



Agenda Item Details

Meeting	Dec 08, 2020 - REGULAR SCHOOL BOARD MEETING
Category	S. Operational Services - Consent
Subject	3. Request for Acceptance of the Energy Conservation Program Quarterly Status Report December 2020
Access	Public
Type	Action (Consent)
Recommended Action	Acceptance of the Energy Conservation Program Quarterly Status Report December 2020
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 December 2020 Energy Conservation Program Quarterly Status Report summarizes the performance results of the Energy Conservation Program for the quarterly period of July 2020 – September 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.

The District's new Energy Manager, Val Kovalenko, has implemented several changes in the system used to track utility consumption and cost for the District. Among the updated changes, the energy evaluation system will be using conditioned square footage of each building to track cost and consumption instead of the previously used gross square footage (GSF). As a result of these updates, the total cumulative cost avoidance will be reduced proportionally to this one-time baseline adjustment. Since inception of the Energy Conservation Program through 3rd Quarter of 2020, the District has realized a total cumulative cost avoidance of \$57,727,491.

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 2020 - September 2020 the Energy Conservation Program has resulted in additional energy cost avoidance for the School District of \$1,254,326. 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 \$57,727,491.

Recommendation:

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

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 2020.pdf \(1,826 KB\)](#)

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 19, 2020 9:27 AM :: Submitted by Cara Pacetti. Routed to Cara Pacetti for approval.
- Nov 19, 2020 10:15 AM :: Approved by Cara Pacetti. Routed to Paul Rose for approval.
- Nov 19, 2020 10:16 AM :: Approved by Paul Rose. Routed to Vicki Davenport for approval.
- Nov 19, 2020 11:58 AM :: Approved by Vicki Davenport. Routed to Mike Degutis for approval.
- Nov 20, 2020 9:36 AM :: Approved by Mike Degutis. Routed to Gina Fallica for approval.
- Dec 1, 2020 6:28 PM :: Approved by Gina Fallica. Routed to Tim Forson for approval.
- Dec 2, 2020 9:39 AM :: Final approval by Tim Forson

Last Modified by Tim Forson on December 2, 2020

**ENERGY CONSERVATION PROGRAM
QUARTERLY STATUS REPORT
July 2020 – September 2020**

EXECUTIVE SUMMARY

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

- Electric Cost Avoidance Summary by Building (July 2020 – September 2020): The District realized a total electric cost avoidance for this quarterly period of \$1,254,326 (or a 45.4% cost avoidance from the baseline period).
- Energy/Cost Savings Summary (July 2020 – September 2020): This reflects the monthly summary of total cost avoidance for the period July 2020 – September 2020.
- Greenhouse Gas Reduction: Greenhouse Gas Reduction for this quarterly period reduced CO² by 6,886 metric tons.
- YTD Monthly Utilities Cost Avoidance (January 2020 – September 2020): This reflects the monthly summary of water, sewer and electric cost avoidance for the period January 2020 – September 2020.
- Energy/Utilities Consumption YTD Summary: Summary breakdown for electricity, water and sewer for July 2020 – September 2020. The District realized a total water cost avoidance for this quarterly period of \$156,769.
- Total Cost Avoidance Summary by Commodity (July 2008 – September 2020): This reflects the total cost avoidance since the implementation of the program. Total cumulative cost avoidance of \$57,727,491.

The District's new Energy Manager, Val Kovalenko, has implemented several changes in the system used to track utility consumption and cost for the District. Among these updated changes, the energy evaluation system will be using conditioned square footage of each building to track cost and consumption instead of gross square footage (GSF).

In accordance with current measurement and verification standards, we do not compare the actual current use directly with the actual baseline use. These international guidance documents say that actual baseline use must first be adjusted up or down to current conditions, meaning it is adjusted to today's floor area, weather, occupancy, equipment, etc. Since conditioned area of the District buildings has a 5.7% smaller footprint than the GSF area, the 2008 baseline has been adjusted accordingly. This is one-time baseline adjustment.

As a result of these updates, the total cumulative cost avoidance will be reduced proportionally to this one-time baseline adjustment. Since inception of the Energy Conservation Program through 3rd Quarter of 2020, the District has now realized a total cumulative cost avoidance of \$57,727,491.

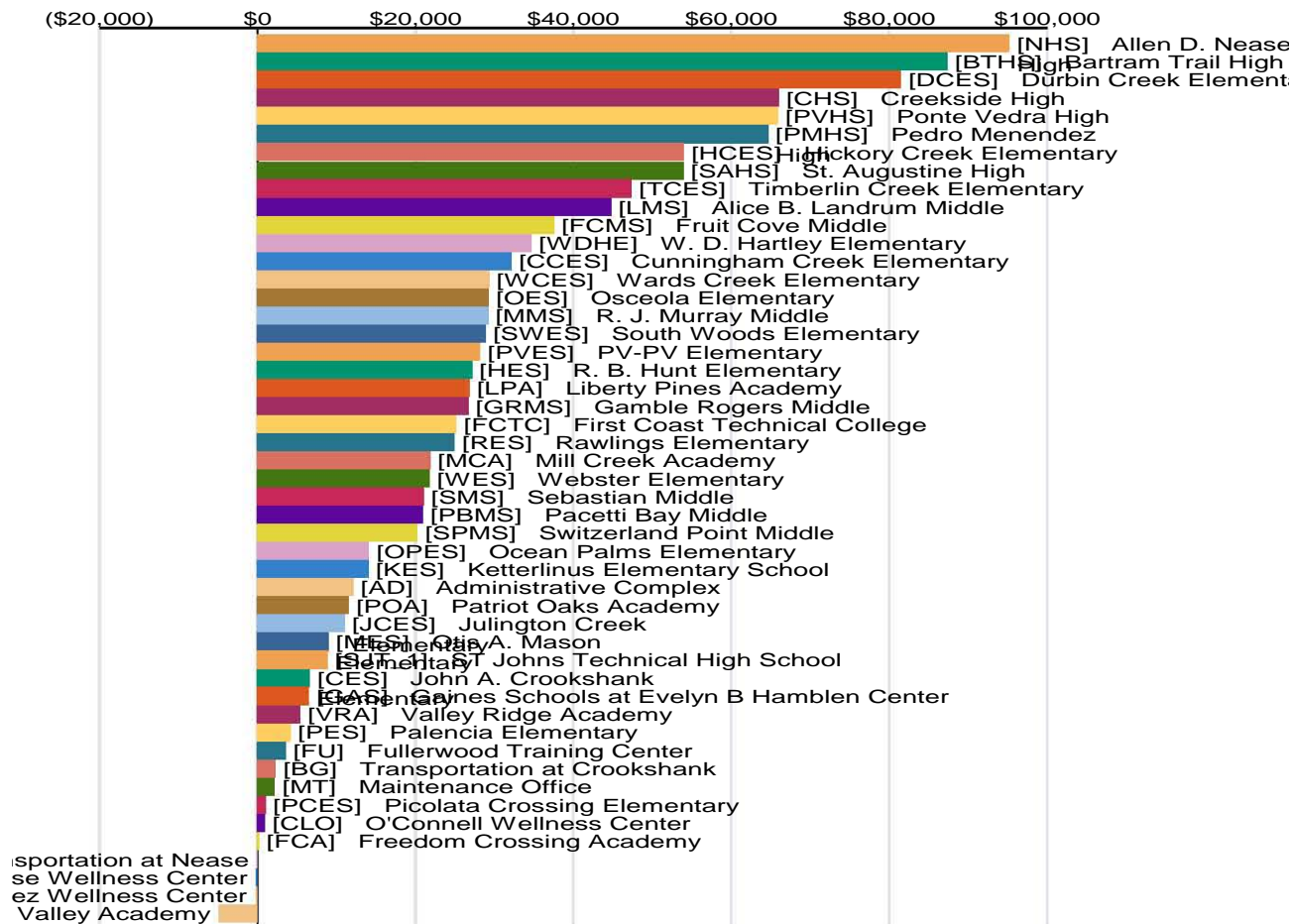
Electric Cost Avoidance Summary By Building

St. Johns County School Board

July 2020 - September 2020

Place	BATCC Cost	Actual Cost	Cost Avoidance	Cost Avoidance %
Administrative Complex	\$30,767	\$18,681	\$12,085	39.3%
Transportation at Crookshank	\$6,390	\$4,098	\$2,292	35.9%
Transportation at Nease	\$3,466	\$3,466	(\$0)	0.0%
Bartram Trail High	\$161,292	\$73,937	\$87,356	54.2%
Cunningham Creek Elementary	\$56,761	\$24,625	\$32,135	56.6%
John A. Crookshank Elementary	\$26,080	\$19,474	\$6,606	25.3%
Creekside High	\$148,686	\$82,684	\$66,003	44.4%
Nease Wellness Center	\$959	\$1,138	(\$179)	-18.7%
O'Connell Wellness Center	\$2,692	\$1,758	\$935	34.7%
Pedro Menendez Wellness Center	\$721	\$936	(\$215)	-29.8%
Durbin Creek Elementary	\$124,449	\$42,969	\$81,480	65.5%
Freedom Crossing Academy	\$49,174	\$49,010	\$164	0.3%
Fruit Cove Middle	\$75,638	\$38,109	\$37,529	49.6%
First Coast Technical College	\$83,224	\$58,040	\$25,184	30.3%
Fullerwood Training Center	\$9,012	\$5,475	\$3,537	39.2%
Gaines Schools at Evelyn B Hamblen Center	\$17,030	\$10,524	\$6,506	38.2%
Gamble Rogers Middle	\$55,053	\$28,369	\$26,684	48.5%
Hickory Creek Elementary	\$94,590	\$40,612	\$53,978	57.1%
R. B. Hunt Elementary	\$41,232	\$14,074	\$27,158	65.9%
Julington Creek Elementary	\$62,623	\$51,641	\$10,982	17.5%
Ketterlinus Elementary School	\$30,451	\$16,431	\$14,019	46.0%
Alice B. Landrum Middle	\$91,427	\$46,679	\$44,748	48.9%
Liberty Pines Academy	\$97,018	\$70,196	\$26,821	27.6%
Mill Creek Academy	\$61,871	\$40,012	\$21,858	35.3%
Otis A. Mason Elementary	\$24,264	\$15,306	\$8,958	36.9%
R. J. Murray Middle	\$54,186	\$25,006	\$29,180	53.9%
Maintenance Office	\$5,564	\$3,370	\$2,194	39.4%
Allen D. Nease High	\$172,410	\$77,210	\$95,200	55.2%
Osceola Elementary	\$48,976	\$19,711	\$29,266	59.8%
Ocean Palms Elementary	\$49,879	\$35,763	\$14,116	28.3%
Pacetti Bay Middle	\$68,820	\$47,880	\$20,940	30.4%
Picolata Crossing Elementary	\$11,862	\$10,845	\$1,017	8.6%
Palencia Elementary	\$22,176	\$18,002	\$4,175	18.8%
Pedro Menendez High	\$111,243	\$46,626	\$64,616	58.1%
Patriot Oaks Academy	\$58,741	\$47,206	\$11,535	19.6%
Palm Valley Academy	\$32,208	\$37,120	(\$4,911)	-15.2%
PV-PV Elementary	\$41,431	\$13,268	\$28,163	68.0%
Ponte Vedra High	\$122,303	\$56,425	\$65,878	53.9%
Rawlings Elementary	\$47,051	\$22,112	\$24,938	53.0%
St. Augustine High	\$103,009	\$49,111	\$53,898	52.3%
ST Johns Technical High School	\$21,562	\$12,730	\$8,832	41.0%
Sebastian Middle	\$47,431	\$26,414	\$21,017	44.3%
Switzerland Point Middle	\$46,209	\$25,968	\$20,242	43.8%
South Woods Elementary	\$56,177	\$27,300	\$28,877	51.4%
Timberlin Creek Elementary	\$79,370	\$32,029	\$47,340	59.6%
Valley Ridge Academy	\$46,363	\$40,957	\$5,405	11.7%
Wards Creek Elementary	\$65,177	\$35,856	\$29,321	45.0%
W. D. Hartley Elementary	\$55,177	\$20,500	\$34,677	62.8%
Webster Elementary	\$38,152	\$16,369	\$21,783	57.1%
Totals:	\$2,760,348	\$1,506,022	\$1,254,326	45.4%

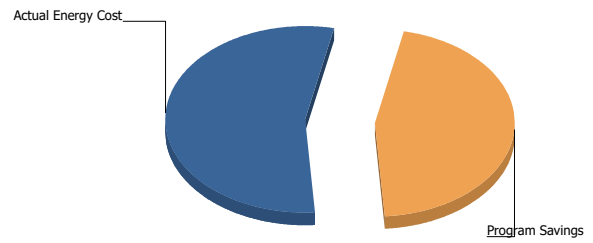
Avoided Cost



3rd Quarter 2020 Cost Savings

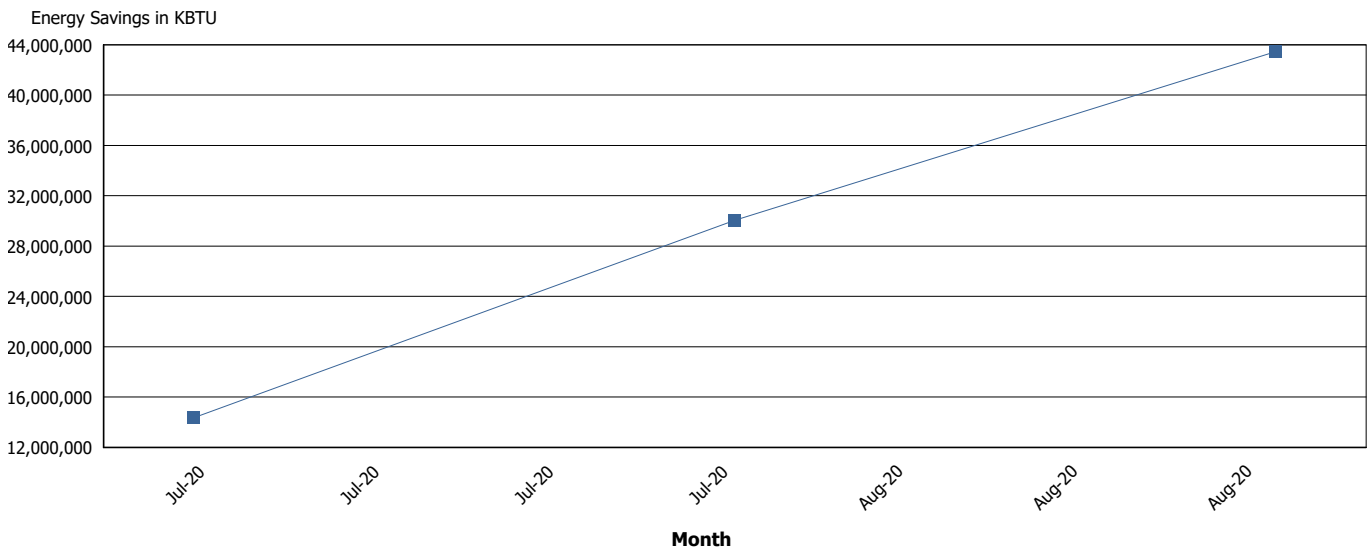
April 2020 - September 2020

Expected Energy Cost	\$2,760,348
Actual Energy Cost	\$1,506,022
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Program Savings	\$1,254,326
Percent Savings	45.4%
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Other Savings	\$0
Total Savings	\$1,254,326



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.	

3rd Quarter 2020 Energy Savings



3rd Quarter 2020 Greenhouse Gas Reduction

Energy Reduction Impact:	43,461,131 KBTU	6,886 equiv. metric tons of CO2
This is equivalent to the following:		
Passenger cars not driven for one year:	1,435	
Tree seedlings grown for 10 years:	176,567	

YTD Monthly Cost Avoidance Summary

	2020		
	Cost Avoid \$	Cost Avoid %	* Total \$
Jan	393,309	40.6	393,309
Feb	361,394	38.8	361,394
Mar	624,146	59.8	624,146
Apr	617,911	69.4	617,911
May	563,699	64.1	563,699
Jun	370,049	50.5	370,049
Jul	455,052	52.4	455,052
Aug	488,072	44.0	488,072
Sep	405,894	37.7	405,894
Total	4,279,525	50.4	4,279,525

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

Energy/Utilities Consumption Summary YTD September 2020

	Use				Cost				
	BATCC	Actual	Avoid	Avoid %	BATCC	Actual	Avoid	Avoid %	Total Savings \$
Electric (KWH)	74,118,142	36,627,624	37,490,518	50.6	7,572,631	3,647,428	3,925,203	51.8	3,925,203
Water (KGAL)	748	2,282	-1,534	-205.1	6,839	18,810	-11,971	-175.0	-11,971
Water & Sewer (KGAL)	50,537	32,283	18,255	36.1	918,911	552,618	366,293	39.9	366,293
Total (KBTU)	252,891,101	124,973,453	127,917,647	50.6	8,498,381	4,218,856	4,279,525	50.4	4,279,525

Cost Avoidance Summary By Commodity

July 2008 - September 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	\$119,243,532	1,052,119,828	\$64,547,324	579,529,829	\$54,696,209	45.9%	472,589,999	44.9%
Water	Kgal	\$108,204	13,428	\$92,213	11,706	\$15,991	14.8%	1,722	12.8%
Water & Sewer	Kgal	\$10,569,885	737,940	\$7,554,594	539,277	\$3,015,291	28.5%	198,663	26.9%
Totals:		\$129,921,621		\$72,194,131		\$57,727,491	44.4%		

Cost Avoidance Summary By Commodity

July 2008 - September 2020

