



### Agenda Item Details

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

A revised Executive Summary for the 1st Quarter (January 2020-March 2020) has been added as backup to this report. This revised summary replaces the previous Quarterly Report information reported to the Board in June 2020. The revisions reflect several changes to data from which these reports are generated. These changes include water bills that were corrected after the original 1st Quarter Executive Summary was generated, as well as credits from FPL.

#### Educational Impact:

The program is intended to reduce operational costs related to utilities, therefore increasing funds 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 April 2020 - June 2020 the Energy Conservation Program has resulted

in additional energy cost avoidance for the School District of \$1,440,659. 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 \$59,750,651.

**Recommendation:**

Acceptance of the Energy Conservation Program Quarterly Status Report for September 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 Report September 2020.pdf \(1,624 KB\)](#)

**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                      Aug 19, 2020 11:54 AM :: Submitted by Cara Pacetti. Routed to Cara Pacetti for approval.  
   Aug 19, 2020 2:12 PM :: Approved by Cara Pacetti. Routed to Paul Rose for approval.  
   Aug 19, 2020 2:14 PM :: Approved by Paul Rose. Routed to Vicki Davenport for approval.  
   Aug 19, 2020 2:54 PM :: Approved by Vicki Davenport. Routed to Nicole Cubbedge for approval.  
   Aug 23, 2020 11:08 PM :: Approved by Nicole Cubbedge. Routed to Gina Fallica for approval.  
   Aug 27, 2020 11:23 AM :: Approved by Gina Fallica. Routed to Tim Forson for approval.  
   Sep 2, 2020 8:19 AM :: Final approval by Tim Forson

Last Modified by Tim Forson on September 2, 2020

**ENERGY CONSERVATION PROGRAM  
QUARTERLY STATUS REPORT  
April 2020 – June 2020**

**EXECUTIVE SUMMARY**

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

- **Electric Cost Avoidance Summary by Building (April 2020 – June 2020):** The District realized a total electric cost avoidance for this quarterly period of \$1,440,659 (or a 64.5% cost avoidance from the baseline period).
- **Greenhouse Gas Reduction:** Greenhouse Gas Reduction for this quarterly period reduced CO<sup>2</sup> by 7,782 metric tons.
- **Year to Date Monthly Cost Avoidance Summary (January 2020 – June 2020):** This reflects the monthly summary of total cost avoidance for the period January 2020 – June 2020.
- **Energy/Utilities Consumption Summary (2<sup>nd</sup> Quarter):** Summary breakdown for electricity, water and sewer for April 2020 – June 2020. The District realized a total water cost avoidance for this quarterly period of \$156,769.
- **Total Cost Avoidance for the district from program inception (July 2008 – June 2020):** This reflects the total cost avoidance since the implementation of the program. Total cumulative cost avoidance of \$59,750,651.
- **A Revised Executive Summary for the 1st Quarter (Jan 2020-March 2020) has been added for information purposes.** This revised Summary replaces the previous version and reflects several changes to data from which these reports are generated. These changes include water bills that were corrected after the original 1<sup>st</sup> Quarter Executive Summary was generated, as well as credits from FPL.

During the period of April 2020 – June 2020 there were 144 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 first quarter for 2020. We are currently monitoring and collecting energy consumption and billing data to determine the COVID-19 impacts and additional savings due to the impacts of the school closings and distance learning.

**ENERGY CONSERVATION PROGRAM  
QUARTERLY STATUS REPORT  
January 2020 – March 2020**

**EXECUTIVE SUMMARY  
(REVISED)**

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

- Cost Avoidance Summary by Site (January 2020 – March 2020): The District realized a total cost avoidance for this quarterly period of \$1,304,057 (or a 49.2% cost avoidance from the baseline period).
- Greenhouse Gas Reduction: Greenhouse Gas Reduction for this quarterly period reduced CO<sup>2</sup> by 5,844 metric tons.
- Year to Date Monthly Cost Avoidance Summary (January 2020 – March 2020): This reflects the monthly summary of total cost avoidance for the period January 2020 – March 2020.
- Energy Consumption Summary (Cumulative Year to date): Summary breakdown for electricity, water & sewer, and irrigation for January 2020 – March 2020.
- Total cost avoidance for the district from program inception (July 2008 – March 2020): This reflects the total cost avoidance since the implementation of the program. Total cumulative cost avoidance of \$58,153,224.

During the period of January 2020 – March 2020 there were 125 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 first quarter for 2020. We are currently monitoring and collecting energy consumption and billing data to determine the COVID-19 impacts and additional savings due to the impacts of the school closings and distance learning.

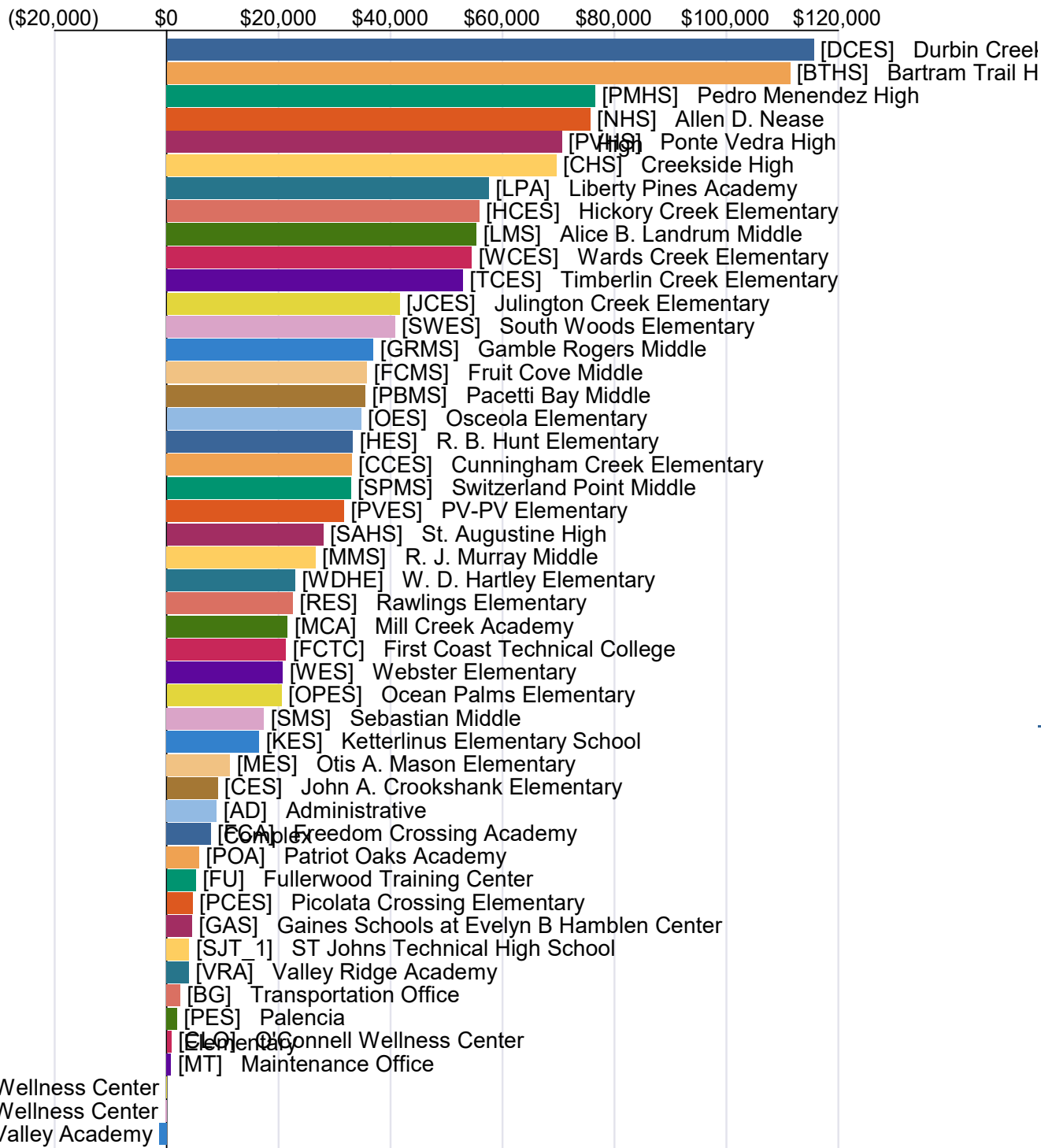
## Electric Cost Avoidance Summary By Building

St. Johns County School Board

April 2020 - June 2020

Place	BATCC Cost	Actual Cost	Cost Avoidance	Cost Avoidance %
Administrative Complex	\$20,541	\$11,598	\$8,943	43.5%
Transportation Office	\$5,630	\$3,211	\$2,419	43.0%
Bartram Trail High	\$143,003	\$31,597	\$111,407	77.9%
Cunningham Creek Elementary	\$48,390	\$15,312	\$33,078	68.4%
John A. Crookshank Elementary	\$18,192	\$9,082	\$9,111	50.1%
Creekside High	\$107,797	\$38,087	\$69,709	64.7%
Nease Wellness Center	\$778	\$862	(\$85)	-10.9%
O'Connell Wellness Center	\$1,993	\$1,152	\$841	42.2%
Pedro Menendez Wellness Center	\$856	\$1,114	(\$258)	-30.2%
Durbin Creek Elementary	\$139,516	\$23,871	\$115,645	82.9%
Freedom Crossing Academy	\$32,361	\$24,445	\$7,915	24.5%
Fruit Cove Middle	\$57,167	\$21,354	\$35,814	62.6%
First Coast Technical College	\$57,276	\$35,927	\$21,349	37.3%
Fullerwood Training Center	\$8,143	\$2,962	\$5,180	63.6%
Gaines Schools at Evelyn B Hamblen	\$9,664	\$5,105	\$4,559	47.2%
Gamble Rogers Middle	\$49,174	\$12,200	\$36,974	75.2%
Hickory Creek Elementary	\$72,713	\$16,834	\$55,879	76.8%
R. B. Hunt Elementary	\$39,528	\$6,237	\$33,291	84.2%
Julington Creek Elementary	\$70,334	\$28,679	\$41,655	59.2%
Ketterlinus Elementary School	\$23,740	\$7,217	\$16,523	69.6%
Alice B. Landrum Middle	\$78,953	\$23,546	\$55,407	70.2%
Liberty Pines Academy	\$107,249	\$49,640	\$57,609	53.7%
Mill Creek Academy	\$42,608	\$20,972	\$21,636	50.8%
Otis A. Mason Elementary	\$19,475	\$8,169	\$11,306	58.1%
R. J. Murray Middle	\$38,184	\$11,589	\$26,596	69.7%
Maintenance Office	\$2,911	\$2,144	\$767	26.3%
Allen D. Nease High	\$99,941	\$24,177	\$75,764	75.8%
Osceola Elementary	\$44,744	\$9,994	\$34,750	77.7%
Ocean Palms Elementary	\$44,319	\$23,781	\$20,538	46.3%
Pacetti Bay Middle	\$57,478	\$21,970	\$35,508	61.8%
Picolata Crossing Elementary	\$10,849	\$6,207	\$4,643	42.8%
Palencia Elementary	\$13,268	\$11,434	\$1,834	13.8%
Pedro Menendez High	\$103,578	\$26,929	\$76,649	74.0%
Patriot Oaks Academy	\$34,283	\$28,494	\$5,790	16.9%
Palm Valley Academy	\$21,679	\$22,997	(\$1,318)	-6.1%
PV-PV Elementary	\$38,980	\$7,289	\$31,691	81.3%
Ponte Vedra High	\$94,034	\$23,377	\$70,658	75.1%
Rawlings Elementary	\$36,198	\$13,655	\$22,542	62.3%
St. Augustine High	\$52,551	\$24,574	\$27,977	53.2%
ST Johns Technical High School	\$9,438	\$5,401	\$4,036	42.8%
Sebastian Middle	\$32,815	\$15,468	\$17,347	52.9%
Switzerland Point Middle	\$49,330	\$16,433	\$32,897	66.7%
South Woods Elementary	\$62,659	\$21,830	\$40,830	65.2%
Timberlin Creek Elementary	\$70,176	\$17,173	\$53,002	75.5%
Valley Ridge Academy	\$30,068	\$26,100	\$3,968	13.2%
Wards Creek Elementary	\$68,183	\$13,637	\$54,546	80.0%
W. D. Hartley Elementary	\$35,079	\$12,104	\$22,975	65.5%
Webster Elementary	\$28,043	\$7,280	\$20,764	74.0%
<b>Totals:</b>	<b>\$2,233,868</b>	<b>\$793,209</b>	<b>\$1,440,659</b>	<b>64.5%</b>

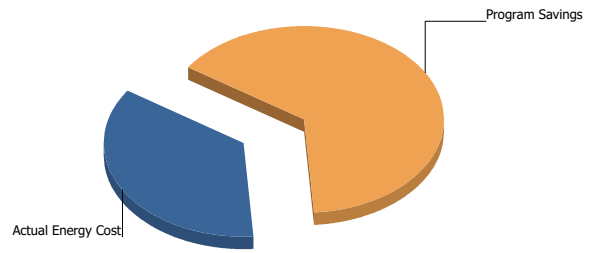
## Avoided Cost



## 2nd Quarter 2020 Cost Savings

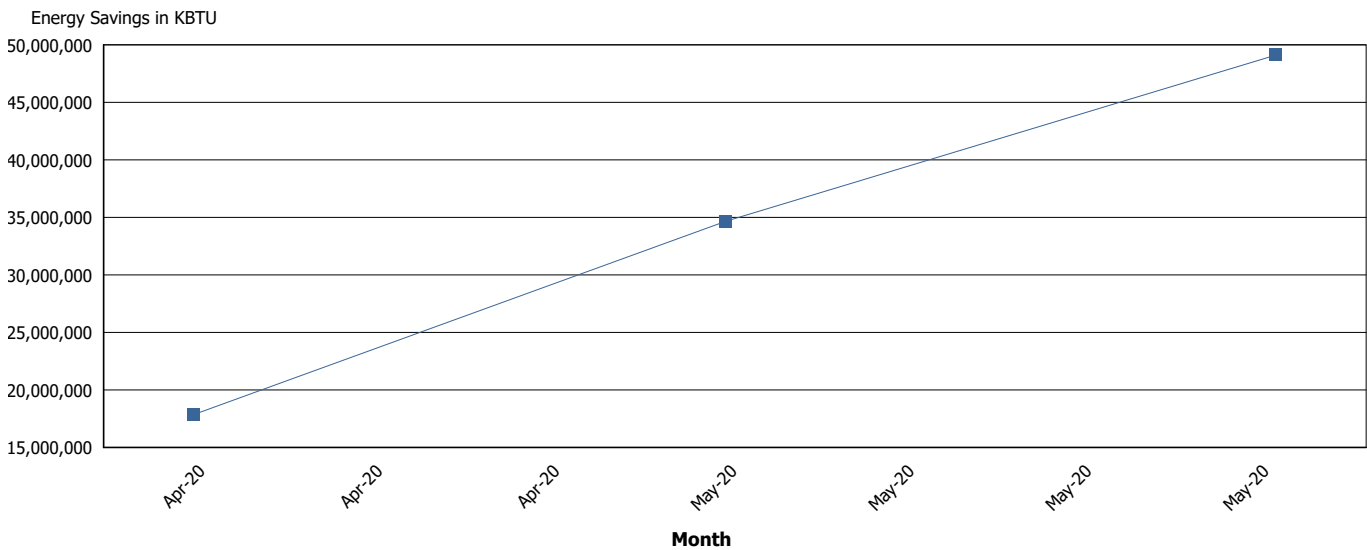
April 2020 - June 2020

Expected Energy Cost	\$2,233,868
Actual Energy Cost	\$793,209
Program Savings	\$1,440,659
Percent Savings	64.5%
Other Savings	\$0
Total Savings	\$1,440,659



Expected Energy Cost	Actual Energy Cost	Program Savings
<p>Anticipated expense without energy management.</p> <p>Base year usage after adjustments for such variables as changes in weather, equipment, schedules, occupancy and prices.</p>	<p>Actual utility costs for electricity, gas, water, sewer, etc. obtained directly from bills.</p> <div style="background-color: black; color: white; text-align: center; padding: 2px;"><b>Other Savings</b></div> <p>Additional documented savings attributable to Program activities but not the direct result of usage reductions, such as rebates, refunds, tariff changes, etc.</p>	<p>The difference between Expected and Actual Cost, calculated in accordance with the International Performance Measurement &amp; 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%.</p>

## 2nd Quarter 2020 Energy Savings



## 2nd Quarter 2020 Greenhouse Gas Reduction

**Energy Reduction Impact:** 49,117,327 KBTU 7,782 equiv. metric tons of CO<sub>2</sub>

This is equivalent to the following:

Passenger cars not driven for one year:	1,621
Tree seedlings grown for 10 years:	199,546

## MONTHLY COST AVOIDANCE SUMMARY

	2020 - 2021		
	Cost Avoid \$	Cost Avoid %	* Total \$
Apr	<b>633,078</b>	<b>69.9</b>	<b>633,078</b>
May	<b>577,578</b>	<b>64.7</b>	<b>577,578</b>
Jun	<b>386,771</b>	<b>51.6</b>	<b>386,771</b>
<b>Total</b>	<b>1,597,427</b>	<b>62.7</b>	<b>1,597,427</b>

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

## ENERGY / UTILITIES CONSUMPTION SUMMARY YTD JUNE 2020

	Use				Cost				
	BATCC	Actual	Avoid	Avoid %	BATCC	Actual	Avoid	Avoid %	Total Savings \$
Electric (KWH)	<b>23,424,876</b>	<b>9,029,411</b>	<b>14,395,465</b>	<b>61.5</b>	<b>2,233,868</b>	<b>793,209</b>	<b>1,440,659</b>	<b>64.5</b>	<b>1,440,659</b>
Water (KGAL)	<b>190</b>	<b>1,858</b>	<b>-1,668</b>	<b>-875.6</b>	<b>1,859</b>	<b>14,906</b>	<b>-13,046</b>	<b>-701.7</b>	<b>-13,046</b>
Water & Sewer (KGAL)	<b>16,046</b>	<b>6,863</b>	<b>9,183</b>	<b>57.2</b>	<b>312,754</b>	<b>142,940</b>	<b>169,815</b>	<b>54.3</b>	<b>169,815</b>
<b>Total (KBTU)</b>	<b>79,925,677</b>	<b>30,808,350</b>	<b>49,117,327</b>	<b>61.5</b>	<b>2,548,482</b>	<b>951,054</b>	<b>1,597,427</b>	<b>62.7</b>	<b>1,597,427</b>



## Cost Avoidance Summary By Commodity July 2008 - June 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	\$119,605,082	1,048,981,511	\$63,041,302	563,251,565	\$56,563,780	47.3%	485,729,946	46.3%
Water	Kgal	\$108,911	13,022	\$89,137	11,060	\$19,774	18.2%	1,962	15.1%
Water & Sewer	Kgal	\$10,524,768	754,906	\$7,357,672	527,334	\$3,167,096	30.1%	227,572	30.1%
<b>Totals:</b>		<b>\$130,238,761</b>		<b>\$70,488,110</b>		<b>\$59,750,651</b>	<b>45.9%</b>		

# Cost Avoidance Summary By Commodity

## July 2008 - June 2020

