation of the program. Total cumulative cost avoidance of \$62,371,370.

During the period of July 2021 – September 2021 there were over 120 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 very successful third quarter of 2021.

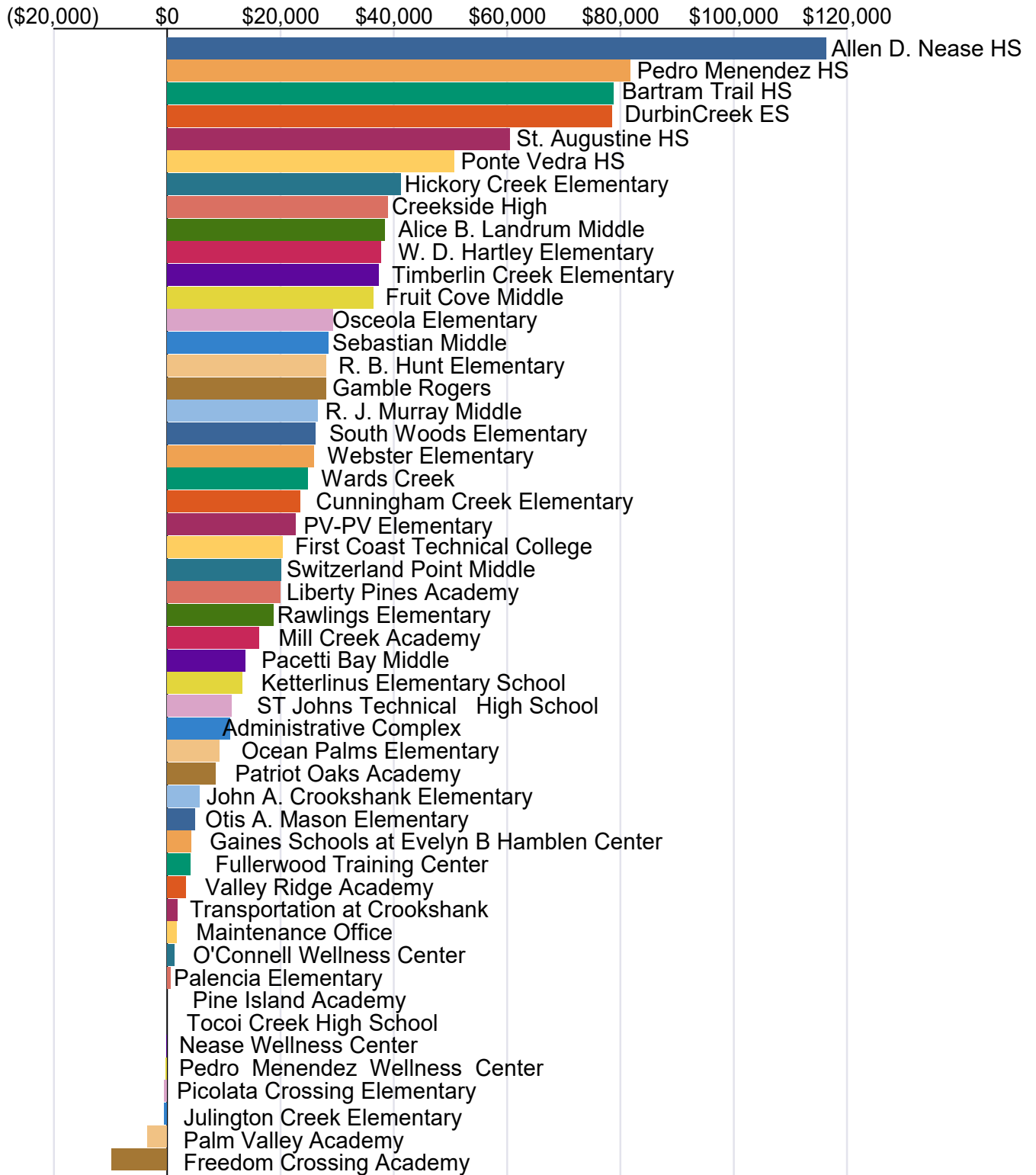
# Electric Cost Avoidance Summary By Building

St. Johns County School Board

July 2021 - September 2021

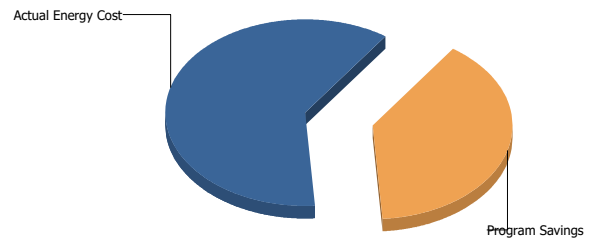
Place	BATCC Cost	Actual Cost	Cost Avoidance	Cost Avoidance %
[0021] John A. Crookshank Elementary	\$28,883	\$23,130	\$5,753	19.9%
[0032] Gaines Schools at Evelyn B Hamblen Center	\$16,306	\$12,118	\$4,188	25.7%
[0091] Ketterlinus Elementary School	\$31,934	\$18,681	\$13,253	41.5%
[0161] R. B. Hunt Elementary	\$43,568	\$15,441	\$28,127	64.6%
[0171] R. J. Murray Middle	\$57,555	\$30,954	\$26,601	46.2%
[0181] St. Augustine High	\$117,022	\$56,537	\$60,485	51.7%
[0201] Webster Elementary	\$47,034	\$21,151	\$25,883	55.0%
[0231] First Coast Technical College	\$84,809	\$64,438	\$20,371	24.0%
[0241] Julington Creek Elementary	\$63,122	\$63,631	(\$509)	-0.8%
[0251] Allen D. Nease High	\$181,295	\$64,993	\$116,301	64.2%
[0261] W. D. Hartley Elementary	\$63,503	\$25,774	\$37,729	59.4%
[0301] Sebastian Middle	\$57,358	\$28,930	\$28,429	49.6%
[0311] Alice B. Landrum Middle	\$87,877	\$49,555	\$38,322	43.6%
[0321] Switzerland Point Middle	\$54,325	\$34,276	\$20,048	36.9%
[0331] Osceola Elementary	\$53,697	\$24,465	\$29,232	54.4%
[0341] Mill Creek Academy	\$67,397	\$51,137	\$16,260	24.1%
[0351P] PV-PV Elementary	\$38,832	\$16,172	\$22,660	58.4%
[0351R] Rawlings Elementary	\$44,123	\$25,308	\$18,815	42.6%
[0361] Otis A. Mason Elementary	\$25,282	\$20,396	\$4,886	19.3%
[0371] Gamble Rogers Middle	\$52,572	\$24,567	\$28,005	53.3%
[0381] Cunningham Creek Elementary	\$52,442	\$29,028	\$23,414	44.6%
[0391] Ocean Palms Elementary	\$51,310	\$42,051	\$9,259	18.0%
[0401] Pedro Menendez High	\$149,035	\$67,198	\$81,837	54.9%
[0411] Bartram Trail High	\$160,819	\$81,992	\$78,827	49.0%
[0441] Durbin Creek Elementary	\$123,560	\$45,136	\$78,425	63.5%
[0451] Timberlin Creek Elementary	\$75,911	\$38,630	\$37,281	49.1%
[0461] South Woods Elementary	\$63,544	\$37,304	\$26,240	41.3%
[0471] Patriot Oaks Academy	\$60,548	\$52,030	\$8,518	14.1%
[0472] Liberty Pines Academy	\$88,782	\$68,872	\$19,910	22.4%
[0481] Pacetti Bay Middle	\$75,676	\$61,922	\$13,754	18.2%
[0482] Wards Creek Elementary	\$62,794	\$37,961	\$24,833	39.5%
[0491] Fruit Cove Middle	\$76,413	\$40,057	\$36,356	47.6%
[0492] Ponte Vedra High	\$122,722	\$72,003	\$50,719	41.3%
[0493] Creekside High	\$138,026	\$99,041	\$38,986	28.2%
[0501] Hickory Creek Elementary	\$82,605	\$41,368	\$41,237	49.9%
[0502] Valley Ridge Academy	\$50,174	\$46,874	\$3,300	6.6%
[0511] Palencia Elementary	\$25,257	\$24,699	\$557	2.2%
[0521] Picolata Crossing Elementary	\$13,823	\$14,331	(\$508)	-3.7%
[0531] Freedom Crossing Academy	\$44,367	\$54,195	(\$9,827)	-22.2%
[0541] Palm Valley Academy	\$34,074	\$37,590	(\$3,517)	-10.3%
[0551] Pine Island Academy	\$14,217	\$14,217	\$0	0.0%
[0552] Toco Creek High School	\$38,565	\$38,565	\$0	0.0%
[9061] Fullerwood Training Center	\$10,374	\$6,325	\$4,049	39.0%
[9721A] Administrative Complex	\$31,117	\$20,065	\$11,052	35.5%
[9780C] Transportation at Crookshank	\$6,705	\$4,891	\$1,814	27.1%
[9810] Maintenance Office	\$4,594	\$2,869	\$1,724	37.5%
[NCLN] Nease Wellness Center	\$617	\$749	(\$132)	-21.4%
[OCLN] O'Connell Wellness Center	\$2,990	\$1,747	\$1,242	41.6%
[PCLN] Pedro Menendez Wellness Center	\$775	\$1,010	(\$235)	-30.3%
[SJT_1] ST Johns Technical High School	\$28,359	\$16,975	\$11,383	40.1%
<b>Totals:</b>	<b>\$2,906,691</b>	<b>\$1,771,354</b>	<b>\$1,135,337</b>	<b>39.1%</b>

# Avoided Cost



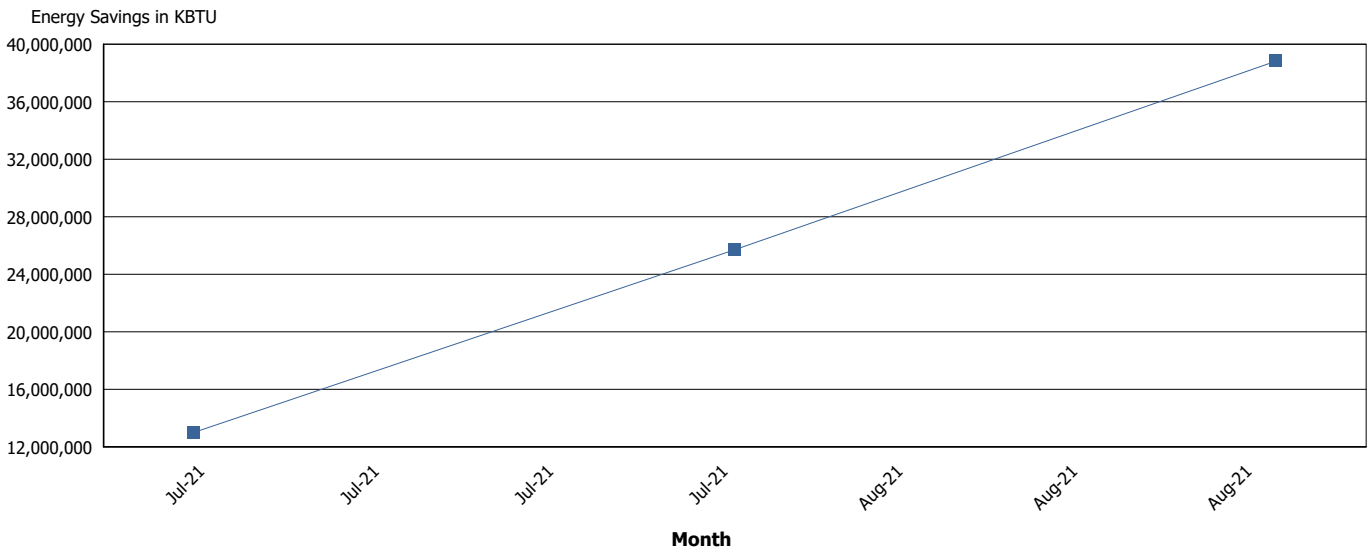
### 3rd Quarter 2021 Electric Cost Savings

Expected Energy Cost	\$2,906,691
Actual Energy Cost	\$1,771,354
Program Savings	\$1,135,337
Percent Savings	39.1%
Other Savings	\$0
Total Savings	\$1,135,337



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 2021 Energy Savings



### 3rd Quarter 2021 Greenhouse Gas Reduction

<b>Energy Reduction Impact:</b>	38,822,166 KBTU	6,151 equiv. metric tons of CO2
This is equivalent to the following:		
Passenger cars not driven for one year:	1,281	
Tree seedlings grown for 10 years:	157,720	

## YTD Monthly Cost Avoidance Summary

	2021		
	Cost Avoid \$	Cost Avoid %	* Total \$
Jan	<b>448,427</b>	<b>43.4</b>	<b>448,427</b>
Feb	<b>353,189</b>	<b>38.0</b>	<b>353,189</b>
Mar	<b>336,360</b>	<b>36.8</b>	<b>336,360</b>
Apr	<b>280,231</b>	<b>31.3</b>	<b>280,231</b>
May	<b>244,834</b>	<b>28.3</b>	<b>244,834</b>
Jun	<b>346,908</b>	<b>41.4</b>	<b>346,908</b>
Jul	<b>418,727</b>	<b>46.7</b>	<b>418,727</b>
Aug	<b>387,915</b>	<b>32.6</b>	<b>387,915</b>
Sep	<b>398,282</b>	<b>34.8</b>	<b>398,282</b>
<b>Total</b>	<b>3,214,873</b>	<b>36.9</b>	<b>3,214,873</b>

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

## Energy/Utilities Consumption Summary YTD (through 3rd Quarter 2021)

	Use				Cost				
	BATCC	Actual	Avoid	Avoid %	BATCC	Actual	Avoid	Avoid %	Total Savings \$
Electric (KWH)	<b>73,744,451</b>	<b>45,046,381</b>	<b>28,698,070</b>	<b>38.9</b>	<b>7,767,043</b>	<b>4,701,943</b>	<b>3,065,100</b>	<b>39.5</b>	<b>3,065,100</b>
Water (KGAL)	<b>850</b>	<b>750</b>	<b>101</b>	<b>11.8</b>	<b>7,819</b>	<b>6,769</b>	<b>1,050</b>	<b>13.4</b>	<b>1,050</b>
Water & Sewer (KGAL)	<b>52,328</b>	<b>46,519</b>	<b>5,809</b>	<b>11.1</b>	<b>864,030</b>	<b>728,170</b>	<b>135,860</b>	<b>15.7</b>	<b>135,860</b>
Irrigation (KGAL)	<b>15,808</b>	<b>14,273</b>	<b>1,536</b>	<b>9.7</b>	<b>65,028</b>	<b>52,166</b>	<b>12,862</b>	<b>19.8</b>	<b>12,862</b>
<b>Total (KBTU)</b>	<b>251,616,067</b>	<b>153,698,252</b>	<b>97,917,815</b>	<b>38.9</b>	<b>8,703,920</b>	<b>5,489,048</b>	<b>3,214,873</b>	<b>36.9</b>	<b>3,214,873</b>

## Cost Avoidance Summary By Commodity July 2008 - September 2021

**St. Johns County School Board**

Commodity		BATCC Cost	BATCC Use	Actual Cost	Actual Use	Cost Avoidance	Cost Avoidance	Use Avoidance	Use Avoidance %
Electric	kWh	\$129,796,782	1,151,152,702	\$70,754,082	639,053,165	\$59,042,700	45.5%	512,099,537	44.5%
Water	Kgal	\$128,951	15,256	\$106,667	13,391	\$22,283	17.3%	1,865	12.2%
Water & Sewer	Kgal	\$11,814,400	809,569	\$8,508,013	600,412	\$3,306,387	28.0%	209,157	25.8%
<b>Totals:</b>		<b>\$141,740,133</b>		<b>\$79,368,762</b>		<b>\$62,371,370</b>	<b>44.0%</b>		



# Cost Avoidance Summary By Commodity July 2008 - September 2021

