



## Agenda Item Details

Meeting	Mar 09, 2021 - REGULAR SCHOOL BOARD MEETING
Category	S. Operational Services - Consent
Subject	3. Request for Acceptance of the Energy Conservation Program Quarterly Status Report March 2021
Access	Public
Type	Action (Consent)
Recommended Action	Acceptance of the Energy Conservation Program Quarterly Status Report March 2021
Goals	GM-1 Mission Statement GO-3 Energy Consumption Strategies

## 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 March 2021 Energy Conservation Program Quarterly Status Report summarizes the performance results of the Energy Conservation Program for the quarterly period of October 2020 – December 2020. 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 2020 - December 2020 the Energy Conservation Program has resulted in additional energy cost avoidance for the School District of \$1,279,278. 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 \$59,202,539.

**Recommendation:**

Acceptance of the Energy Conservation Program Quarterly Status Report for March 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 March 2021.pdf \(632 KB\)](#)

**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

- Feb 19, 2021 10:50 AM :: Submitted by Cara Pacetti. Routed to Cara Pacetti for approval.
- Feb 23, 2021 10:36 AM :: Approved by Cara Pacetti. Routed to Paul Rose for approval.
- Feb 23, 2021 10:37 AM :: Approved by Paul Rose. Routed to Vicki Davenport for approval.
- Feb 23, 2021 11:27 AM :: Approved by Vicki Davenport. Routed to Mike Degutis for approval.
- Feb 24, 2021 4:37 PM :: Approved by Mike Degutis. Routed to Gina Fallica for approval.
- Feb 25, 2021 2:19 PM :: Approved by Gina Fallica. Routed to Tim Forson for approval.
- Mar 3, 2021 9:31 AM :: Final approval by Tim Forson

Last Modified by Tim Forson on March 3, 2021

**ENERGY CONSERVATION PROGRAM  
QUARTERLY STATUS REPORT  
October 2020 – December 2020**

**EXECUTIVE SUMMARY**

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

- Electric Cost Avoidance Summary by Building (October 2020 – December 2020): The District realized a total electric cost avoidance for this quarterly period of \$1,279,278 (or a 46.5% cost avoidance from the baseline period\*).
- 4<sup>th</sup> Quarter Electric Cost Savings Summary (October 2020 – December 2020): This reflects the monthly summary of total cost avoidance for the period October 2020 – December 2020.
- Greenhouse Gas Reduction: Greenhouse Gas Emissions Equivalent for this quarterly period reduced CO<sup>2</sup> by 6,082 metric tons.
- YTD Monthly Utilities Cost Avoidance (January 2020 – December 2020): This reflects the monthly summary of water, sewer and electric cost avoidance for the period January 2020 – December 2020.
- Energy/Utilities Consumption YTD Summary: Summary breakdown for electricity, water and sewer for January 2020 – December 2020 period. Between all tracked utilities, the District realized a total cost avoidance for this year of \$5,653,118
- Total Cost Avoidance Summary by Commodity (July 2008 – December 2020): This reflects the total cost avoidance since the implementation of the program. Total cumulative cost avoidance of \$59,202,539.

During the period of October 2020 – December 2020 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 and our facilities staff district-wide for a very successful fourth quarter of 2020.

\*The term used for the adjusted baseline is the BATCC—the Baseline (which has been) Adjusted To Current Conditions. In other words, the BATCC is what the District WOULD HAVE USED AND SPENT if we continued the *energy inefficient ways* of the base year and been subjected to today's weather, growth and other variables.

## Electric Cost Avoidance Summary By Building

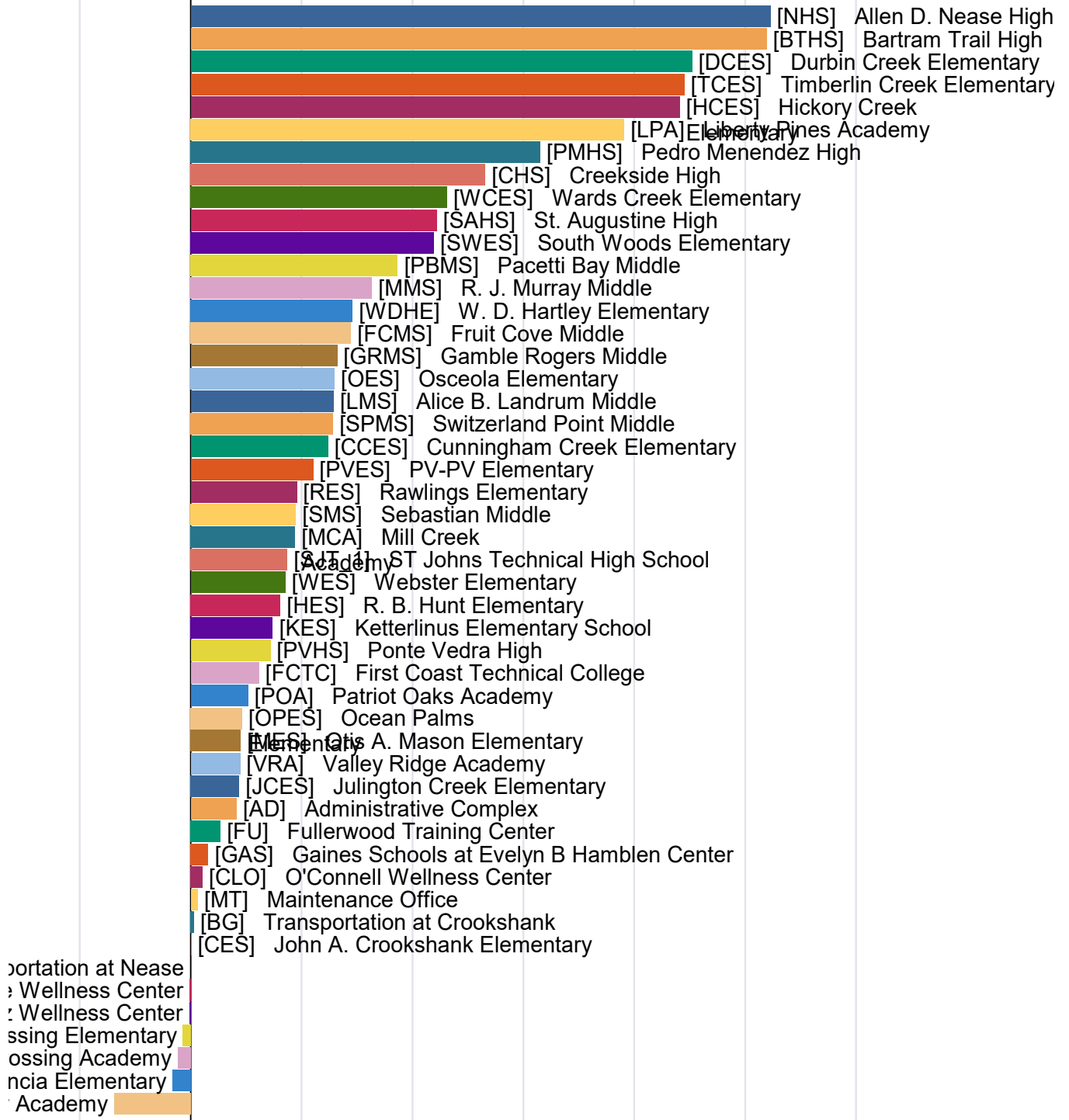
St. Johns County School Board

October 2020 - December 2020

Place	BATCC Cost	Actual Cost	Cost Avoidance	Cost Avoidance %
Administrative Complex	\$23,223	\$14,927	\$8,296	35.7%
Transportation at Crookshank	\$4,346	\$3,722	\$624	14.4%
Transportation at Nease	\$5,908	\$5,908	(\$0)	0.0%
Bartram Trail High	\$186,379	\$82,494	\$103,885	55.7%
Cunningham Creek Elementary	\$44,514	\$19,735	\$24,779	55.7%
John A. Crookshank Elementary	\$18,609	\$18,510	\$99	0.5%
Creekside High	\$138,255	\$85,082	\$53,173	38.5%
Nease Wellness Center	\$1,037	\$1,205	(\$168)	-16.2%
O'Connell Wellness Center	\$3,628	\$1,509	\$2,119	58.4%
Pedro Menendez Wellness Center	\$805	\$1,050	(\$245)	-30.4%
Durbin Creek Elementary	\$130,503	\$40,061	\$90,442	69.3%
Freedom Crossing Academy	\$36,440	\$38,742	(\$2,302)	-6.3%
Fruit Cove Middle	\$59,431	\$30,521	\$28,910	48.6%
First Coast Technical College	\$62,574	\$50,247	\$12,326	19.7%
Fullerwood Training Center	\$10,426	\$5,050	\$5,375	51.6%
Gaines Schools at Evelyn B Hamblen Cent	\$13,261	\$10,070	\$3,191	24.1%
Gamble Rogers Middle	\$48,666	\$22,247	\$26,419	54.3%
Hickory Creek Elementary	\$135,262	\$47,075	\$88,187	65.2%
R. B. Hunt Elementary	\$30,177	\$13,977	\$16,200	53.7%
Julington Creek Elementary	\$61,271	\$52,529	\$8,742	14.3%
Ketterlinus Elementary School	\$27,817	\$13,000	\$14,817	53.3%
Alice B. Landrum Middle	\$69,767	\$44,011	\$25,756	36.9%
Liberty Pines Academy	\$135,437	\$57,270	\$78,167	57.7%
Mill Creek Academy	\$53,405	\$34,608	\$18,797	35.2%
Otis A. Mason Elementary	\$22,879	\$13,853	\$9,026	39.5%
R. J. Murray Middle	\$55,795	\$23,055	\$32,740	58.7%
Maintenance Office	\$3,566	\$2,325	\$1,242	34.8%
Allen D. Nease High	\$153,655	\$49,059	\$104,595	68.1%
Osceola Elementary	\$41,687	\$15,733	\$25,955	62.3%
Ocean Palms Elementary	\$45,185	\$35,895	\$9,290	20.6%
Pacetti Bay Middle	\$92,467	\$55,099	\$37,368	40.4%
Picolata Crossing Elementary	\$14,161	\$15,544	(\$1,383)	-9.8%
Palencia Elementary	\$16,393	\$19,671	(\$3,278)	-20.0%
Pedro Menendez High	\$119,545	\$56,499	\$63,046	52.7%
Patriot Oaks Academy	\$51,254	\$40,892	\$10,363	20.2%
Palm Valley Academy	\$25,755	\$39,551	(\$13,796)	-53.6%
PV-PV Elementary	\$35,147	\$13,054	\$22,093	62.9%
Ponte Vedra High	\$85,538	\$71,161	\$14,377	16.8%
Rawlings Elementary	\$38,589	\$19,451	\$19,138	49.6%
St. Augustine High	\$84,930	\$40,556	\$44,374	52.2%
ST Johns Technical High School	\$31,871	\$14,419	\$17,452	54.8%
Sebastian Middle	\$39,782	\$20,787	\$18,995	47.7%
Switzerland Point Middle	\$54,113	\$28,455	\$25,658	47.4%
South Woods Elementary	\$82,908	\$39,019	\$43,890	52.9%
Timberlin Creek Elementary	\$132,326	\$43,254	\$89,071	67.3%
Valley Ridge Academy	\$53,141	\$44,243	\$8,898	16.7%
Wards Creek Elementary	\$89,055	\$42,781	\$46,274	52.0%
W. D. Hartley Elementary	\$50,298	\$21,110	\$29,187	58.0%
Webster Elementary	\$31,774	\$14,657	\$17,117	53.9%
<b>Totals:</b>	<b>\$2,752,954</b>	<b>\$1,473,676</b>	<b>\$1,279,278</b>	<b>46.5%</b>

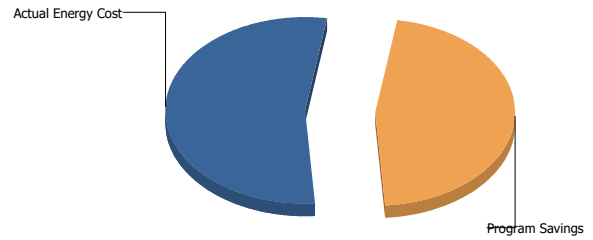
## Avoided Cost

(\$20,000)    \$0    \$20,000    \$40,000    \$60,000    \$80,000    \$100,000    \$120,000



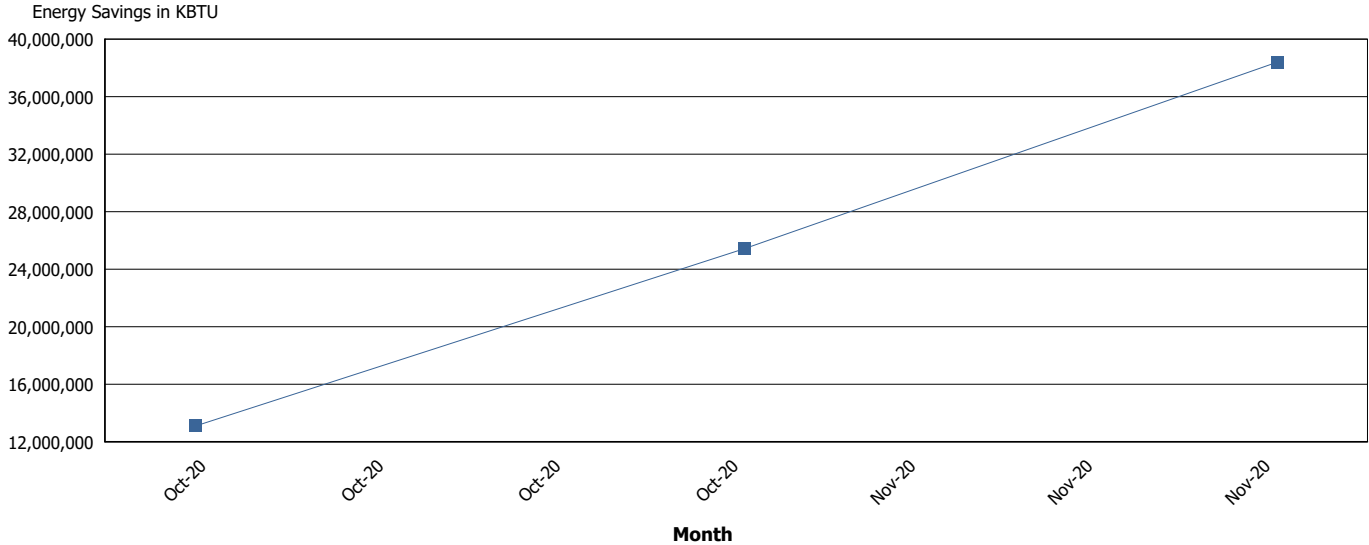
## 4th Quarter 2020 Electric Cost Savings

Expected Energy Cost	\$2,752,954
Actual Energy Cost	\$1,473,676
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Program Savings	\$1,279,278
Percent Savings	46.5%
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Other Savings	\$0
Total Savings	\$1,279,278



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.	

## 4th Quarter 2020 Energy Savings



## 4th Quarter Greenhouse Gas Reduction

**Energy Reduction Impact:** 38,388,750 KBTU 6,082 equiv. metric tons of CO2

This is equivalent to the following:

Passenger cars not driven for one year:	1,267
Tree seedlings grown for 10 years:	155,960

## YTD Monthly Cost Avoidance Summary

	2020		
	Cost Avoid \$	Cost Avoid %	* Total \$
Jan	<b>396,197</b>	<b>40.8</b>	<b>396,197</b>
Feb	<b>355,319</b>	<b>38.4</b>	<b>355,319</b>
Mar	<b>628,844</b>	<b>60.0</b>	<b>628,844</b>
Apr	<b>618,415</b>	<b>69.4</b>	<b>618,415</b>
May	<b>564,006</b>	<b>64.1</b>	<b>564,006</b>
Jun	<b>370,785</b>	<b>50.6</b>	<b>370,785</b>
Jul	<b>455,484</b>	<b>52.4</b>	<b>455,484</b>
Aug	<b>488,747</b>	<b>44.0</b>	<b>488,747</b>
Sep	<b>406,427</b>	<b>37.8</b>	<b>406,427</b>
Oct	<b>395,540</b>	<b>38.7</b>	<b>395,540</b>
Nov	<b>438,905</b>	<b>43.7</b>	<b>438,905</b>
Dec	<b>534,452</b>	<b>51.0</b>	<b>534,452</b>
<b>Total</b>	<b>5,653,118</b>	<b>48.8</b>	<b>5,653,118</b>

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

## Energy/Utilities Consumption Summary YTD December 2020

	Use				Cost				
	BATCC	Actual	Avoid	Avoid %	BATCC	Actual	Avoid	Avoid %	Total Savings \$
Electric (KWH)	<b>99,131,125</b>	<b>50,341,398</b>	<b>48,789,727</b>	<b>49.2</b>	<b>10,329,533</b>	<b>5,120,725</b>	<b>5,208,808</b>	<b>50.4</b>	<b>5,208,808</b>
Water (KGAL)	<b>1,726</b>	<b>3,222</b>	<b>-1,496</b>	<b>-86.7</b>	<b>15,367</b>	<b>26,495</b>	<b>-11,128</b>	<b>-72.4</b>	<b>-11,128</b>
Water & Sewer (KGAL)	<b>68,921</b>	<b>46,409</b>	<b>22,512</b>	<b>32.7</b>	<b>1,232,117</b>	<b>776,679</b>	<b>455,439</b>	<b>37.0</b>	<b>455,439</b>
Total (KBTU)	<b>338,235,399</b>	<b>171,764,850</b>	<b>166,470,549</b>	<b>49.2</b>	<b>11,577,018</b>	<b>5,923,899</b>	<b>5,653,118</b>	<b>48.8</b>	<b>5,653,118</b>



# Cost Avoidance Summary By Commodity

## July 2008 - December 2020

**St. Johns County School Board**

Commodity		BATCC Cost	BATCC Use	Actual Cost	Actual Use	Cost Avoidance	Cost Avoidance	Use Avoidance	Use Avoidance %
Electric	kWh	\$122,052,928	1,077,644,137	\$66,020,621	593,436,473	\$56,032,307	45.9%	484,207,664	44.9%
Water	Kgal	\$121,131	14,406	\$99,898	12,642	\$21,233	17.5%	1,765	12.3%
Water & Sewer	Kgal	\$10,928,843	756,462	\$7,779,844	553,661	\$3,148,999	28.8%	202,801	26.8%
<b>Totals:</b>		<b>\$133,102,902</b>		<b>\$73,900,363</b>		<b>\$59,202,539</b>	<b>44.5%</b>		

# Cost Avoidance Summary By Commodity

## July 2008 - December 2020

