



SANTA MONICA-MALIBU UNIFIED SCHOOL DISTRICT

## Energy Assessment Report

Prepared For:

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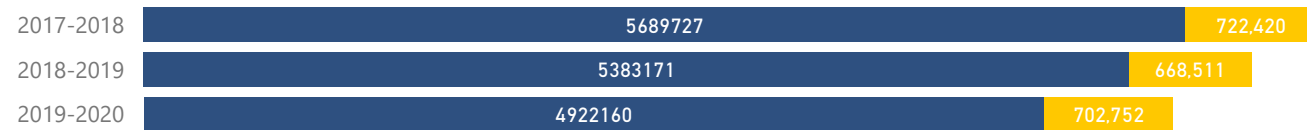
# District Electric Energy Totals

## Overview

In FY 2018-19, Santa Monica-Malibu Unified School District (SMMUSD) launched a Districtwide Sustainability Plan. This plan provides a strategic roadmap for formalizing and uniting the District's many existing sustainability initiatives, including student learning, integrating climate protection, resource efficiency, waste management, and energy efficiency. In accordance with the Sustainability Plan, there are several projects currently scoped over the next few years which will affect the District's total electric usage. SitelogIQ will coordinate closely with the District to ensure awareness as to the progress of Facilities Improvement Projects and any others as they pertain to energy management. Thus far, all LED lighting projects were completed as of March 2019. Additionally, several of the sites were retrofitted with HVAC units, and are consequently operating at a higher consumption rate. Lastly, SAMOHI and Malibu HS are currently undergoing major construction.

## Electricity (kWh) by FY (Jul - Feb)

● Utility Purchased Energy (kWh) ● Solar Generation (kWh)

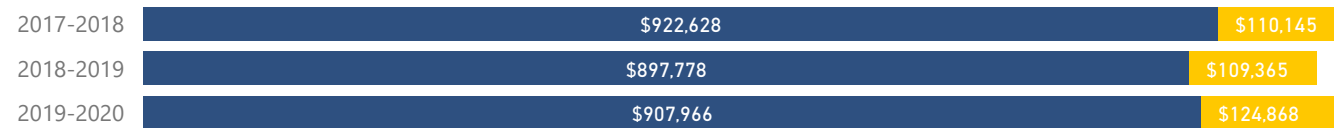


kWh Savings vs FY 17-18 YTD

**787,235**

## Electricity (\$) by FY (Jul - Feb)

● Utility Purchased Cost (\$) ● Site Electric PPA Cost (\$)



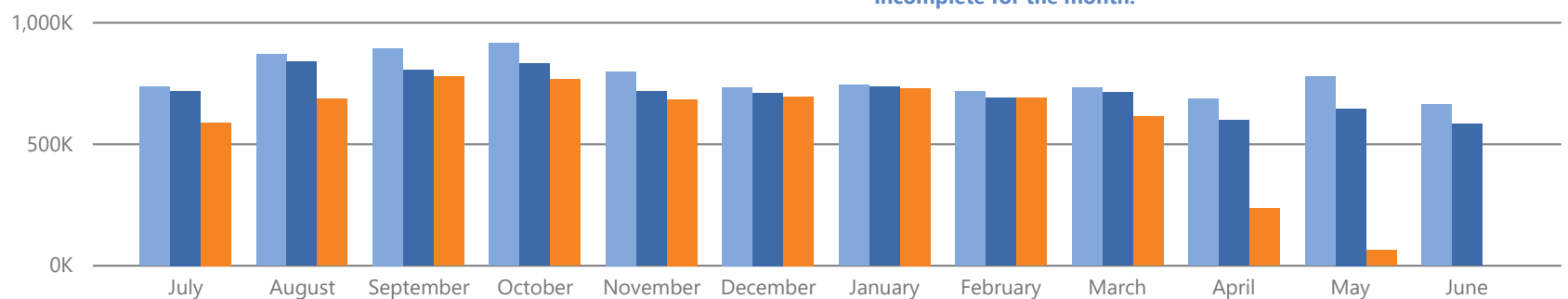
Avoided Costs vs FY 2017-18

**\$165,044**

## Total Electric (kWh) by Month and Fiscal Year

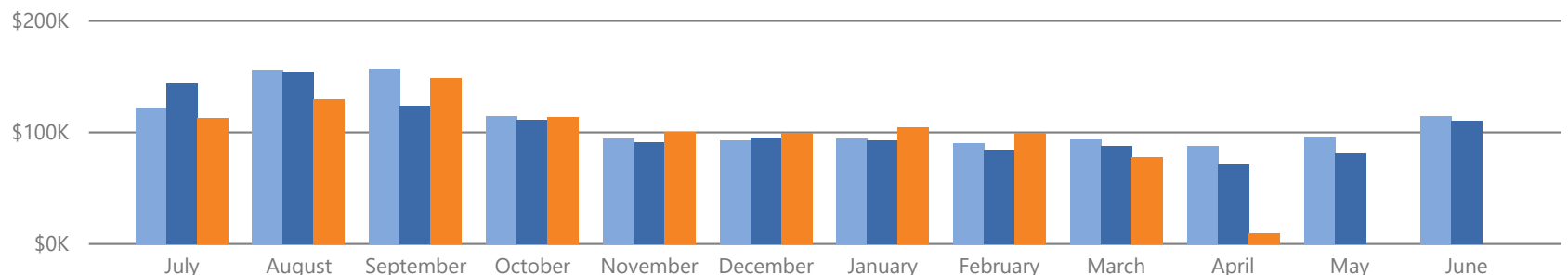
FY ● 2017-2018 ● 2018-2019 ● 2019-2020

\*Note that latest month values are not accurate due to data being incomplete for the month.



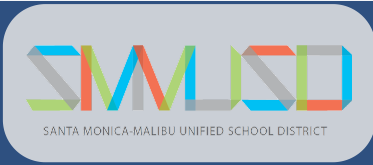
## Total Electric Cost (\$) by Month

FY ● 2017-2018 ● 2018-2019 ● 2019-2020



\*Note that latest month values are not accurate due to data being incomplete for the month.

\*\* PPA cost data was not available for FY 2017-18



## Site Electric Energy & Costs

Site Name	Utility Purchased Energy (kWh)	Solar Generation (kWh)	Total Electric (kWh)	Utility Purchased Cost (\$)	Electric PPA Cost (\$)	Electric Total Cost (\$)
Bus Barn	24,454		24,454	\$4,134		\$4,134
District Office	233,935		233,935	\$70,685		\$70,685
Edison Elementary	226,287		226,287	\$44,713		\$44,713
Franklin Elementary	66,190	127,546	193,736	\$13,919	\$22,275	\$36,194
Grant Elementary	32,944	99,259	132,203	\$6,110	\$18,468	\$24,578
John Adams MS (JAMS)	349,878		349,878	\$64,665		\$64,665
John Muir Elementary/SMASH	124,810	7,007	131,816	\$22,967	\$2,652	\$25,619
Juan Cabrillo ES	2,884	72,577	75,461	\$3,272	\$12,042	\$15,313
Lincoln MS	508,672		508,672	\$85,022		\$85,022
Malibu Elementary School	88,123	59,767	147,890	\$11,038	\$10,308	\$21,346
Malibu HS/MS	638,570		638,570	\$101,550		\$101,550
McKinley Elementary	162,701	20,386	183,087	\$26,135	\$3,466	\$29,601
Obama Center for Inquiry and Exploration	128,175		128,175	\$22,914		\$22,914
Roosevelt Elementary	6,214	138,386	144,600	\$5,655	\$22,971	\$28,626
Santa Monica HS (SAMOHI)	2,222,784		2,222,784	\$395,351		\$395,351
Washington Pre/FIP	75,401		75,401	\$17,081		\$17,081
Webster Elementary	-2,980	77,102	74,122	\$3,112	\$12,666	\$15,778
Will Rogers Elementary	33,118	100,723	133,841	\$9,643	\$17,901	\$27,544
<b>Total</b>	<b>4,922,160</b>	<b>702,752</b>	<b>5,624,912</b>	<b>\$907,966</b>	<b>\$122,748</b>	<b>\$1,030,714</b>

**Utility Purchased Energy (kWh):** Quantity of electricity purchased from the utility (SCE)

**Solar Generation (kWh):** Quantity of electricity produced by the solar photovoltaic panels

**Total Electric (kWh):** Sum total electricity usage of solar production and utility purchased electricity

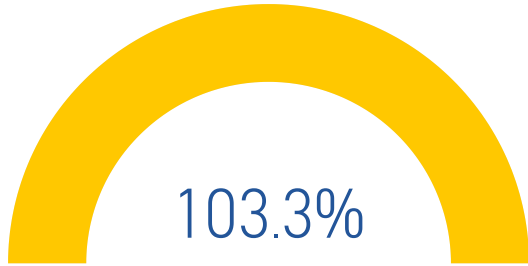
**Utility Purchased Cost (\$):** Total electrical cost from electricity utility (SCE)

**Electric PPA Cost (\$):** The cost of electricity purchase from the Solar Power Purchase Agreement (PPA)

**Electric Total Cost (\$):** Total costs for electricity, including electric utility (SCE) and the PPA

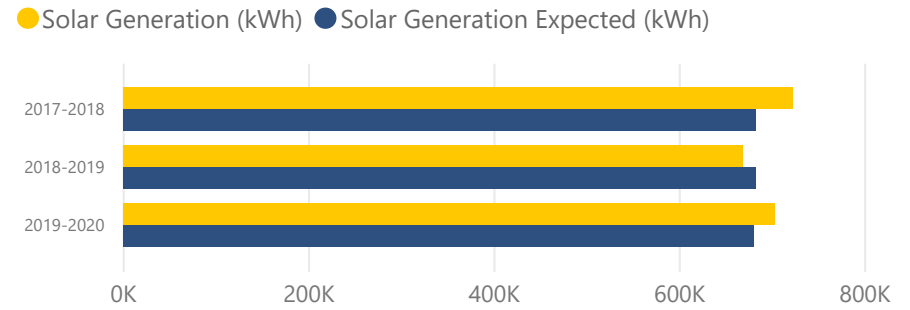
# Solar Performance

## % Solar Performance



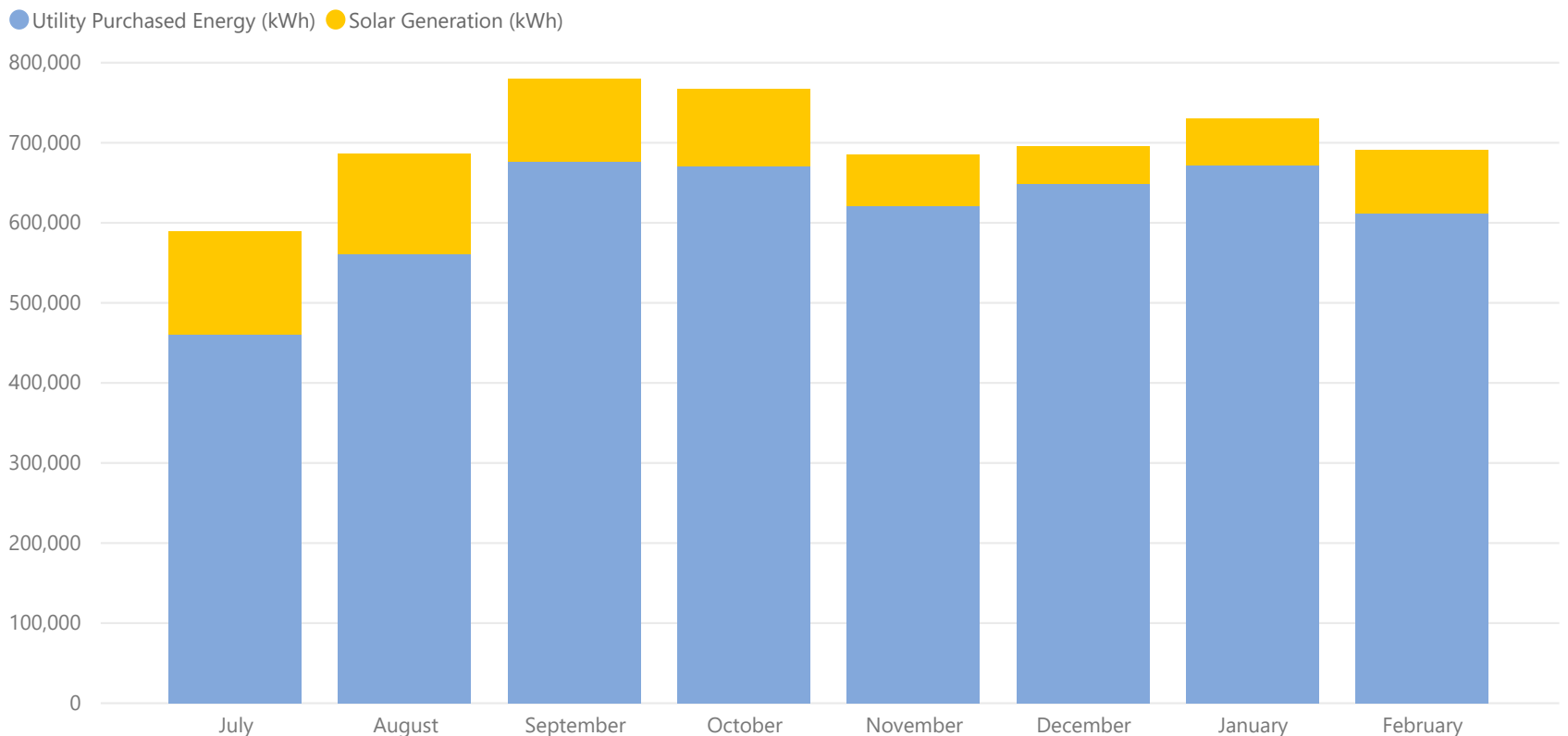
% Solar Performance is a percentage of total electricity provided by solar generation compared to the amount expected based on weather models.

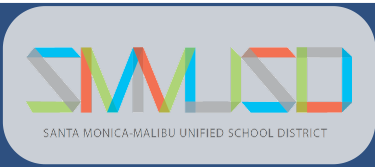
## Solar Generation By Fiscal Year



Site Name	Solar Generation (kWh)	Solar Performance (%)	Site Electric PPA Cost (\$)
Franklin Elementary	127,546	101.6%	\$22,275
Grant Elementary	99,259	99.6%	\$18,468
John Muir Elementary/SMASH	7,007	94.7%	\$2,652
Juan Cabrillo ES	72,577	114.7%	\$12,042
Malibu Elementary School	59,767	88.0%	\$10,308
McKinley Elementary	20,386	75.9%	\$3,466
Roosevelt Elementary	138,386	110.2%	\$22,971
Webster Elementary	77,102	109.7%	\$12,666
Will Rogers Elementary	100,723	107.6%	\$17,901
<b>Total</b>	<b>702,752</b>	<b>103.3%</b>	<b>\$122,748</b>

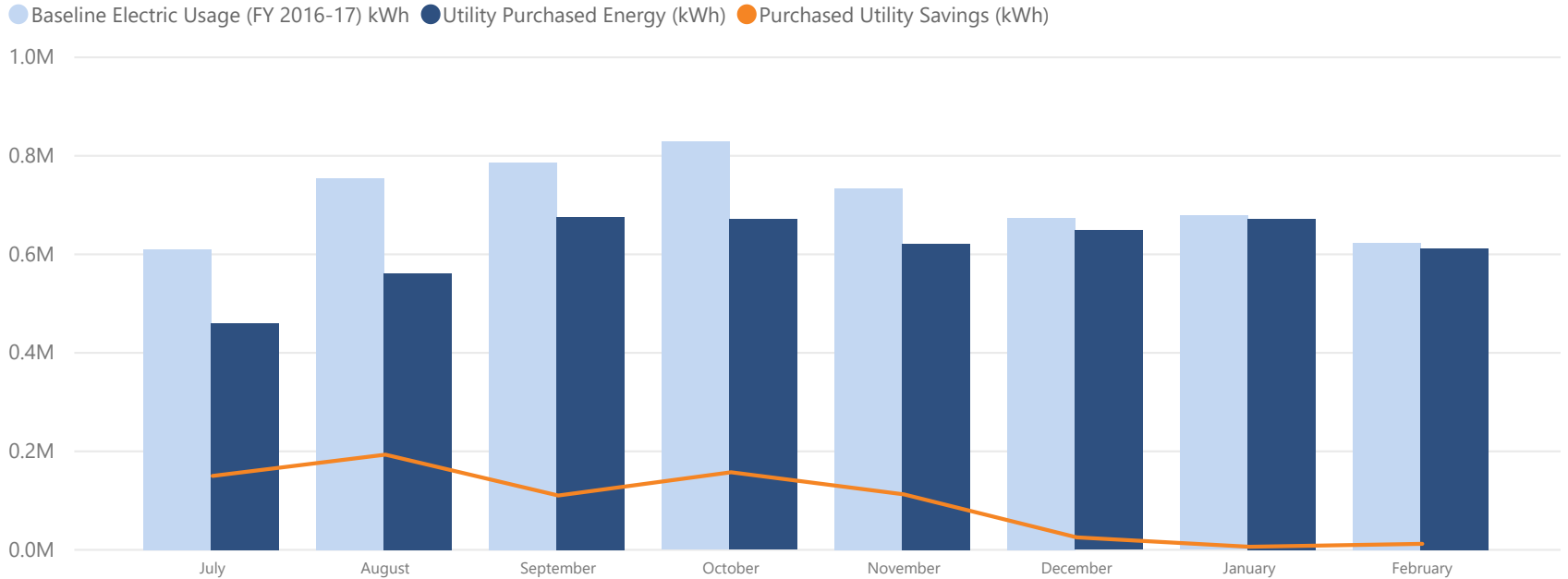
## Total Electric (kWh) by Month



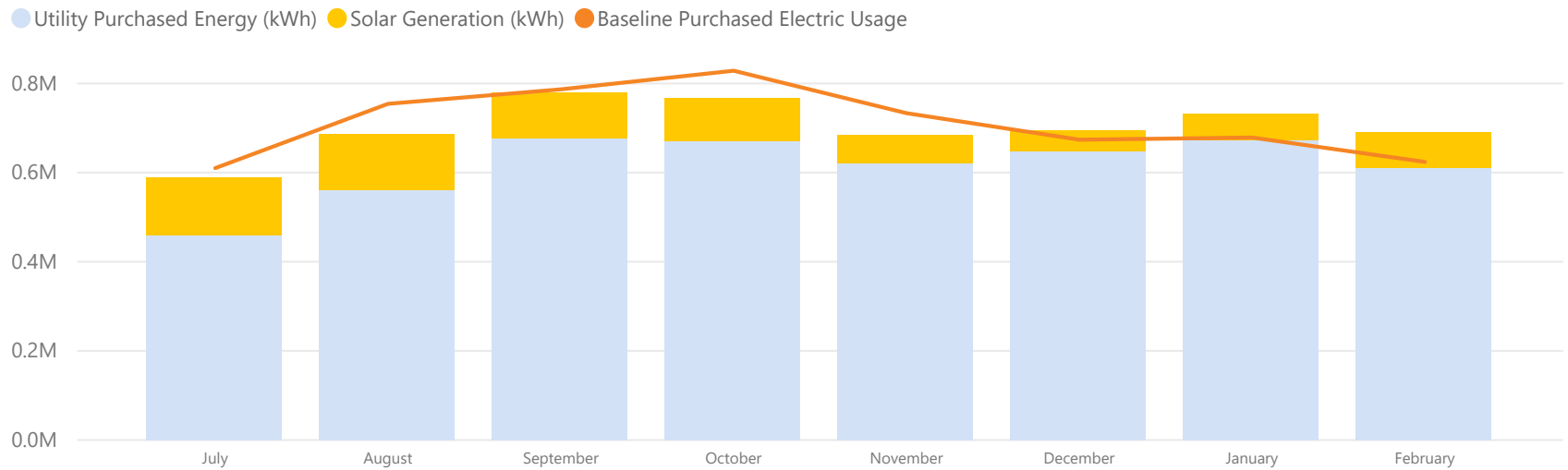


## Baseline (FY 2017-2018) vs Current (FY 2019-2020)

### Utility Purchased Electricity vs. Baseline



### Total Electric Usage vs. Baseline



FY 2017-18 Baseline Usage (kWh)	FY 2019-20 Usage (kWh)	Utility Rate (\$/kWh)	Total Energy (kWh) Savings
6,412,147	5,624,912	\$0.1814	787,235
FY 17-18 Baseline Cost (\$)	FY 2019-20 Cost (\$)	Avoided Costs (\$)	SCE Cost Savings (\$)
\$928,287	\$1,020,463	\$165,044	\$2,061

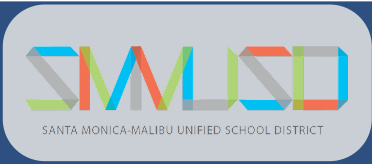
**Cost Savings (\$):** Savings based on difference in utility bills compared to baseline year.

**Total Energy kWh Savings:** Total Electricity reduction (solar and utility purchased electricity) between current year and baseline year.

\* Electrical Usage values include total solar generation and electricity purchased from the utility (SCE)

\*\* PPA cost data was not available for FY 2017-18





Month Range: Jul - Feb  
 Current Fiscal Year: 2019-2020  
 Baseline Fiscal Year: 2017-2018

## Bus Barn : Energy Totals

### Electricity (kWh) by FY (Jul - Feb)



### Electricity (\$) by FY (Jul - Feb)



(kWh) Savings vs Baseline YTD

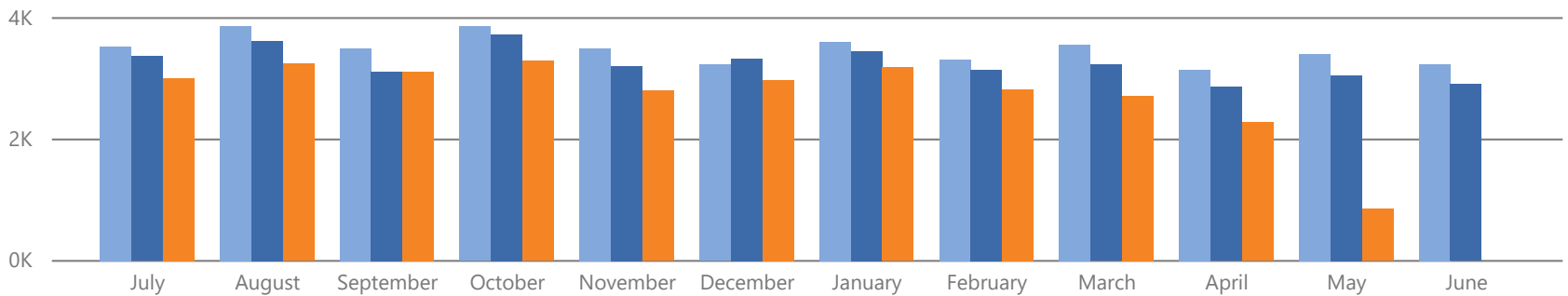
3,957

(\$ Savings vs Baseline YTD

\$83

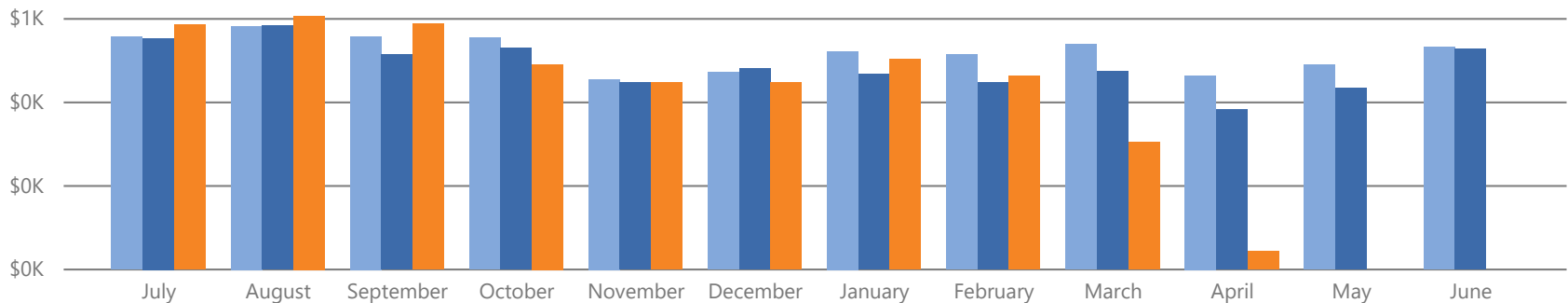
### Total Electric (kWh) by Month and Fiscal Year

FY ● 2017-2018 ● 2018-2019 ● 2019-2020



### Total Electric Cost (\$) by Month

FY ● 2017-2018 ● 2018-2019 ● 2019-2020



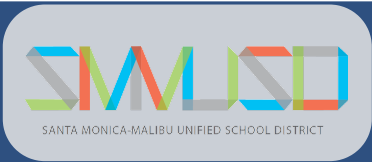
### Site Narrative

In FY 2019-20 from July through February, the Bus Barn showed a **decrease in electricity of about 3,957 kWh (14% reduction)**, though **costs have increased by about \$83 (2%) compared to FY 2017-18**. Part of the reason for this difference in percent energy vs cost savings is due to the rate increase resultant from obtaining energy through clean generation sources. Since rate increases have occurred both through SCE and with the addition of Community Choice Aggregation (CCA) costs, monetary savings are better communicated through avoided costs (energy savings multiplied by current \$/kWh). **Avoided Costs during this period is equal to \$726.**

No major projects have been performed at the Bus Barn within the past fiscal year.

\*Note that latest month values are not accurate due to data being incomplete for the month.





Month Range: Jul - Feb  
 Current Fiscal Year: 2019-2020  
 Baseline Fiscal Year: 2017-2018

## District Office : Energy Totals

### Electricity (kWh) by FY (Jul - Feb)



### Electricity (\$) by FY (Jul - Feb)



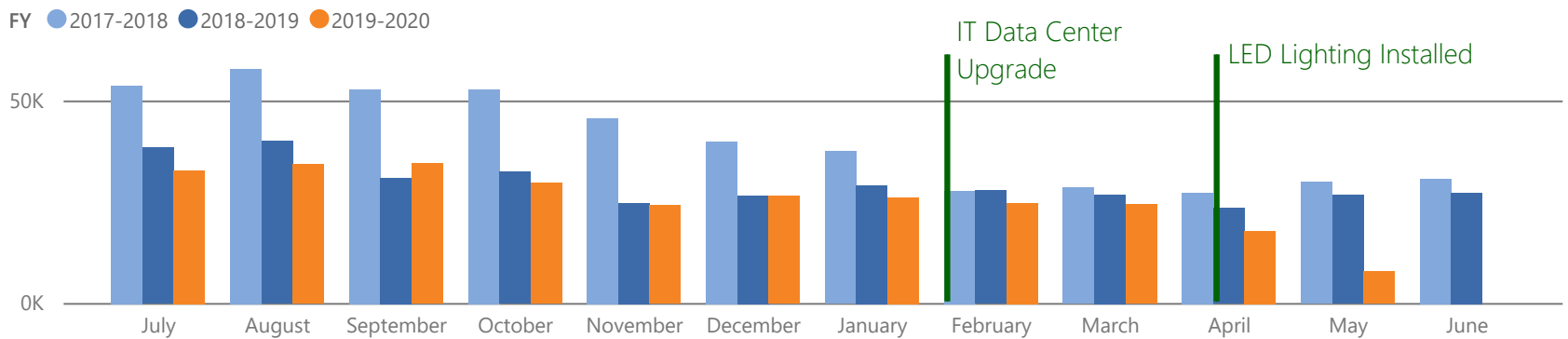
(kWh) Savings vs Baseline YTD

135,420

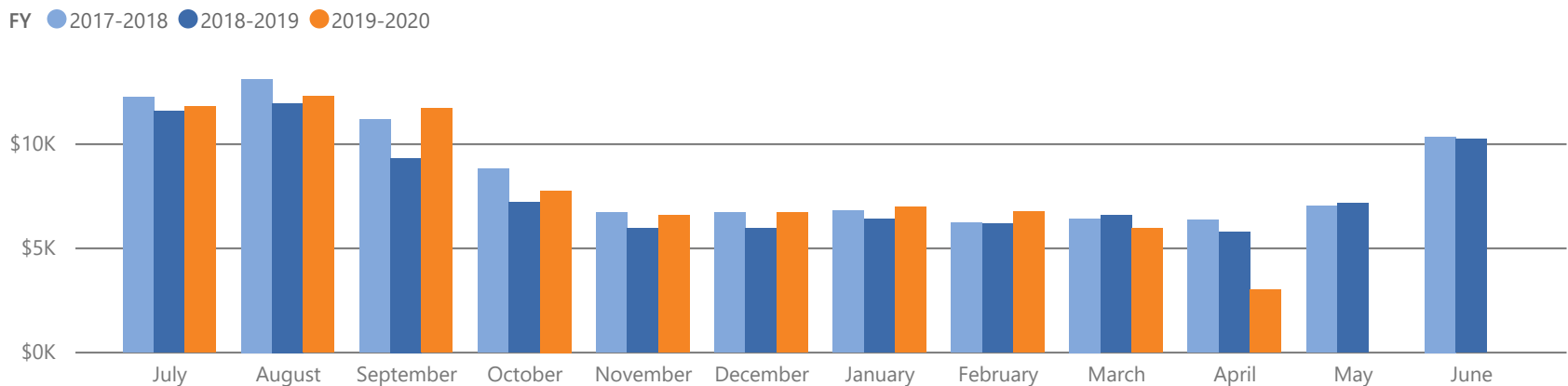
(\$ Savings vs Baseline YTD

\$1,207

### Total Electric (kWh) by Month and Fiscal Year



### Total Electric Cost (\$) by Month



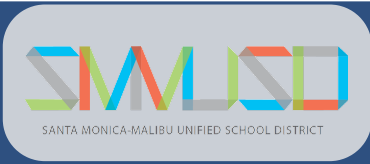
### Site Narrative

In FY 2019-20 from July through February, the District Office showed a **decrease in electricity of 135,420 kWh (37% reduction), yielding a cost savings of about \$1,207 (2% reduction) compared to FY 2017-18.** This drastic difference in energy usage is largely due to optimization of the cooling system District server area. The District Office has also made significant progress becoming very conscious of making behavior changes. However, part of the reason for this difference in percent energy vs cost savings is due to the rate increase from obtaining energy through clean generation sources. Since rate increases have occurred both through SCE and with the addition of Community Choice Aggregation (CCA) costs, monetary savings are better communicated through avoided costs (energy savings multiplied by current \$/kWh). **Avoided Costs during this period is equal to \$24,862.**

A timeline of the major projects at the site is shown in the total electricity graph above. Green indicates a project that resulted in lowered energy use, while red indicates a project that increases energy use. The District Office completed an upgrade of the server room, leading to a lowered system cooling demand in February 2018, significantly lowering overall energy consumption. Interior LED lighting completed installation in April 2019, which led to additional energy savings.

\*Note that latest month values are not accurate due to data being incomplete for the month.





Month Range: Jul - Feb  
 Current Fiscal Year: 2019-2020  
 Baseline Fiscal Year: 2017-2018

## Edison Elementary : Energy Totals

### Electricity (kWh) by FY (Jul - Feb)



### Electricity (\$) by FY (Jul - Feb)



### (kWh) Savings vs Baseline YTD

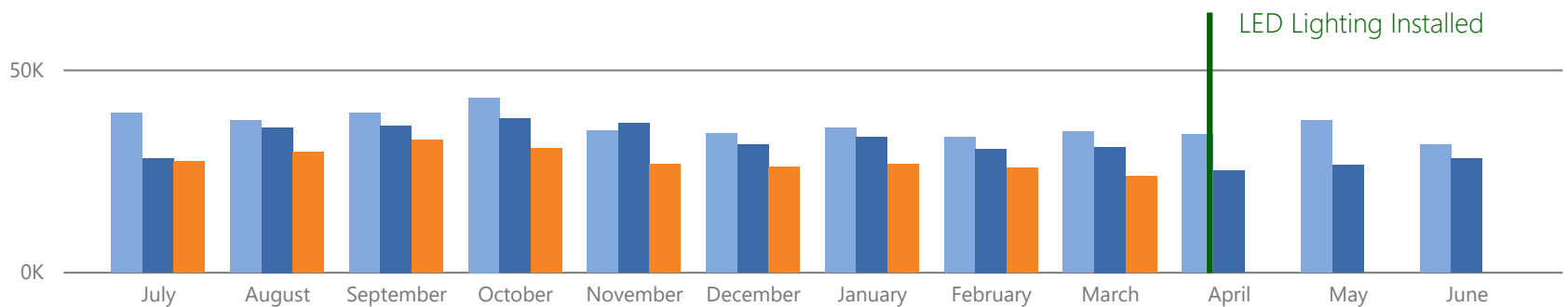
71,951

### (\$ Savings vs Baseline YTD

\$2,516

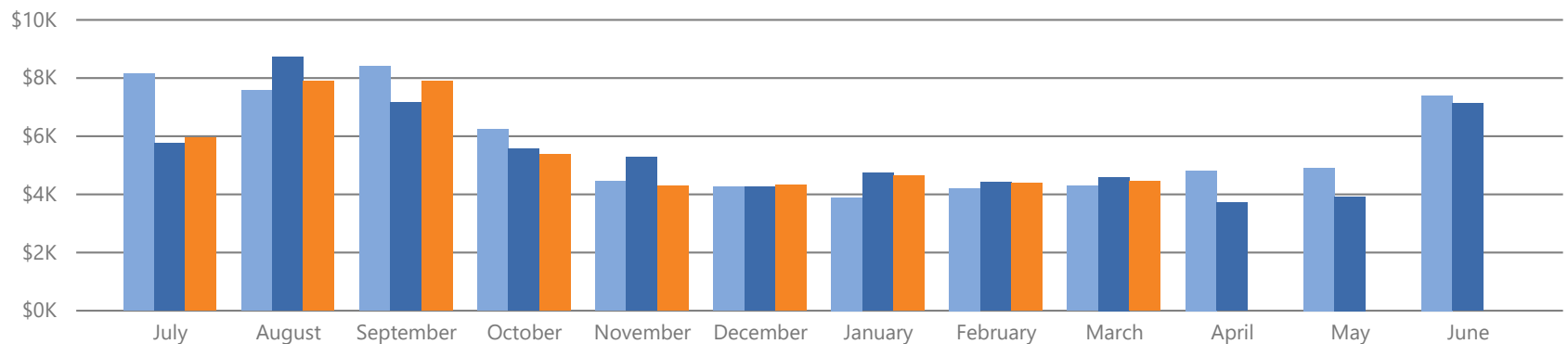
### Total Electric (kWh) by Month and Fiscal Year

FY ● 2017-2018 ● 2018-2019 ● 2019-2020



### Total Electric Cost (\$) by Month

FY ● 2017-2018 ● 2018-2019 ● 2019-2020



### Site Narrative

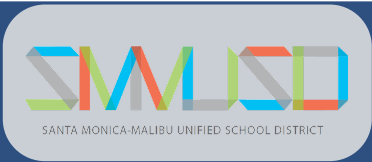
In FY 2019-20 from July through February, Edison Language Academy showed a decrease in electricity of 71,951 kWh (24% reduction), yielding a cost savings of \$2,516 (5% reduction) compared to FY 2017-18. Part of the reason for this difference in percent energy vs cost savings is due to the rate increase from obtaining energy through clean generation sources. Since rate increases have occurred both through SCE and with the addition of Community Choice Aggregation (CCA) costs, monetary savings are better communicated through avoided costs (energy savings multiplied by current \$/kWh). **Avoided Costs during this period is equal to \$13,210.**

A timeline of the major projects at the site is shown in the total electricity graph above. Green indicates a project that resulted in lowered energy use, while red indicates a project that increases energy use. Edison Language Academy completed an upgrade to interior LED lighting installation in April 2019.

\*Note that latest month values are not accurate due to data being incomplete for the month.

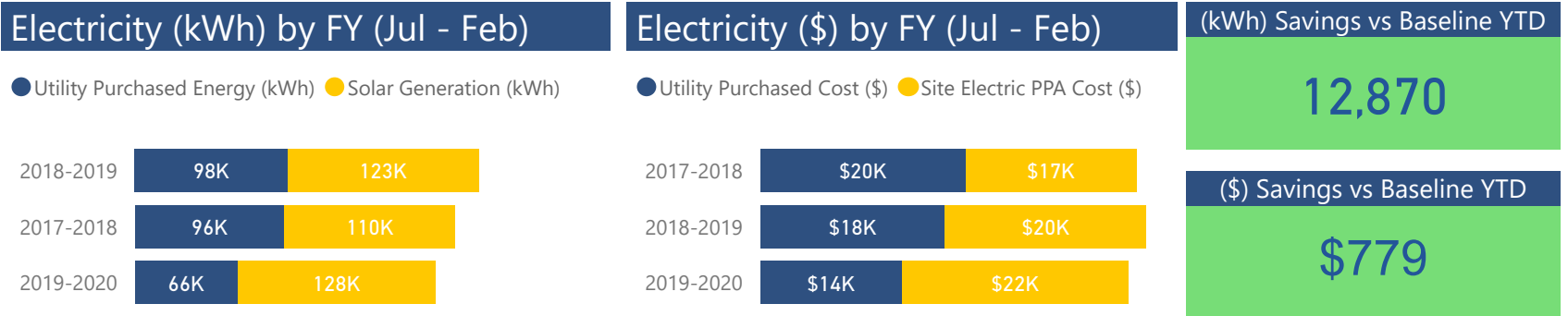




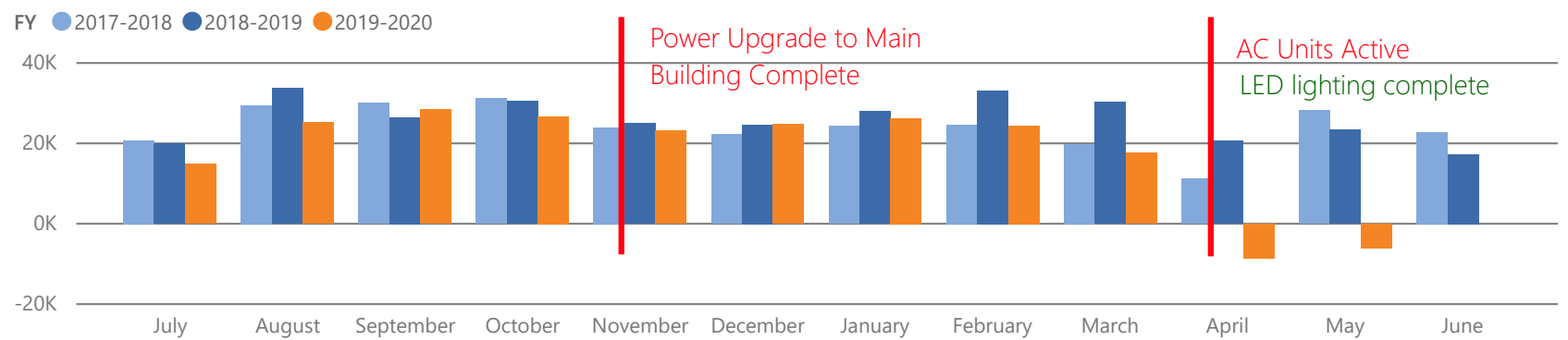


Month Range: Jul - Feb  
 Current Fiscal Year: 2019-2020  
 Baseline Fiscal Year: 2017-2018

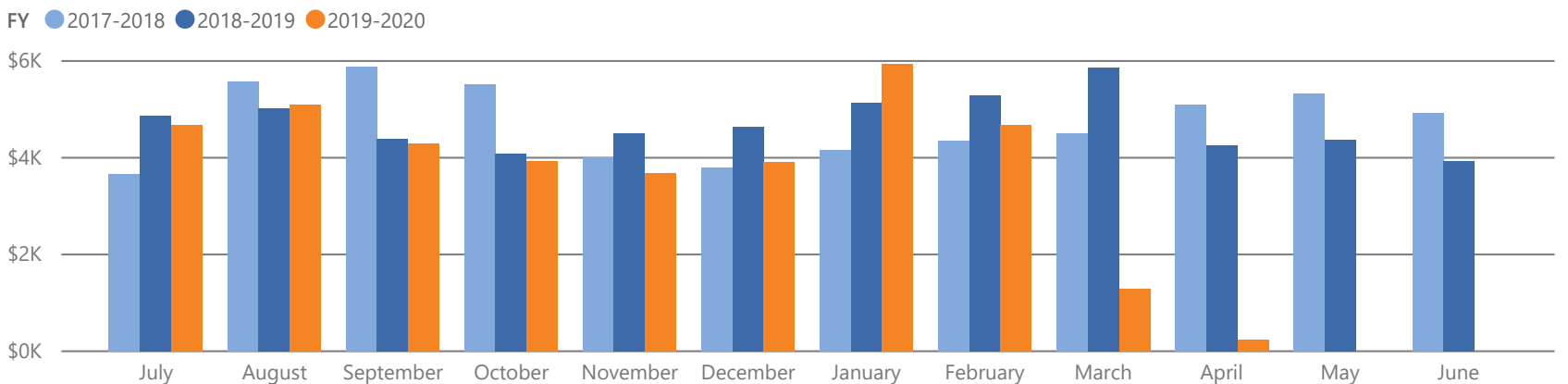
# Franklin Elementary : Energy Totals



## Total Electric (kWh) by Month and Fiscal Year



## Total Electric Cost (\$) by Month



### Site Narrative

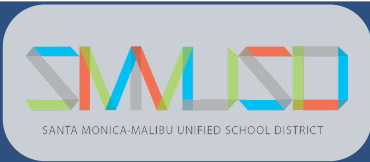
In FY 2019-20 from July through February, Franklin Elementary showed a decrease in electricity use of 12,870 kWh (6% decrease), and SCE costs have decreased by \$779 (2%) compared to FY 2017-18. This discrepancy may be a result of shifted peak energy usage and costs from solar generation. Since rate increases have occurred both through SCE and with the addition of Community Choice Aggregation (CCA) costs, monetary savings are better communicated through avoided costs (energy savings multiplied by current \$/kWh). **Avoided Costs during this period is equal to \$2,363.**

A timeline of the major projects at the site is shown in the total electricity graph above. Green indicates a project that resulted in lowered energy use, while red indicates a project that increases energy use. Franklin Elementary completed installation of new AC units, where previously there had been none, which led to an increase in overall energy consumption in FY 2018-19. However, interior LED lighting completed installation in April 2019, which seemingly lowered the energy usage.

\*Note that latest month values are not accurate due to data being incomplete for the month.

\*\* PPA cost data was not available for FY 2017-18



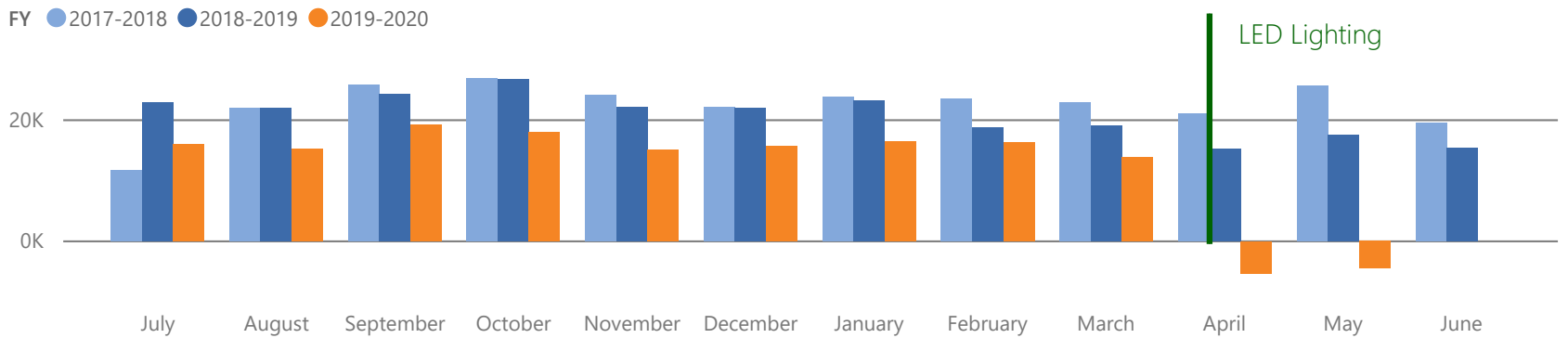


Month Range: Jul - Feb  
 Current Fiscal Year: 2019-2020  
 Baseline Fiscal Year: 2017-2018

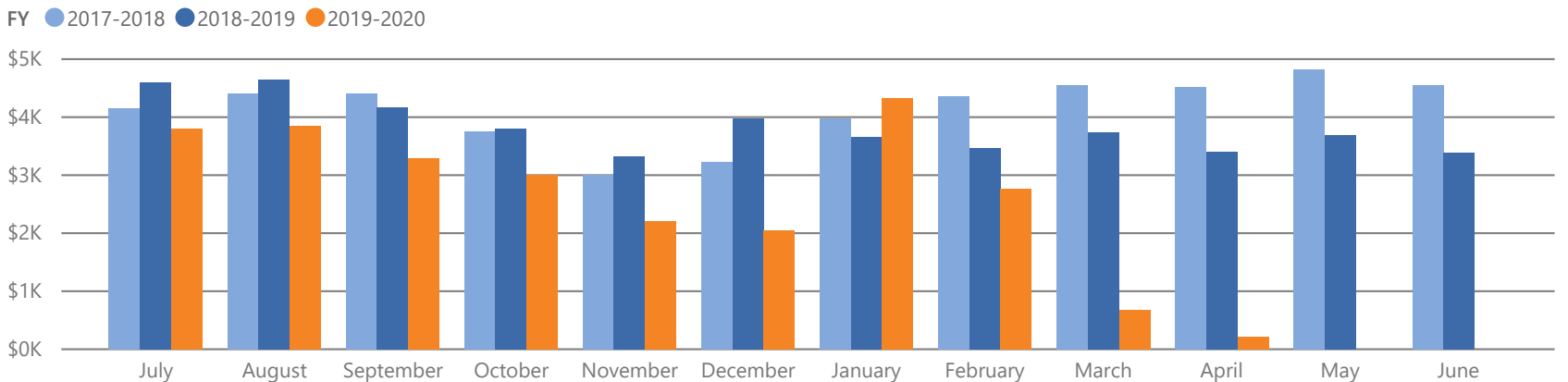
# Grant Elementary : Energy Totals

Electricity (kWh) by FY (Jul - Feb)		Electricity (\$) by FY (Jul - Feb)		(kWh) Savings vs Baseline YTD
● Utility Purchased Energy (kWh)	● Solar Generation (kWh)	● Utility Purchased Cost (\$)	● Site Electric PPA Cost (\$)	<b>47,827</b>
2018-2019	84K / 98K	2017-2018	\$15K / \$16K	(\$ Savings vs Baseline YTD <b>\$6,723</b>
2017-2018	76K / 104K	2018-2019	\$16K / \$16K	
2019-2020	33K / 99K	2019-2020	\$6K / \$18K	

## Total Electric (kWh) by Month and Fiscal Year



## Total Electric Cost (\$) by Month



## Site Narrative

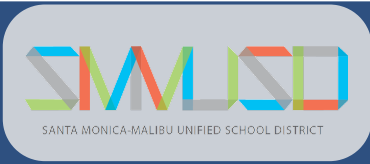
In FY 2019-20 from July through February, Grant Elementary showed a decrease in electricity of 47,827 kWh (27% reduction), yielding a SCE cost savings of about \$6,723 (21% reduction) compared to FY 2017-18. Since rate increases have occurred both through SCE and with the addition of Community Choice Aggregation (CCA) costs, monetary savings are better communicated through avoided costs (energy savings multiplied by current \$/kWh). **Avoided Costs during this period is equal to \$8,891.**

A timeline of the major projects at the site is shown in the total electricity graph above. Green indicates a project that resulted in lowered energy use, while red indicates a project that increases energy use. Grant Elementary completed installation of interior LED lighting in April 2019, which significantly lowered the energy usage in the following months.

\*Note that latest month values are not accurate due to data being incomplete for the month.

\*\* PPA cost data was not available for FY 2017-18





Month Range: Jul - Feb  
 Current Fiscal Year: 2019-2020  
 Baseline Fiscal Year: 2017-2018

# John Adams MS (JAMS) : Energy Totals

## Electricity (kWh) by FY (Jul - Feb)



## Electricity (\$) by FY (Jul - Feb)



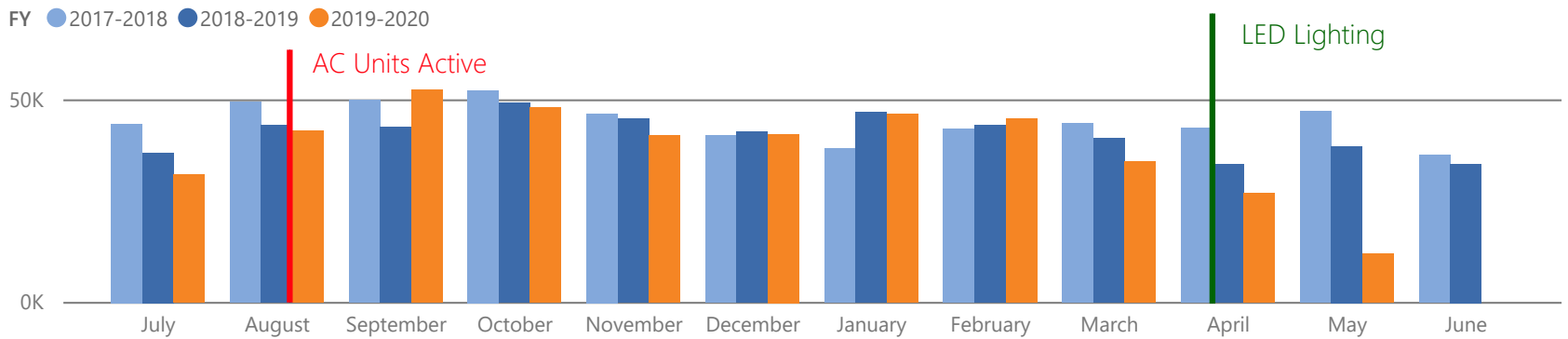
## (kWh) Savings vs Baseline YTD

15,270

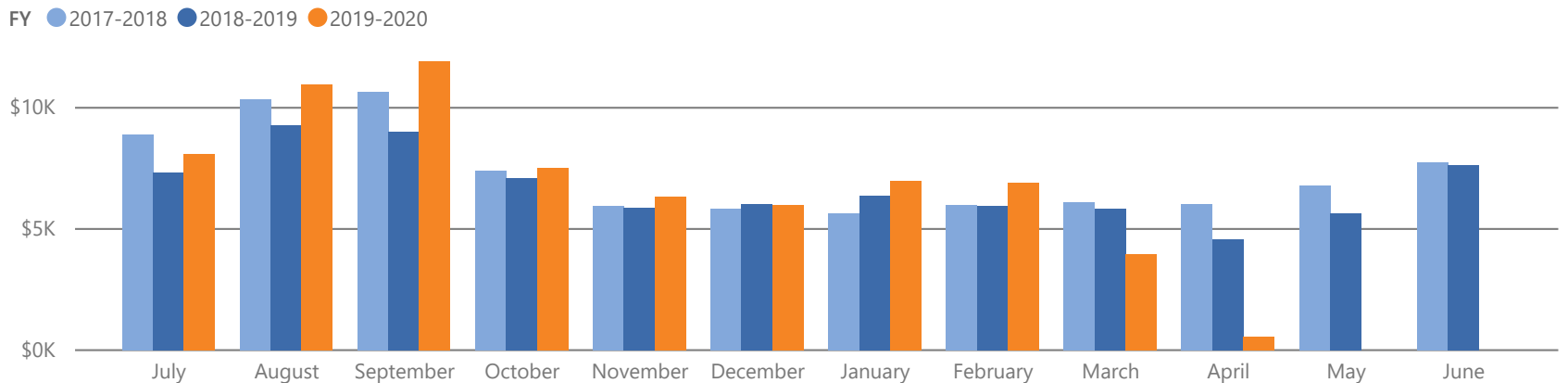
## (\$ Savings vs Baseline YTD

(\$3,914)

## Total Electric (kWh) by Month and Fiscal Year



## Total Electric Cost (\$) by Month



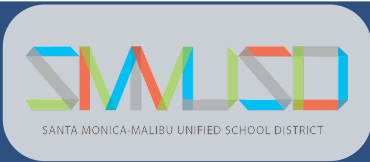
## Site Narrative

In FY 2019-20 from July through February, the John Adams Middle School showed a decrease in electricity of 15,270 kWh (4% reduction), but costs have increased by about \$3,914 (6%) compared to FY 2017-18. Part of the reason for this difference in energy vs cost savings is due to the rate increase from obtaining energy through clean generation sources, yielding a higher cost per kWh. Since rate increases have occurred both through SCE and with the addition of Community Choice Aggregation (CCA) costs, monetary savings are better communicated through avoided costs (energy savings multiplied by current \$/kWh). **Avoided Costs during this period is equal to \$2,822.**

A timeline of the major projects at the site is shown in the total electricity graph above. Green indicates a project that resulted in lowered energy use, while red indicates a project that increases energy use. John Adams MS completed installation of interior LED lighting in April 2019, which significantly lowered the energy usage in the following months. The site also completed installation of AC Units in August 2019, which resulted in a increase in energy consumption.

\*Note that latest month values are not accurate due to data being incomplete for the month.



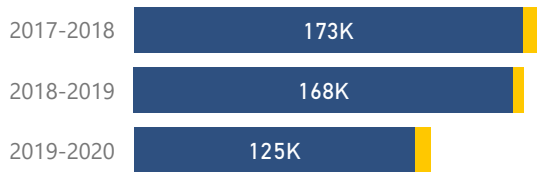


Month Range: Jul - Feb  
 Current Fiscal Year: 2019-2020  
 Baseline Fiscal Year: 2017-2018

# John Muir Elementary/SMASH : Energy Totals

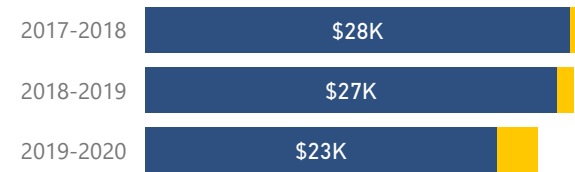
## Electricity (kWh) by FY (Jul - Feb)

● Utility Purchased Energy (kWh) ● Solar Generation (kWh)



## Electricity (\$) by FY (Jul - Feb)

● Utility Purchased Cost (\$) ● Site Electric PPA Cost (\$)



## (kWh) Savings vs Baseline YTD

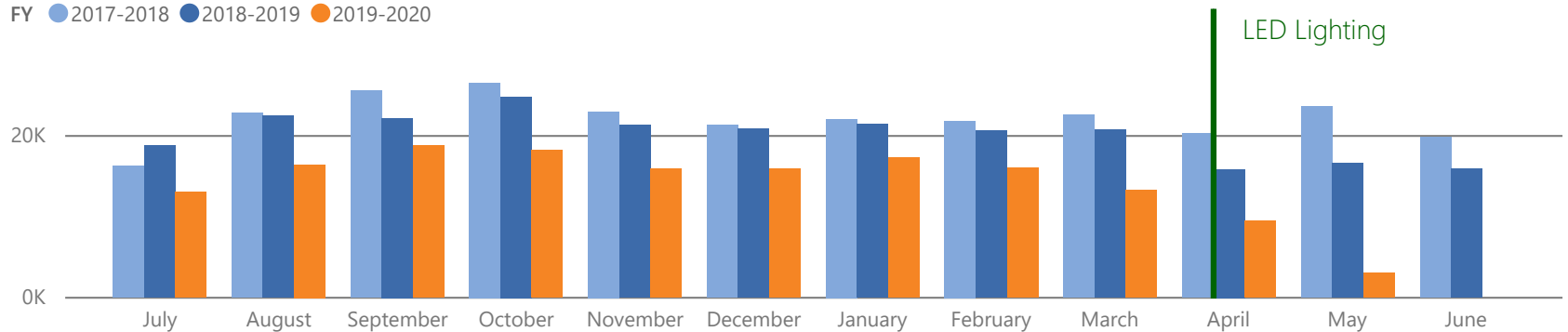
47,738

## (\$ Savings vs Baseline YTD

\$3,194

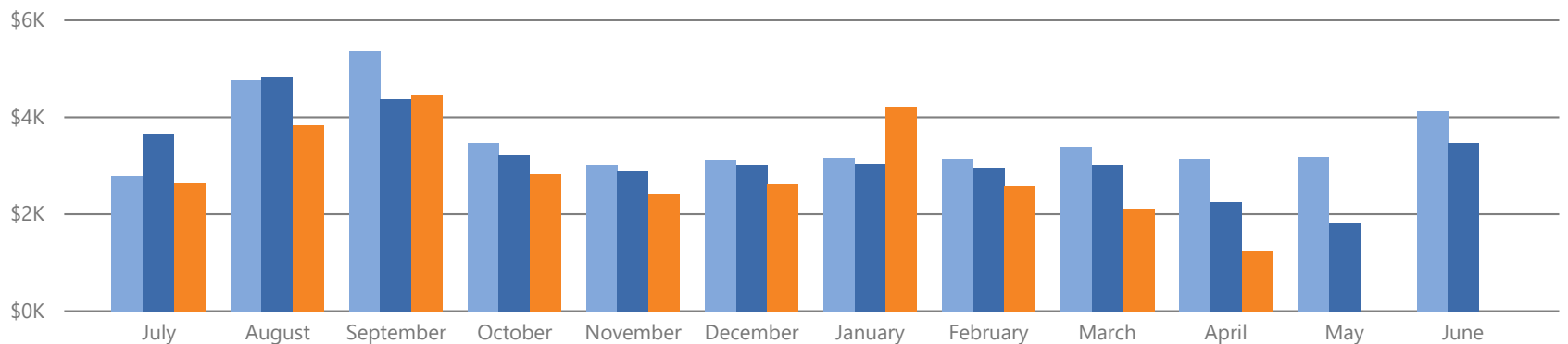
## Total Electric (kWh) by Month and Fiscal Year

FY ● 2017-2018 ● 2018-2019 ● 2019-2020



## Total Electric Cost (\$) by Month

FY ● 2017-2018 ● 2018-2019 ● 2019-2020



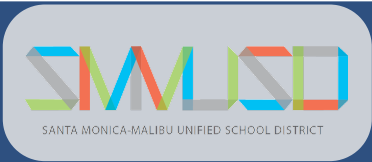
## Site Narrative

In FY 2019-20 from July through February, the John Muir/SMASH site showed a decrease in electricity of 47,738 kWh (27% reduction), yielding a cost savings of about \$3,194 (11% reduction) compared to FY 2017-18. Part of the reason for this difference in energy vs cost savings is due to the rate increase from obtaining energy through clean generation sources, yielding a higher cost per kWh. Since rate increases have occurred both through SCE and with the addition of Community Choice Aggregation (CCA) costs, monetary savings are better communicated through avoided costs (energy savings multiplied by current \$/kWh). **Avoided Costs during this period is equal to \$9,278.** A timeline of the major projects at the site is shown in the total electricity graph above. Green indicates a project that resulted in lowered energy use, while red indicates a project that increases energy use. John Muir Elementary completed installation of interior LED lighting in April 2019, which significantly lowered the energy usage in the following months.

\*Note that latest month values are not accurate due to data being incomplete for the month.

\*\* PPA cost data was not available for FY 2017-18



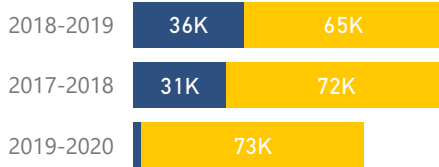


Month Range: Jul - Feb  
 Current Fiscal Year: 2019-2020  
 Baseline Fiscal Year: 2017-2018

## Juan Cabrillo ES : Energy Totals

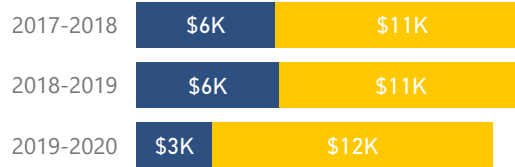
### Electricity (kWh) by FY (Jul - Feb)

● Utility Purchased Energy (k... ● Solar Generation (k...



### Electricity (\$) by FY (Jul - Feb)

● Utility Purchased Cost (\$) ● Site Electric PPA Cost (\$)



### Savings vs Baseline YTD

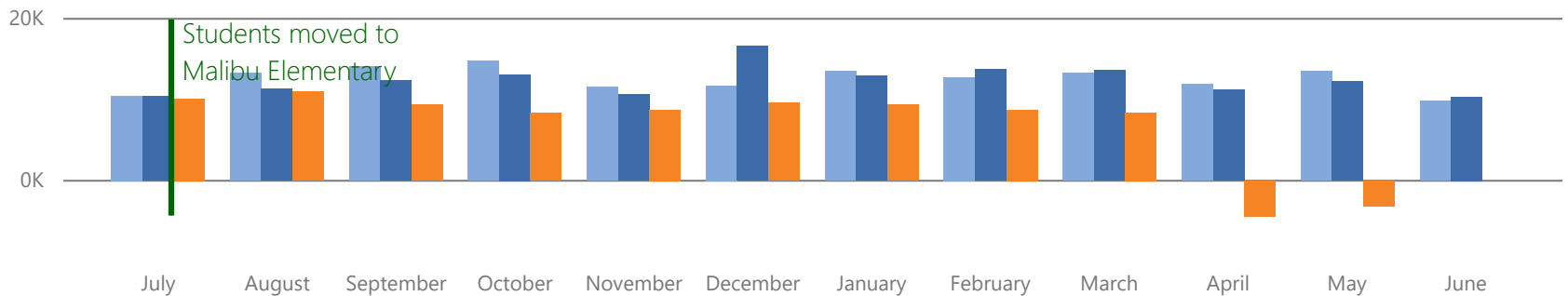
26,800

### (\$ Savings vs Baseline YTD

\$1,574

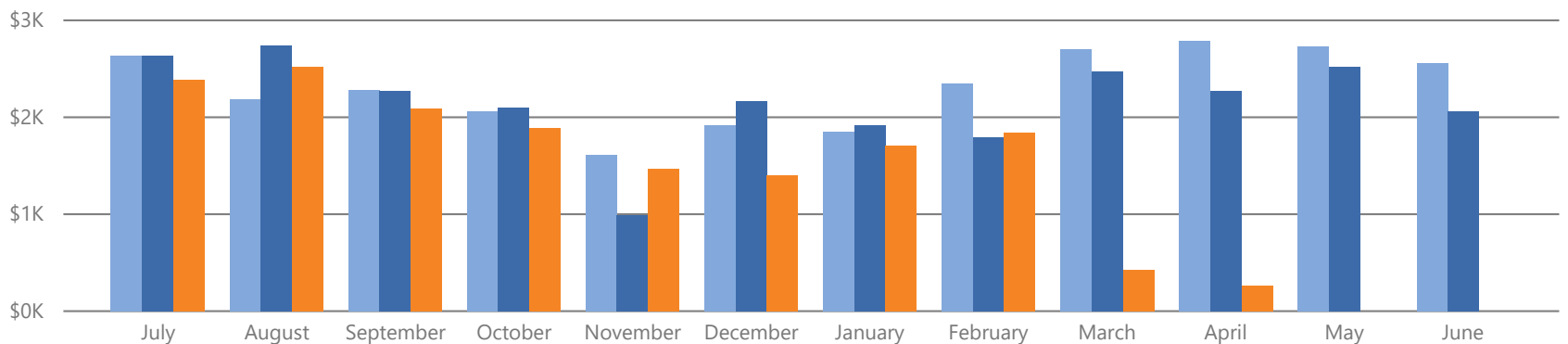
## Total Electric (kWh) by Month and Fiscal Year

FY ● 2017-2018 ● 2018-2019 ● 2019-2020



## Total Electric Cost (\$) by Month

FY ● 2017-2018 ● 2018-2019 ● 2019-2020



## Site Narrative

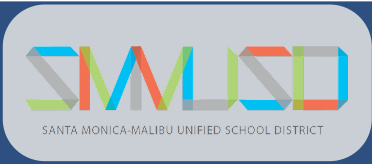
In FY 2019-20 from July through February, the John Muir/SMASH site showed a decrease in electricity of 26,800 kWh (26% reduction), yielding an SCE cost savings of about \$1,574 (9% reduction) compared to FY 2017-18. This discrepancy may be a result of shifted peak energy usage and costs from solar generation. Since rate increases have occurred both through SCE and with the addition of Community Choice Aggregation (CCA) costs, monetary savings are better communicated through avoided costs (energy savings multiplied by current \$/kWh). **Avoided Costs during this period is equal to \$5,439.**

A timeline of the major projects at the site is shown in the total electricity graph above. Green indicates a project that resulted in lowered energy use, while red indicates a project that increases energy use. Juan Cabrillo Elementary is currently under construction as part of the combining with the Malibu HS/MS site. This year, all students were moved to Malibu Elementary (formerly Point Dume Marine Science), thus there was a significant reduction in energy usage starting July 2019.

\*Note that latest month values are not accurate due to data being incomplete for the month.

\*\* PPA cost data was not available for FY 2017-18





Month Range: Jul - Feb  
 Current Fiscal Year: 2019-2020  
 Baseline Fiscal Year: 2017-2018

# Lincoln MS : Energy Totals

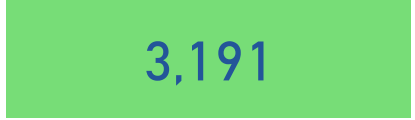
## Electricity (kWh) by FY (Jul - Feb)



## Electricity (\$) by FY (Jul - Feb)



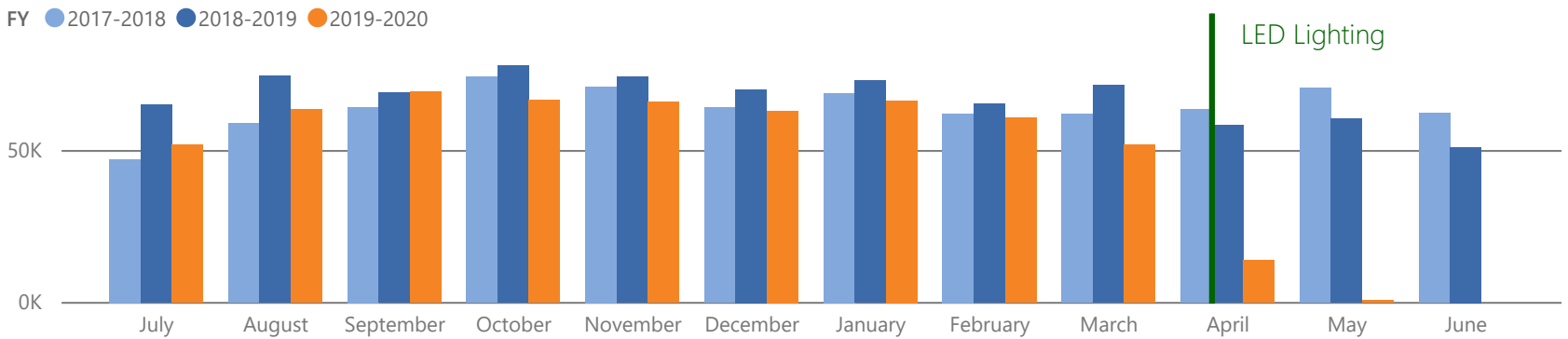
## (kWh) Savings vs Baseline YTD



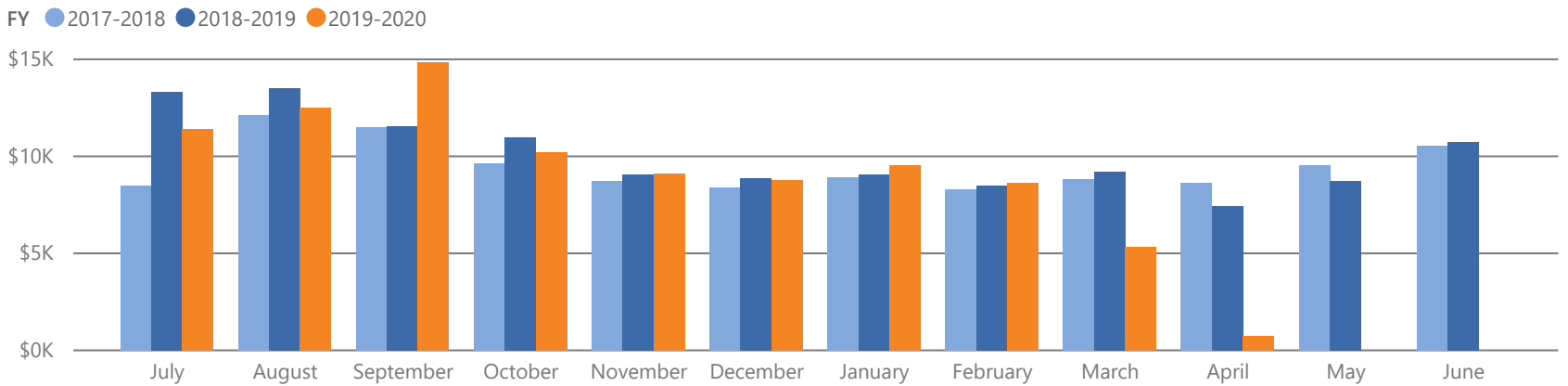
## (\$ Savings vs Baseline YTD



## Total Electric (kWh) by Month and Fiscal Year



## Total Electric Cost (\$) by Month



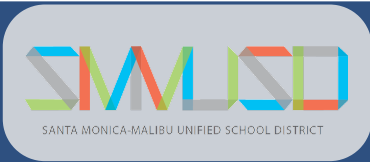
## Site Narrative

In FY 2019-20 from July through February Lincoln MS showed an decrease in electricity of 3,192 kWh (1% increase), but increased utility costs by \$8,962 (12% increase) compared to FY 2017-18. Since rate increases have occurred both through SCE and with the addition of Community Choice Aggregation (CCA) costs, monetary savings are better communicated through avoided costs (energy savings multiplied by current \$/kWh). **Avoided Costs during this period is equal to \$533.**

A timeline of the major projects at the site is shown in the total electricity graph above. Green indicates a project that resulted in lowered energy use, while red indicates a project that increases energy use. Lincoln Middle School completed installation of interior LED lighting in April 2019, which significantly lowered the energy usage in the following months.

\*Note that latest month values are not accurate due to data being incomplete for the month.

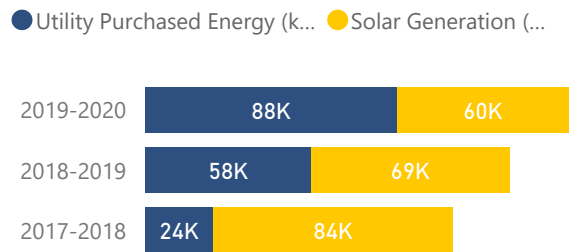




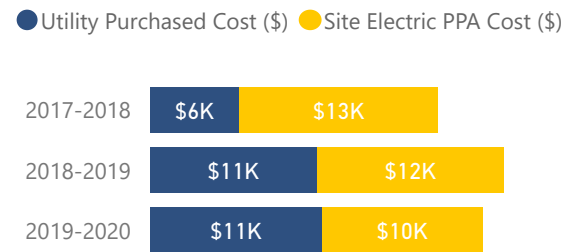
Month Range: Jul - Feb  
 Current Fiscal Year: 2019-2020  
 Baseline Fiscal Year: 2017-2018

# Malibu Elementary School : Energy Totals

## Electricity (kWh) by FY (Jul - Feb)



## Electricity (\$) by FY (Jul - Feb)



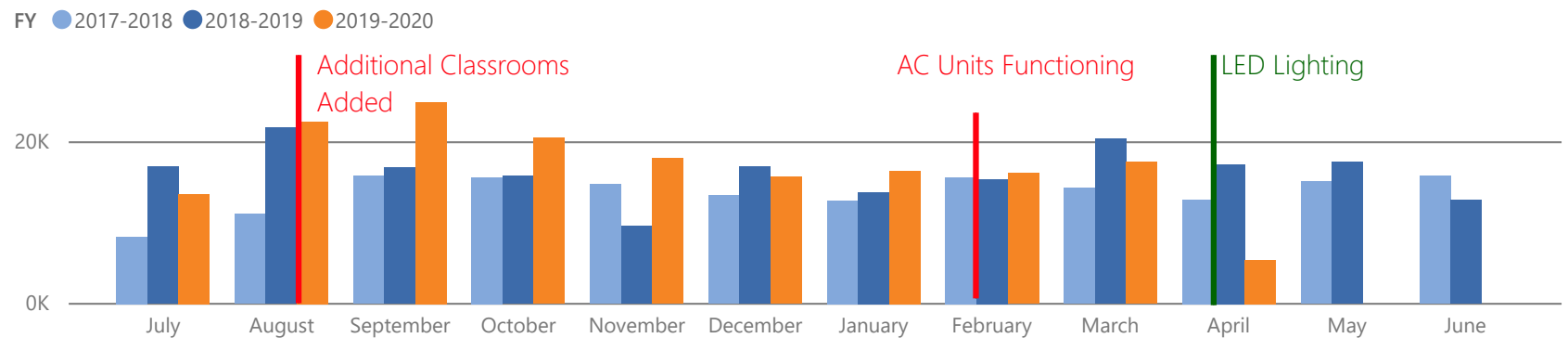
## (kWh) Savings vs Baseline YTD

**-40,323**

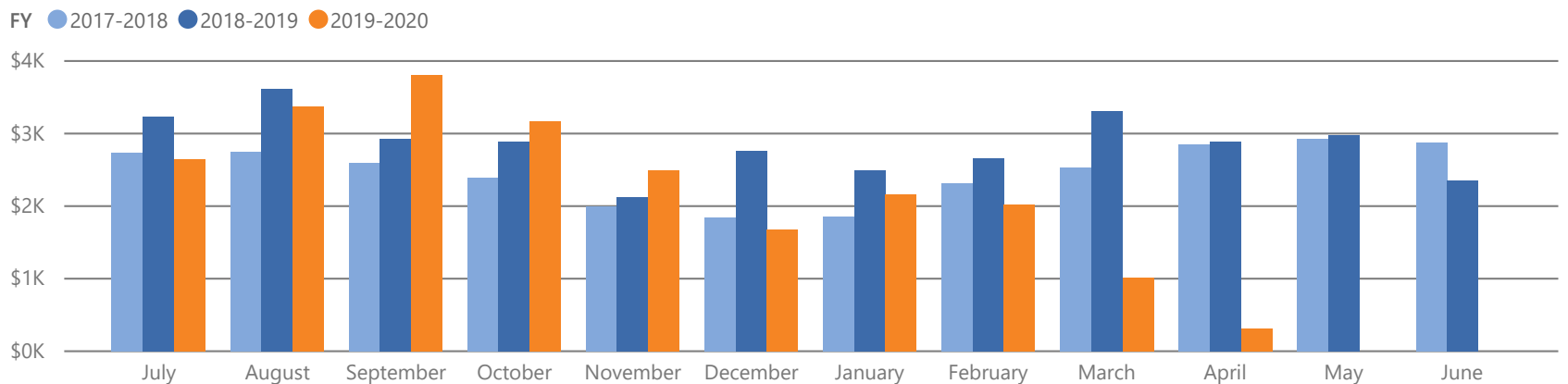
## (\$ Savings vs Baseline YTD

**(\$2,861)**

## Total Electric (kWh) by Month and Fiscal Year



## Total Electric Cost (\$) by Month



## Site Narrative

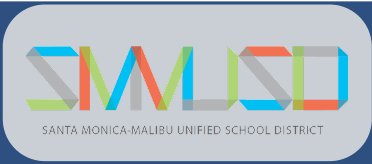
In FY 2019-20 from July through February, Malibu Elementary (previously Point Dume Elementary) showed an increase in electricity of 40,323 kWh (37% increase), increasing SCE costs by \$2,861 (15% increase) compared to FY 2017-18 .

A timeline of the major projects at the site is shown in the total electricity graph above. Green indicates a project that resulted in lowered energy use, while red indicates a project that increases energy use. Malibu Elementary completed installation of interior LED lighting in April 2019, which lowered the energy usage in the following months. However, during the recent year, student from Juan Cabrillo Elementary were transferred to Malibu Elementary and additional portable classrooms were added. In addition, AC units were added and operational as of February 2019, significantly increasing energy consumption.

\*Note that latest month values are not accurate due to data being incomplete for the month.

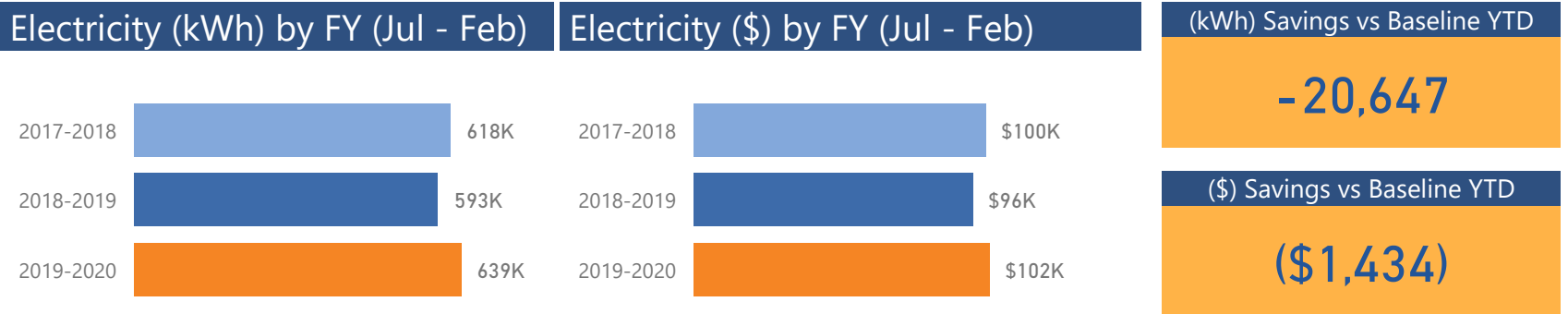
\*\* PPA cost data was not available for FY 2017-18



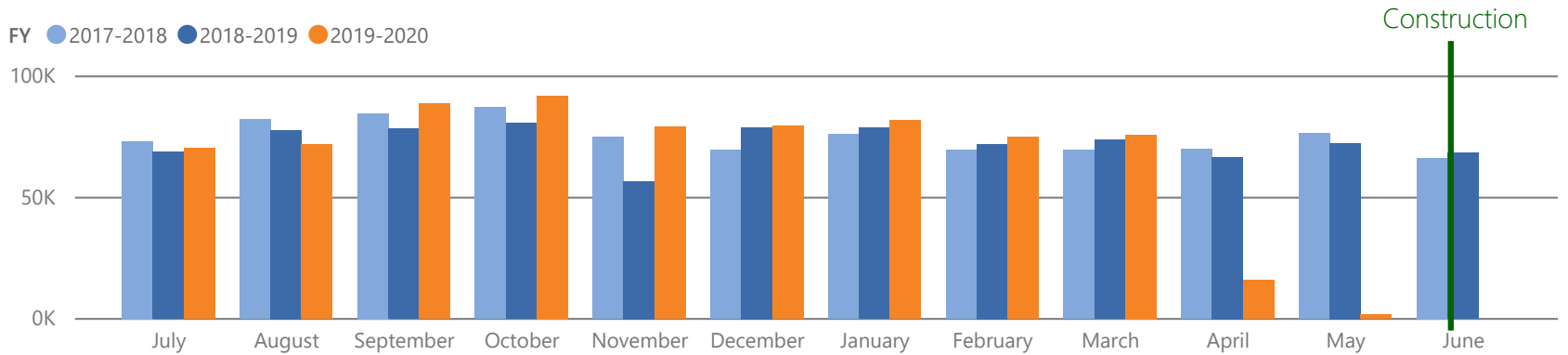


Month Range: Jul - Feb  
 Current Fiscal Year: 2019-2020  
 Baseline Fiscal Year: 2017-2018

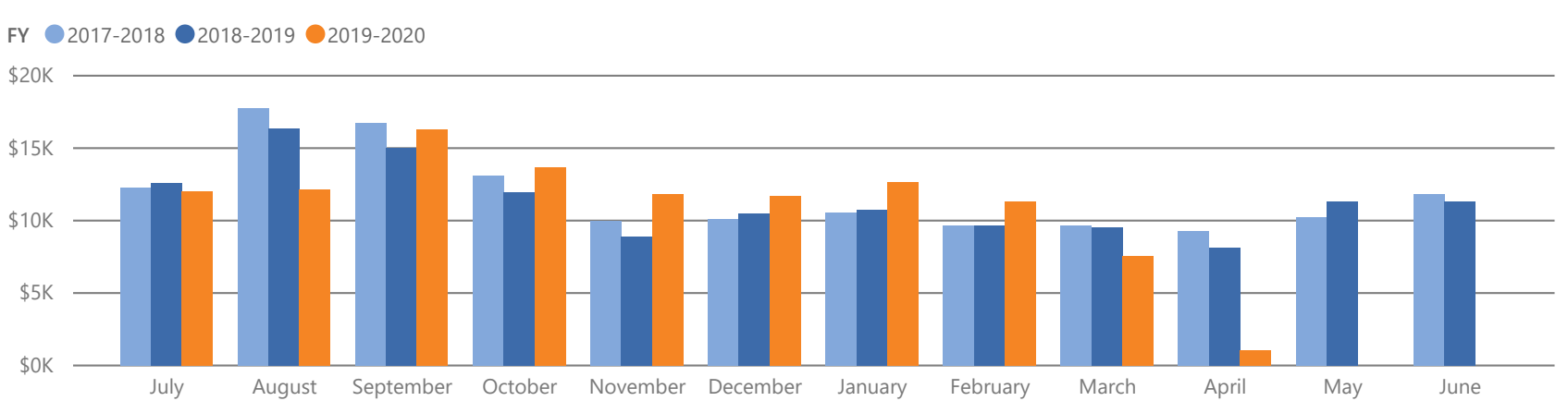
## Malibu HS/MS : Energy Totals



### Total Electric (kWh) by Month and Fiscal Year



### Total Electric Cost (\$) by Month



### Site Narrative

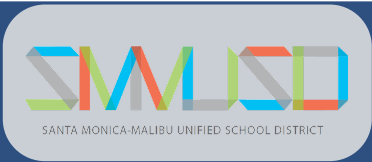
In FY 2019-20 from July through February, Malibu HS/MS showed an increase in electricity of 20,647 kWh (3% increase), though SCE costs have increased by \$1,434 (1% increase) compared to FY 2017-18.

At Malibu HS/MS, there has been significant construction starting June 2019, which has led to inconsistent billing cycles. This site is to be combined with Juan Cabrillo Elementary in the following Fiscal year once construction is completed.

\*Note that latest month values are not accurate due to data being incomplete for the month.





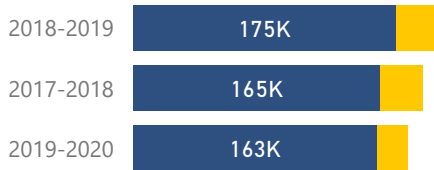


Month Range: Jul - Feb  
 Current Fiscal Year: 2019-2020  
 Baseline Fiscal Year: 2017-2018

# McKinley Elementary : Energy Totals

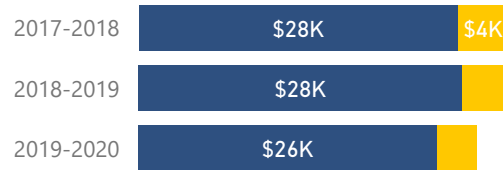
## Electricity (kWh) by FY (Jul - Feb)

● Utility Purchased Energy (kWh) ● Solar Generation (kWh)



## Electricity (\$) by FY (Jul - Feb)

● Utility Purchased Cost (\$) ● Site Electric PPA Cost (\$)



## (kWh) Savings vs Baseline YTD

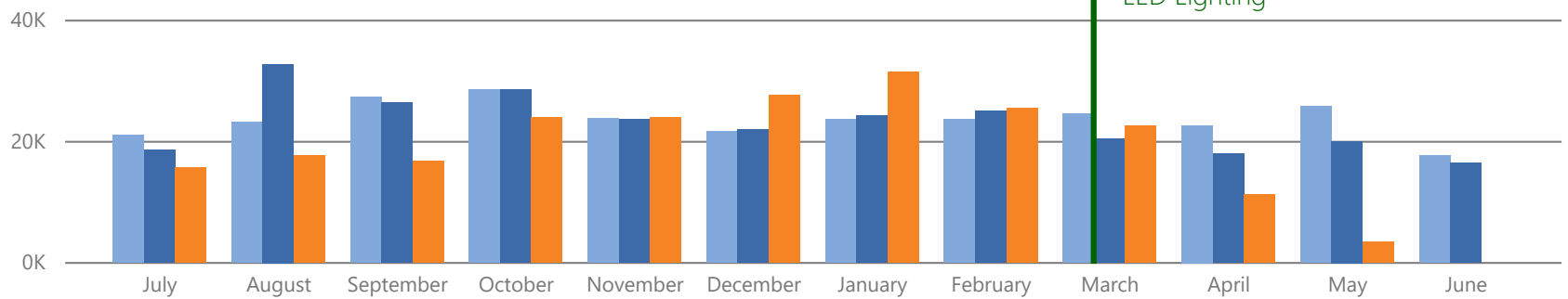
10,189

## (\$ Savings vs Baseline YTD

\$2,739

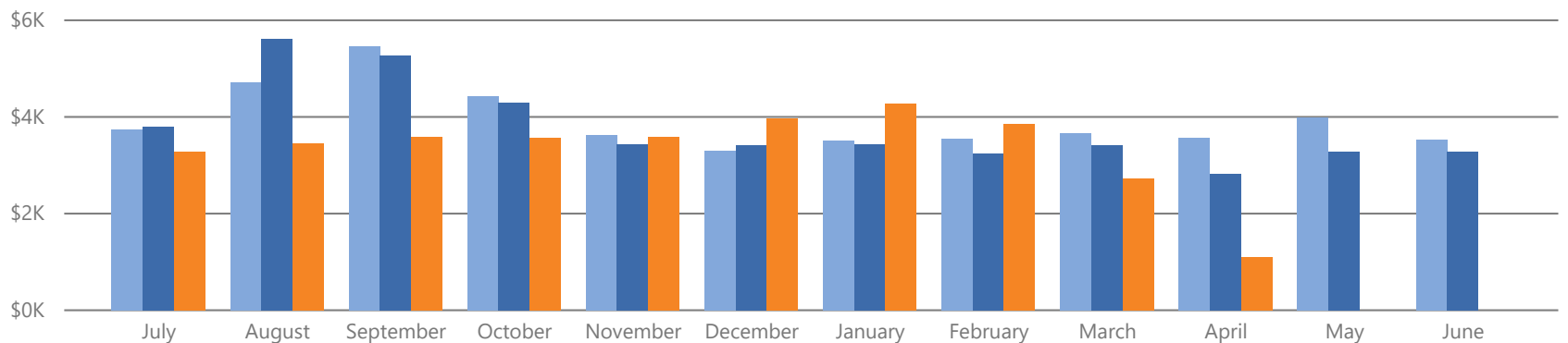
## Total Electric (kWh) by Month and Fiscal Year

FY ● 2017-2018 ● 2018-2019 ● 2019-2020



## Total Electric Cost (\$) by Month

FY ● 2017-2018 ● 2018-2019 ● 2019-2020



## Site Narrative

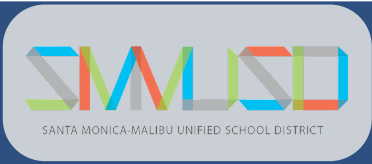
In FY 2019-20 from July through February, McKinley Elementary showed a decrease in electricity of 10,189 kWh (5% reduction) and SCE costs were decreased by \$2,739 (8% decrease) compared to FY 2017-18.

A timeline of the major projects at the site is shown in the total electricity graph above. Green indicates a project that resulted in lowered energy use, while red indicates a project that increases energy use. McKinley Elementary School completed installation of interior LED lighting in March 2019, which significantly lowered the energy usage in the following months.

\*Note that latest month values are not accurate due to data being incomplete for the month.

\*\* PPA cost data was not available for FY 2017-18





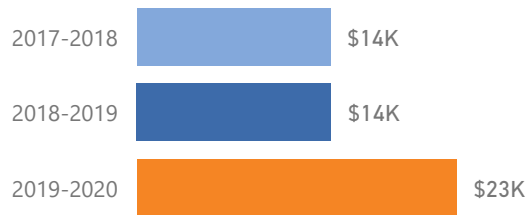
Month Range: Jul - Feb  
 Current Fiscal Year: 2019-2020  
 Baseline Fiscal Year: 2017-2018

# Obama Center for Inquiry and Exploration : Energy Totals

## Electricity (kWh) by FY (Jul - Feb)



## Electricity (\$) by FY (Jul - Feb)



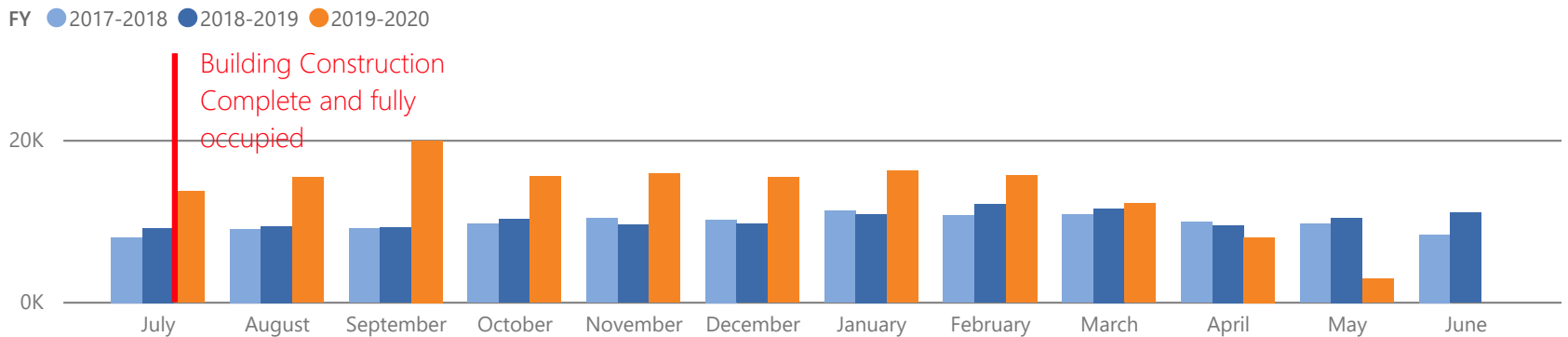
## (kWh) Savings vs Baseline YTD

**-49,316**

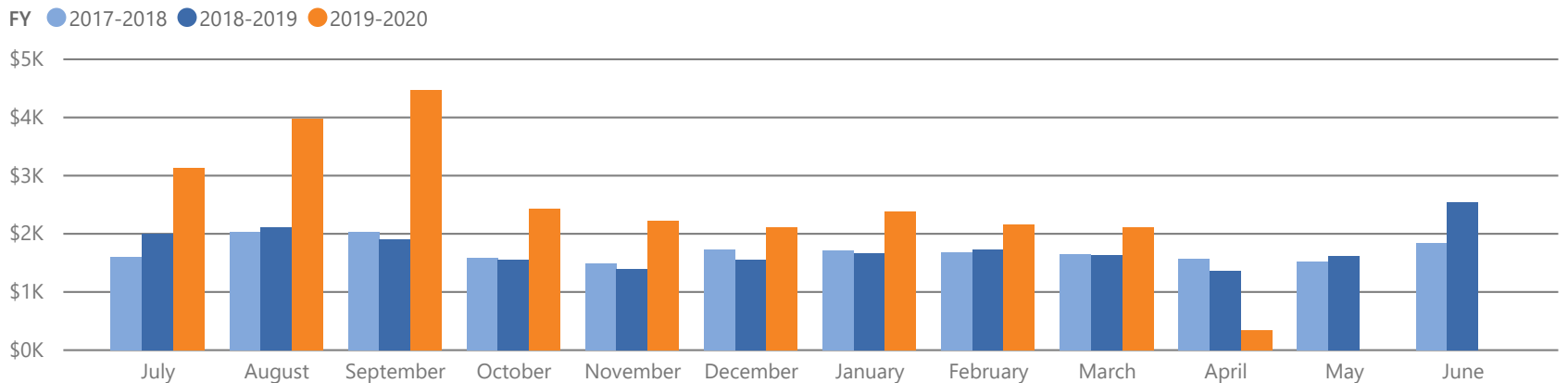
## (\$ Savings vs Baseline YTD

**(\$8,816)**

## Total Electric (kWh) by Month and Fiscal Year



## Total Electric Cost (\$) by Month



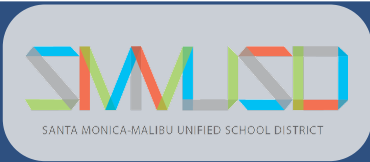
## Site Narrative

In FY 2019-20 from July through February, the Michelle and Barack Obama Center for Inquiry and Exploration (previously Olympic HS) showed an increase in electricity of 49316 kWh (63% increase), increasing utility costs by \$8,816 (65% increase) compared to FY 2017-18. This energy increase is attributed to the facilities upgrade that was completed near the end of FY 2017-18 and beginning of FY 2018-19. Now that the site is in full use compared to the baseline year, energy usage is expected to increase.

A timeline of the major projects at the site is shown in the total electricity graph above. Green indicates a project that resulted in lowered energy use, while red indicates a project that increases energy use. The Obama Center was previously undergoing major renovation and installing new AC units. When these new loads went online, energy usage and electric costs.

\*Note that latest month values are not accurate due to data being incomplete for the month.

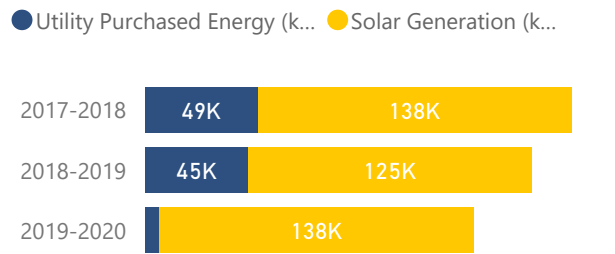




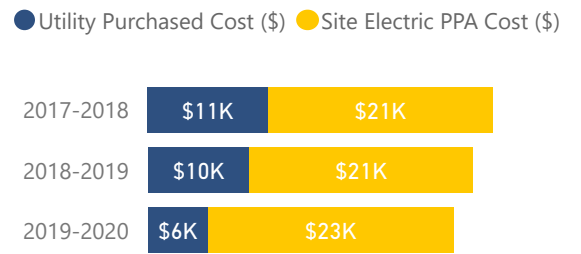
Month Range: Jul - Feb  
 Current Fiscal Year: 2019-2020  
 Baseline Fiscal Year: 2017-2018

# Roosevelt Elementary : Energy Totals

## Electricity (kWh) by FY (Jul - Feb)



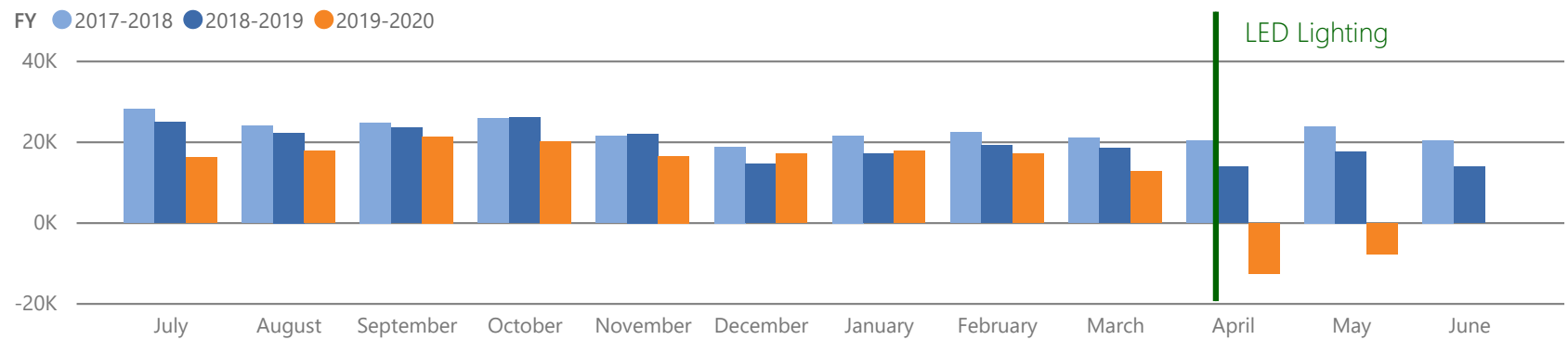
## Electricity (\$) by FY (Jul - Feb)



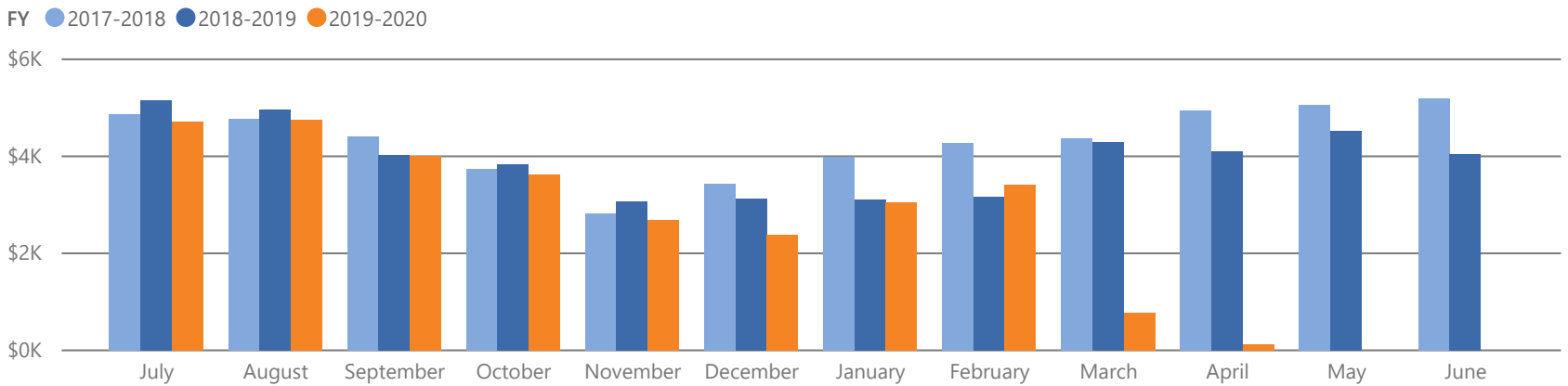
(kWh) Savings vs Baseline YTD  
**42,897**

(\$ Savings vs Baseline YTD  
**\$3,681**

## Total Electric (kWh) by Month and Fiscal Year



## Total Electric Cost (\$) by Month



## Site Narrative

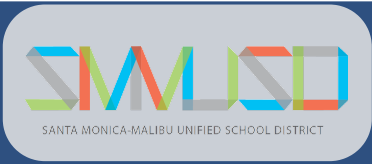
In FY 2019-20 from July through February, Roosevelt Elementary showed a decrease in electricity of 42,897 kWh (23% reduction), yielding a cost savings of about \$3,681 (11% reduction) compared to FY 2017-18. Since rate increases have occurred both through SCE and with the addition of Community Choice Aggregation (CCA) costs, monetary savings are better communicated through avoided costs (energy savings multiplied by current \$/kWh). **Avoided Costs during this period is equal to \$8,492.**

A timeline of the major projects at the site is shown in the total electricity graph above. Green indicates a project that resulted in lowered energy use, while red indicates a project that increases energy use. Roosevelt Elementary School completed installation of interior LED lighting in April 2019, which significantly lowered the energy usage in the following months.

\*Note that latest month values are not accurate due to data being incomplete for the month.

\*\* PPA cost data was not available for FY 2017-18





Month Range: Jul - Feb  
 Current Fiscal Year: 2019-2020  
 Baseline Fiscal Year: 2017-2018

## Santa Monica HS (SAMOHI) : Energy Totals

### Electricity (kWh) by FY (Jul - Feb)



### Electricity (\$) by FY (Jul - Feb)



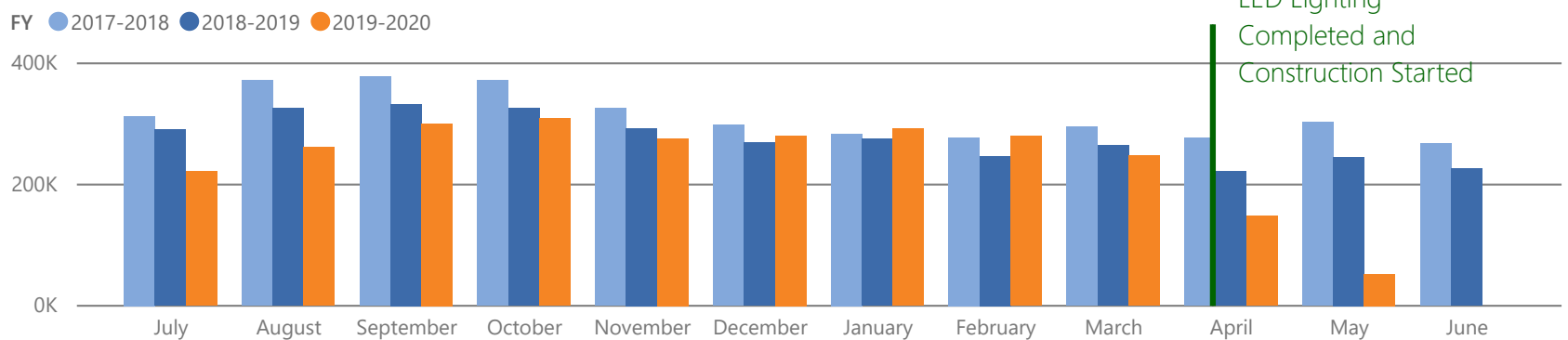
### (kWh) Savings vs Baseline YTD

397,487

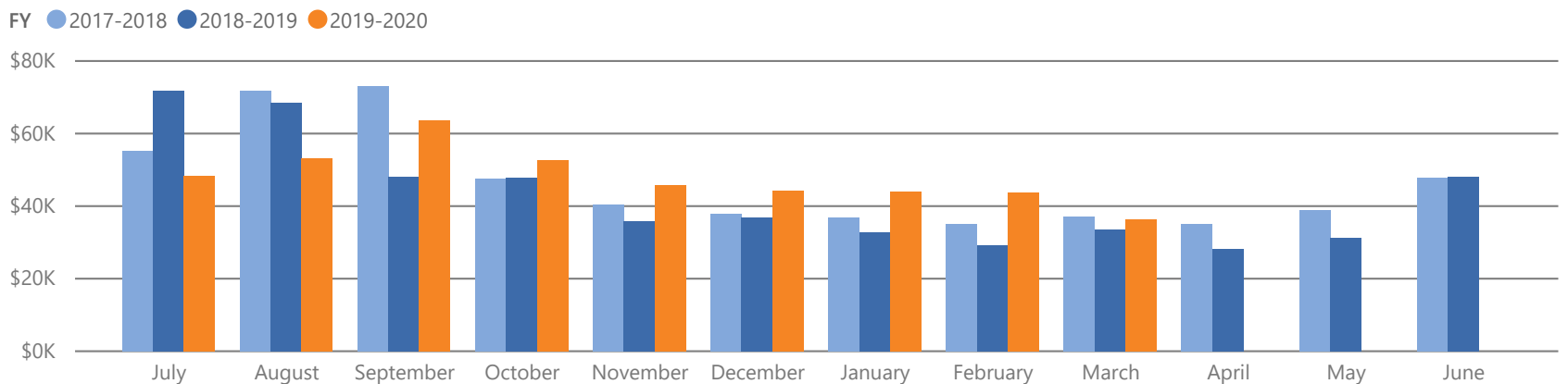
### (\$ Savings vs Baseline YTD

\$2,669

### Total Electric (kWh) by Month and Fiscal Year



### Total Electric Cost (\$) by Month



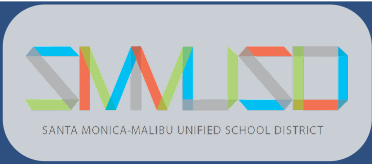
### Site Narrative

In FY 2019-20 from July through February, Santa Monica HS showed a decrease in electricity of 397,487 kWh (15% reduction), yielding a cost savings of about \$2,669 (1% reduction) compared to FY 2017-18. A large portion of the school is currently under construction, which may account for part of the energy reduction. Since rate increases have occurred both through SCE and with the addition of Community Choice Aggregation (CCA) costs, monetary savings are better communicated through avoided costs (energy savings multiplied by current \$/kWh). **Avoided Costs during this period is equal to \$70,698.**

A timeline of the major projects at the site is shown in the total electricity graph above. Green indicates a project that resulted in lowered energy use, while red indicates a project that increases energy use. Santa Monica HS completed installation of interior LED lighting and started significant construction around the month of April 2019, which significantly lowered the energy usage in the following months.

\*Note that latest month values are not accurate due to data being incomplete for the month.





Month Range: Jul - Feb  
 Current Fiscal Year: 2019-2020  
 Baseline Fiscal Year: 2017-2018

## Washington Pre/FIP : Energy Totals

### Electricity (kWh) by FY (Jul - Feb)



### Electricity (\$) by FY (Jul - Feb)



### (kWh) Savings vs Baseline YTD

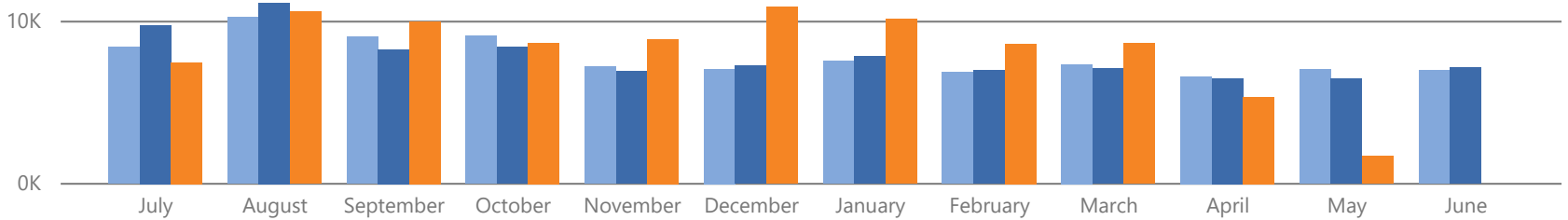
**-9,731**

### (\$ Savings vs Baseline YTD

**(\$3,895)**

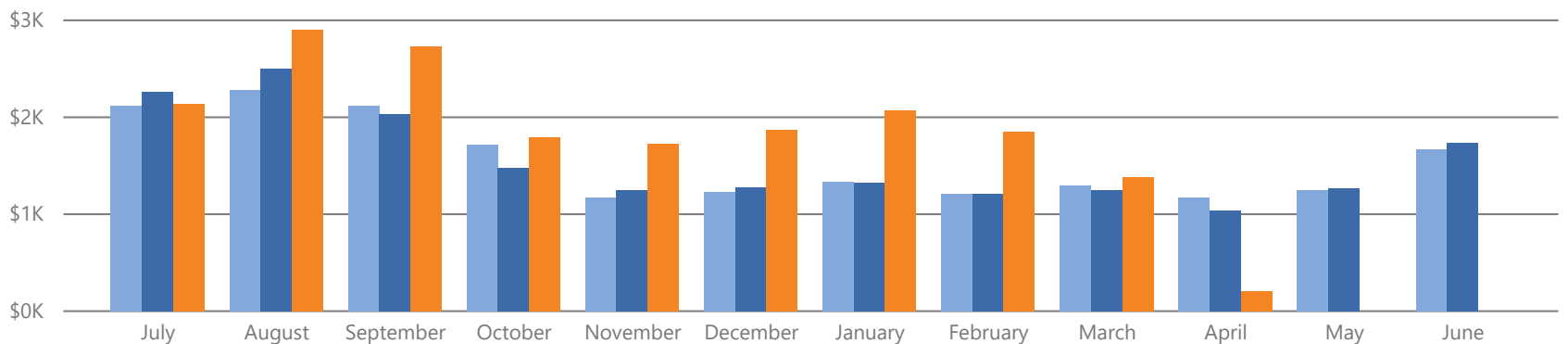
## Total Electric (kWh) by Month and Fiscal Year

FY ● 2017-2018 ● 2018-2019 ● 2019-2020



## Total Electric Cost (\$) by Month

FY ● 2017-2018 ● 2018-2019 ● 2019-2020

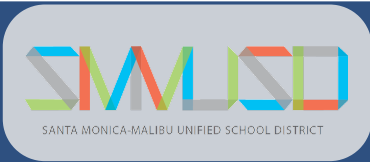


## Site Narrative

In FY 2019-20 from July through February, the Washington Pre-school/FIP Office showed an increase in electricity of 9,731 kWh (15% increase), increasing utility costs by \$3,895 (30% increase) compared to FY 2017-18.

\*Note that latest month values are not accurate due to data being incomplete for the month.



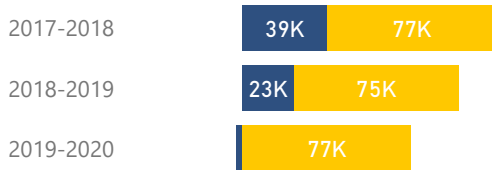


Month Range: Jul - Feb  
 Current Fiscal Year: 2019-2020  
 Baseline Fiscal Year: 2017-2018

# Webster Elementary : Energy Totals

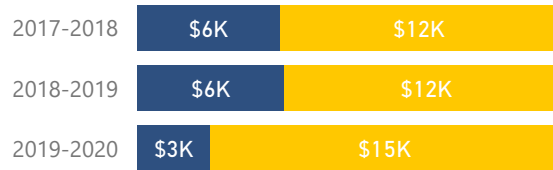
## Electricity (kWh) by FY (Jul - Feb)

● Utility Purchased Energy (k... ● Solar Generation (k...



## Electricity (\$) by FY (Jul - Feb)

● Utility Purchased Cost (\$) ● Site Electric PPA Cost (\$)



(kWh) Savings vs Baseline YTD

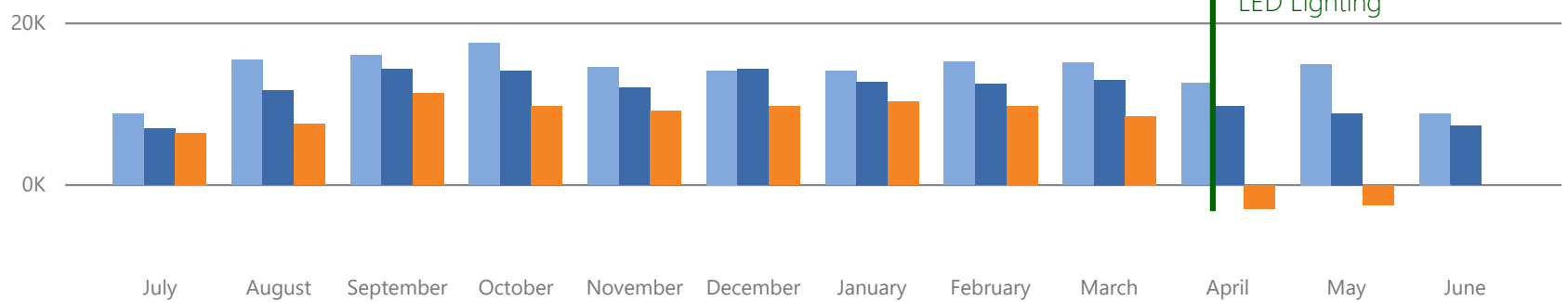
41,974

(\$ Savings vs Baseline YTD

\$2,087

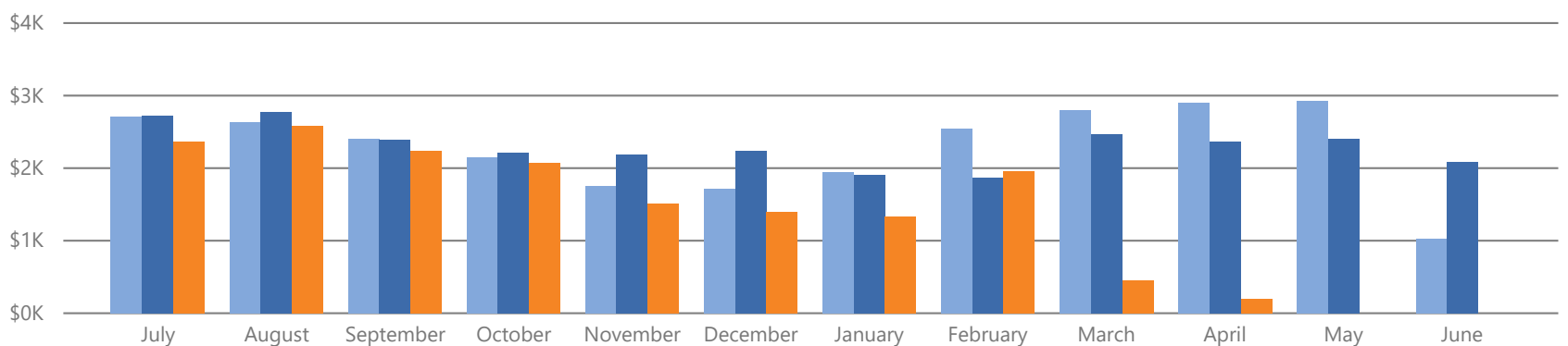
## Total Electric (kWh) by Month and Fiscal Year

FY ● 2017-2018 ● 2018-2019 ● 2019-2020



## Total Electric Cost (\$) by Month

FY ● 2017-2018 ● 2018-2019 ● 2019-2020



## Site Narrative

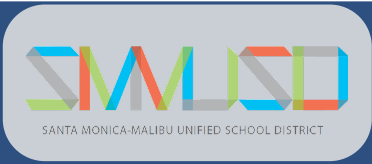
In FY 2019-20 from July through February, Webster Elementary showed a decrease in electricity of 41,975 kWh (36% reduction), yielding a decrease in costs of about \$2,087 (12% decrease) compared to FY 2017-18. Since rate increases have occurred both through SCE and with the addition of Community Choice Aggregation (CCA) costs, monetary savings are better communicated through avoided costs (energy savings multiplied by current \$/kWh). Avoided Costs during this period is equal to \$8,935.

A timeline of the major projects at the site is shown in the total electricity graph above. Green indicates a project that resulted in lowered energy use, while red indicates a project that increases energy use. Webster Elementary School completed installation of interior LED lighting in April 2019, which significantly lowered the energy usage in the following months.

\*Note that latest month values are not accurate due to data being incomplete for the month.

\*\* PPA cost data was not available for FY 2017-18



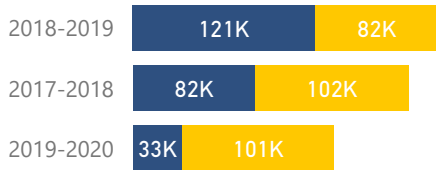


Month Range: Jul - Feb  
 Current Fiscal Year: 2019-2020  
 Baseline Fiscal Year: 2017-2018

# Will Rogers Elementary : Energy Totals

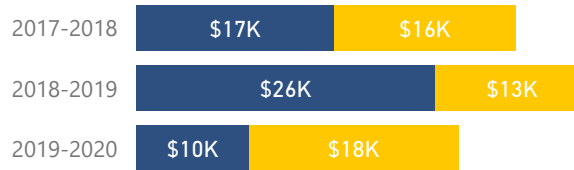
## Electricity (kWh) by FY (Jul - Feb)

● Utility Purchased Energy (kWh) ● Solar Generation (kWh)



## Electricity (\$) by FY (Jul - Feb)

● Utility Purchased Cost (\$) ● Site Electric PPA Cost (\$)



## (kWh) Savings vs Baseline YTD

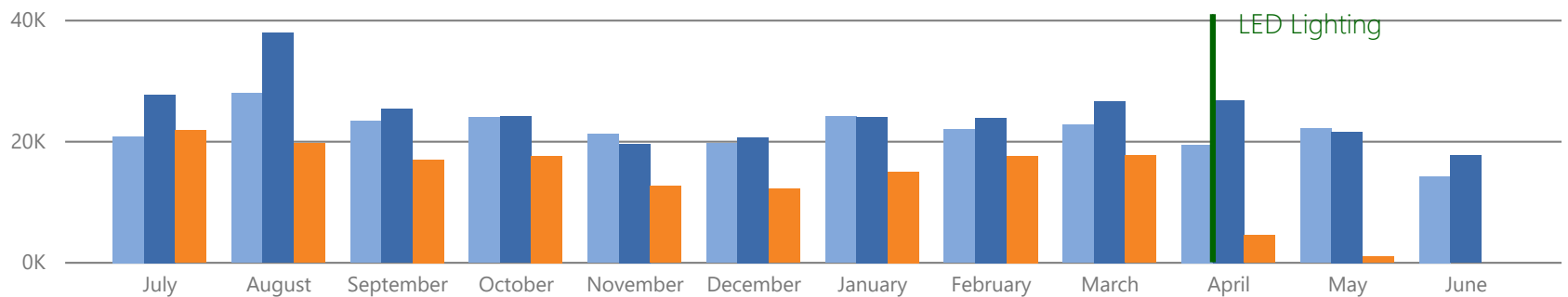
49,681

## (\$ Savings vs Baseline YTD

\$4,925

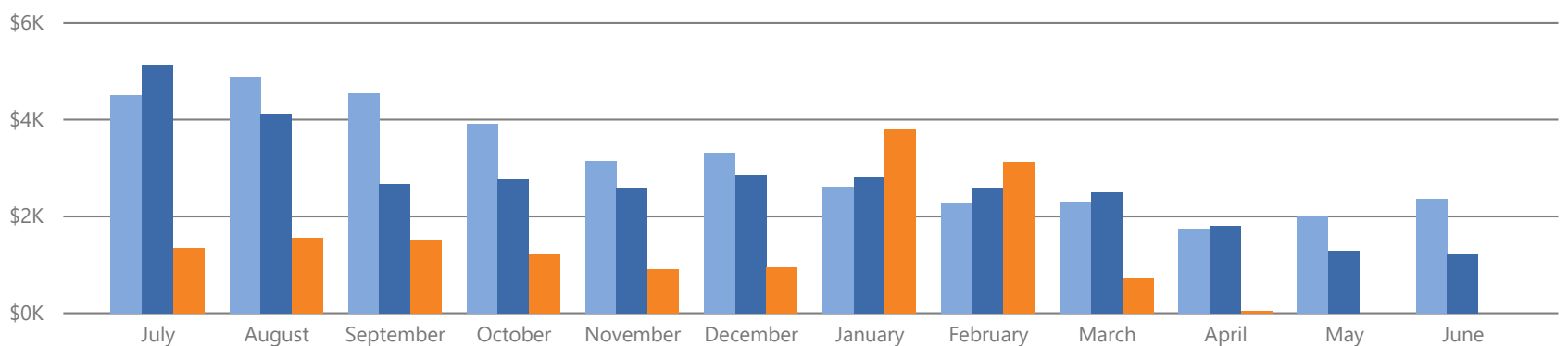
## Total Electric (kWh) by Month and Fiscal Year

FY ● 2017-2018 ● 2018-2019 ● 2019-2020



## Total Electric Cost (\$) by Month

FY ● 2017-2018 ● 2018-2019 ● 2019-2020



## Site Narrative

In FY 2019-20 from July through February, Will Rogers Elementary showed a reduction in electricity of 49,680 kWh (27% decrease), decreasing SCE costs by \$4,925 (15% reduction) compared to FY 2017-18. Since rate increases have occurred both through SCE and with the addition of Community Choice Aggregation (CCA) costs, monetary savings are better communicated through avoided costs (energy savings multiplied by current \$/kWh). Avoided Costs during this period is equal to \$10,224.

A timeline of the major projects at the site is shown in the total electricity graph above. Green indicates a project that resulted in lowered energy use, while red indicates a project that increases energy use. Will Rogers Elementary School completed installation of interior LED lighting in April 2019, which significantly lowered the energy usage in the following months.

\*Note that latest month values are not accurate due to data being incomplete for the month.

\*\* PPA cost data was not available for FY 2017-18

