



CITY OF SAN PABLO

*City of New Directions*

San Pablo



2014

# Municipal Solar Project Update

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# Background

- In 2012 Council approved the Municipal Solar Project
- Installed a total 320 kW of solar PV systems on
  - City Hall
  - Church Ln Senior Center
  - Police Department



# Overview

- Review pre-project projections
- Perform a comparison of each site
- Compare pre-project projections with actual results
- Review projected vs. actual cash flow of the project

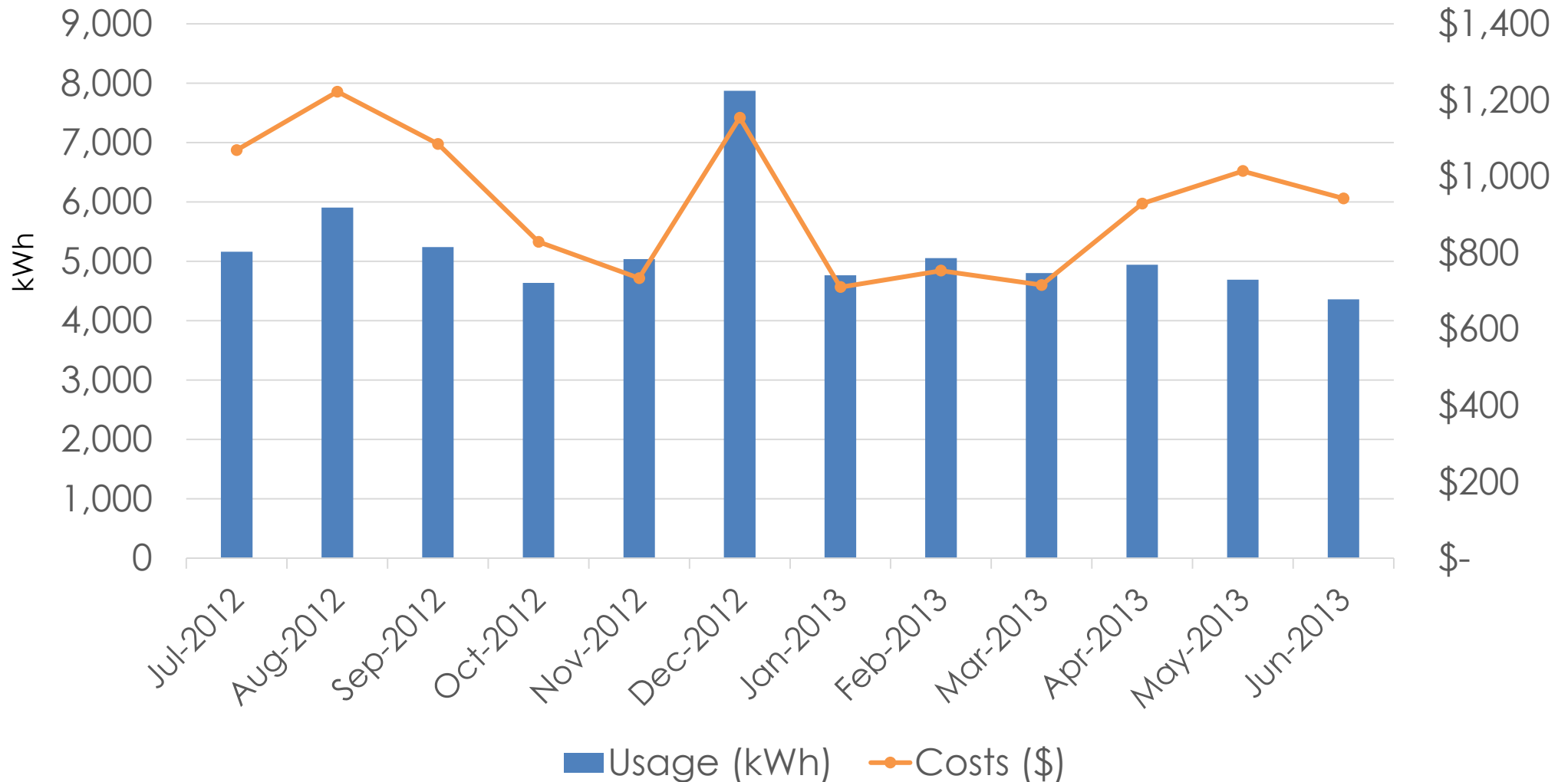
# Pre-Project Electricity Usage and Costs

- Purchased over 626,000 kWh of electricity
- Costing over \$98,000 annually
- Solar PV was projected to provide 70% of the electricity for the combined 3 sites
- Project to save over \$87,000 per year

# Senior Center- Before Solar

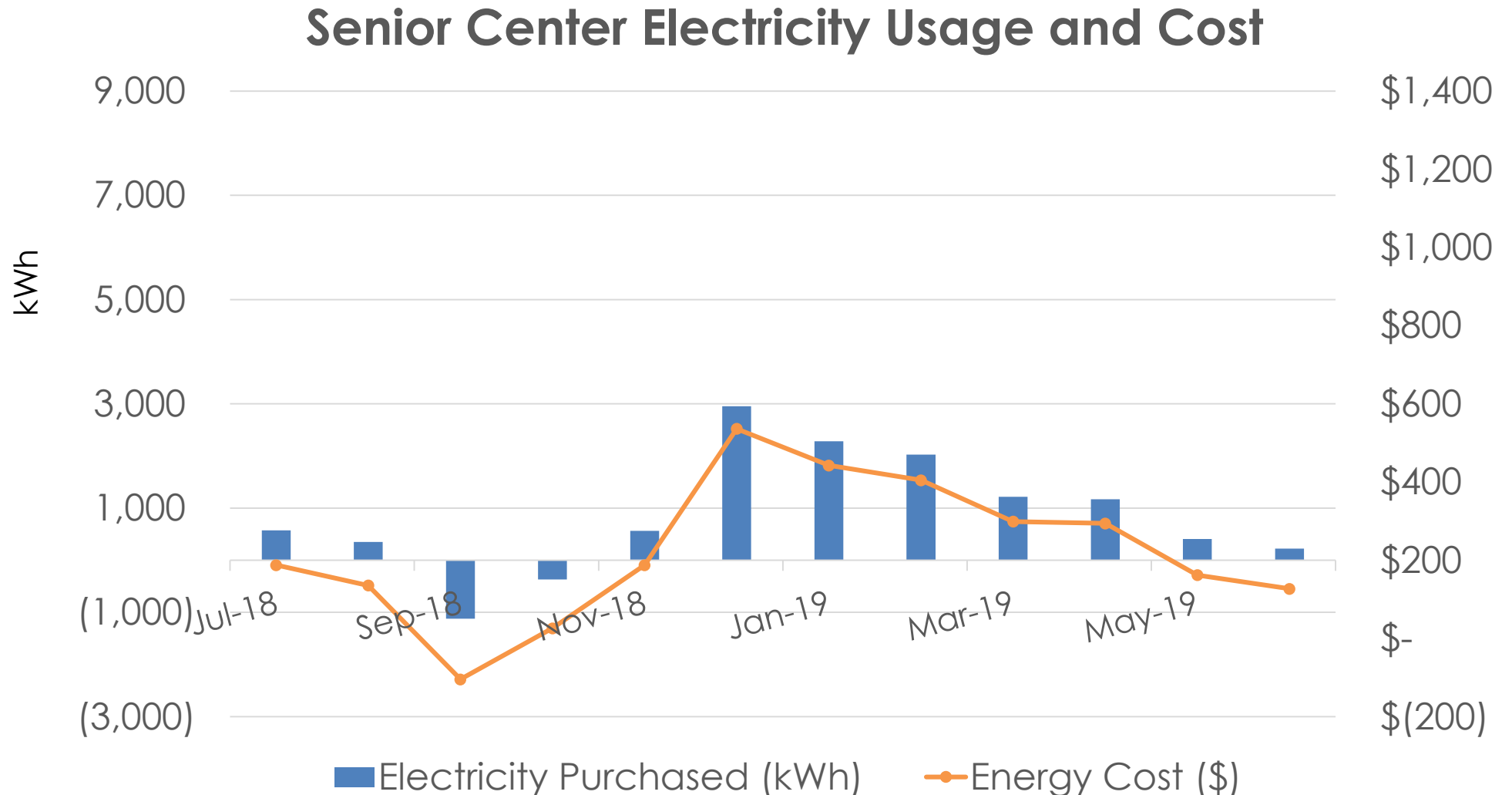
## 2012-2013 Electricity Usage and Costs

- Average monthly purchased electricity **5,188 kWh**
- Average monthly costs **\$926**



# Senior Center- After Solar

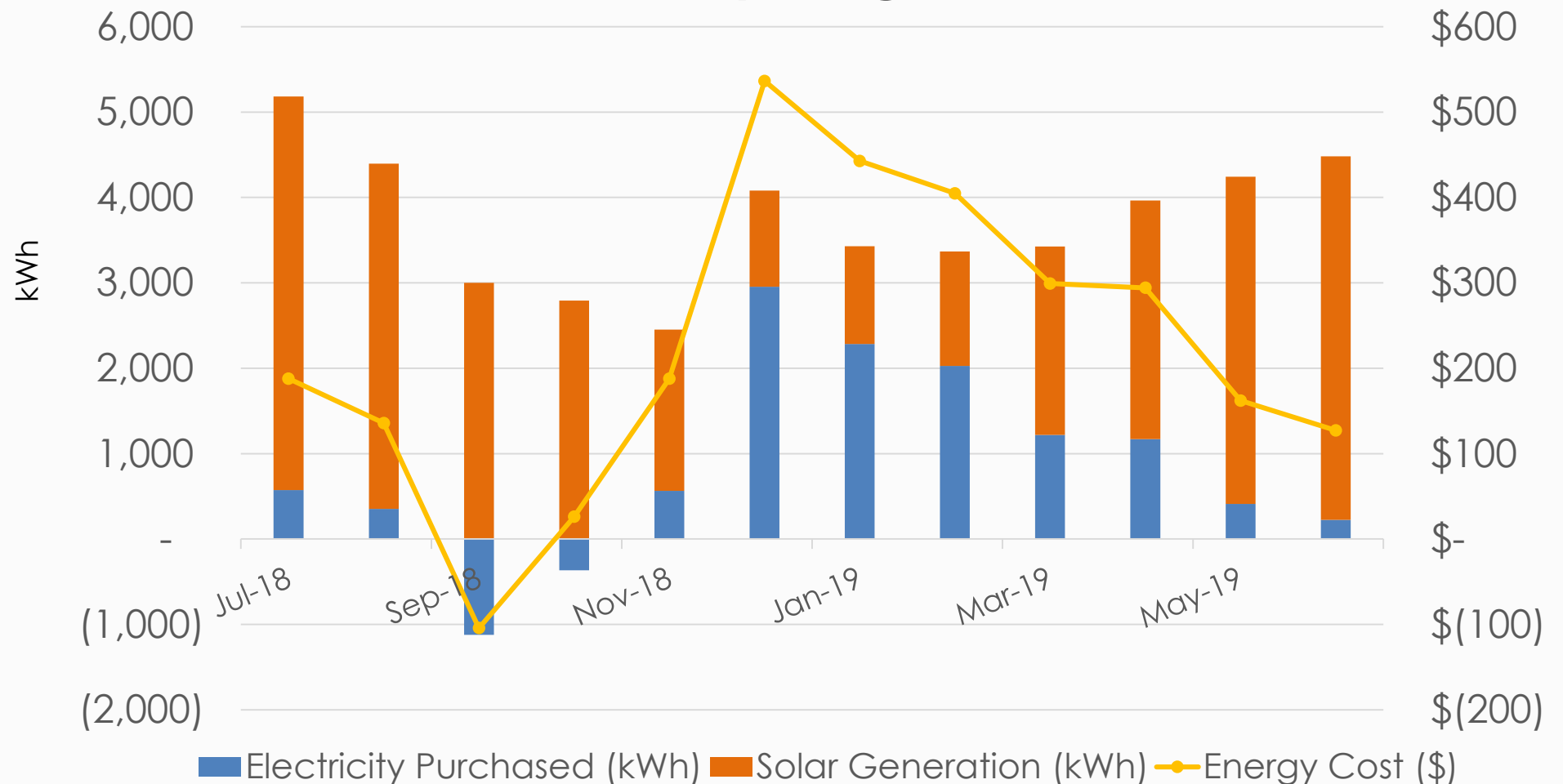
- Average monthly purchased electricity **857 kWh**
- Average monthly costs **\$133**
- Average monthly solar generation **2,753 kWh**



# Senior Center

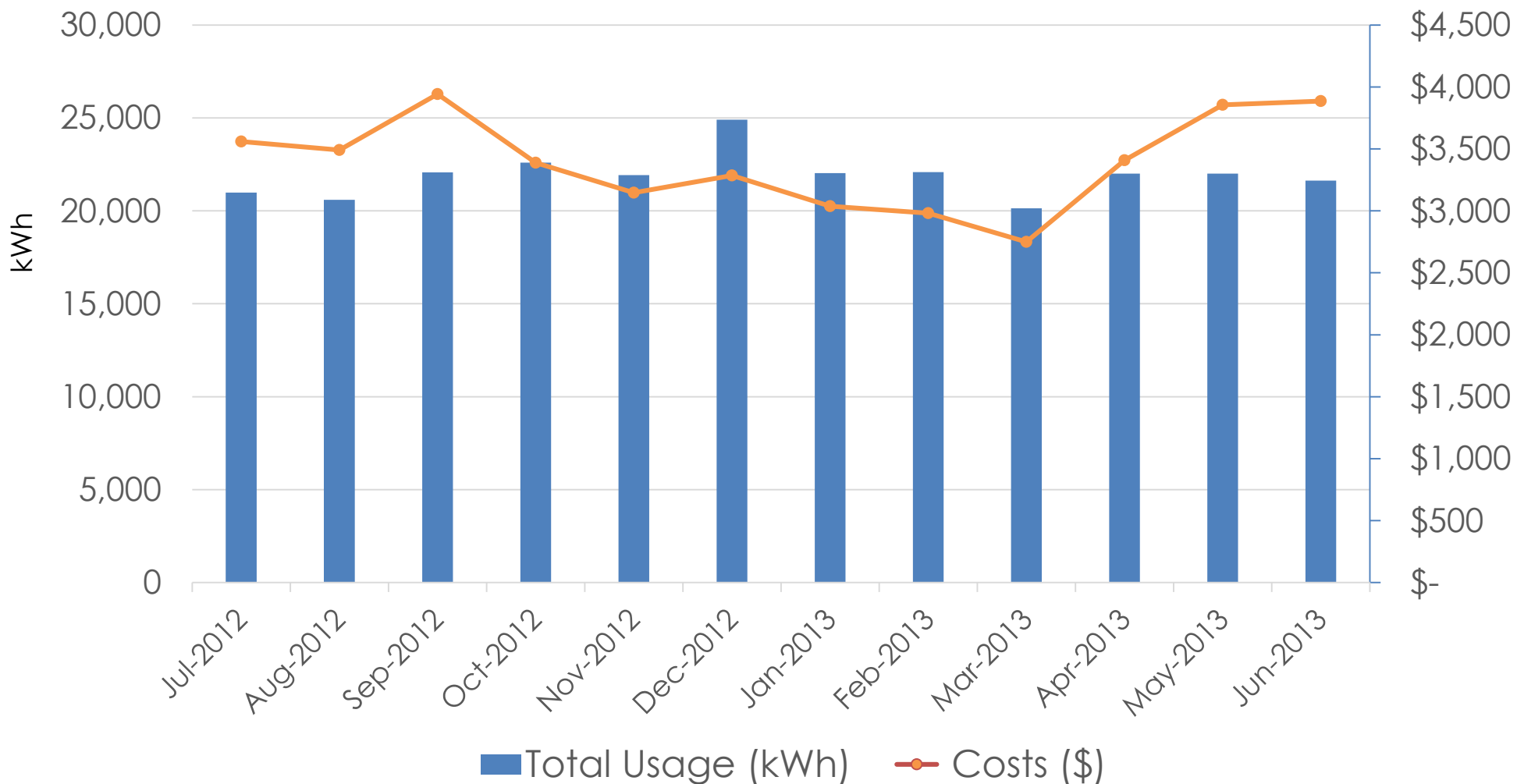
- Solar PV covered **76%** of annual electricity usage.
- Annual costs are **down 76%**
- Annual solar generation is **33,039 kWh-GHG equivalent of taking 5 cars off the road**

## 2018-2019 Electricity Usage, Generation & Cost



# City Hall - Before Solar

2012-2013 City Hall Electricity Usage and Costs



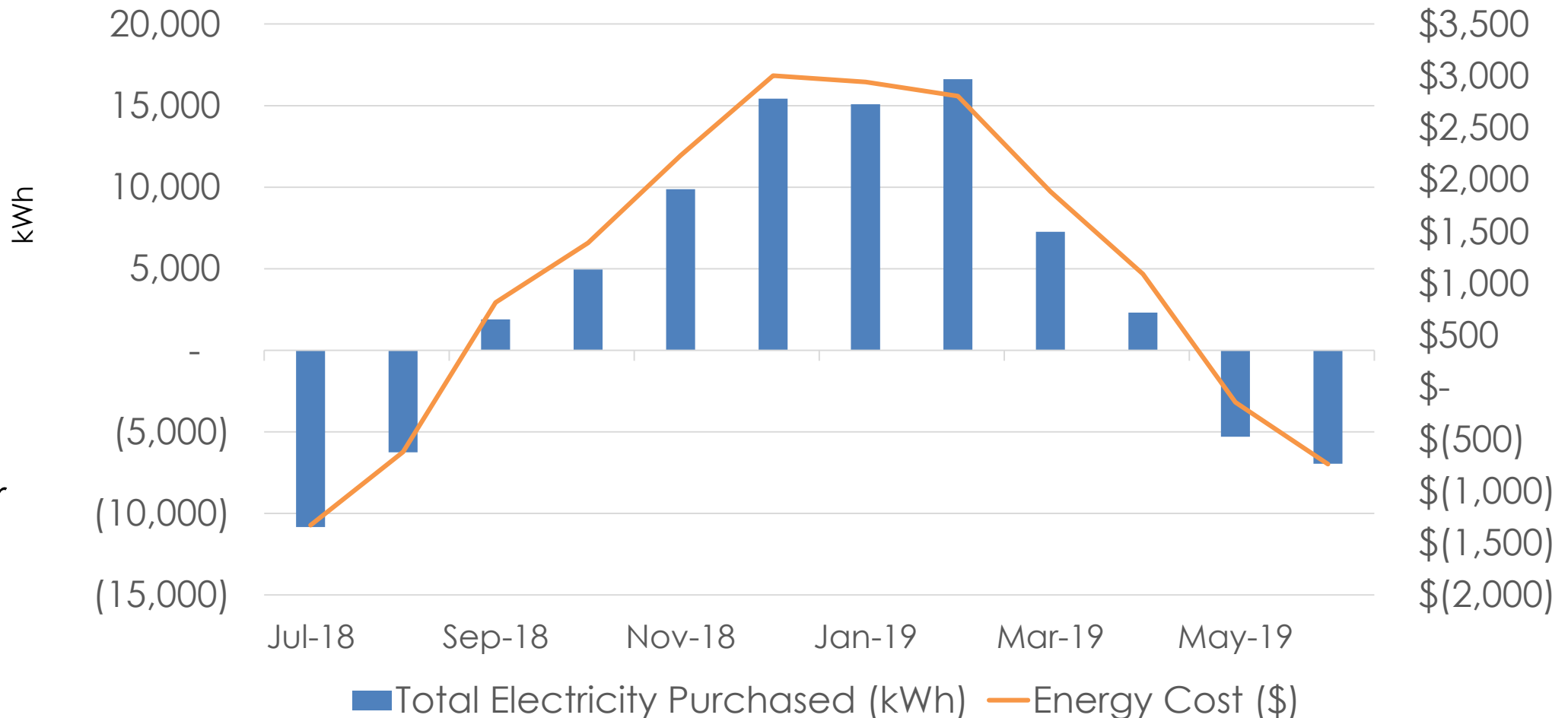
- Average monthly purchased electricity **21,914 kWh**
- Average monthly costs **\$3,394**



# City Hall- After Solar

- Average monthly purchased electricity **3,675 kWh**
- Average monthly electricity costs **\$1,111**
- Average monthly solar generation **20,045 kWh**

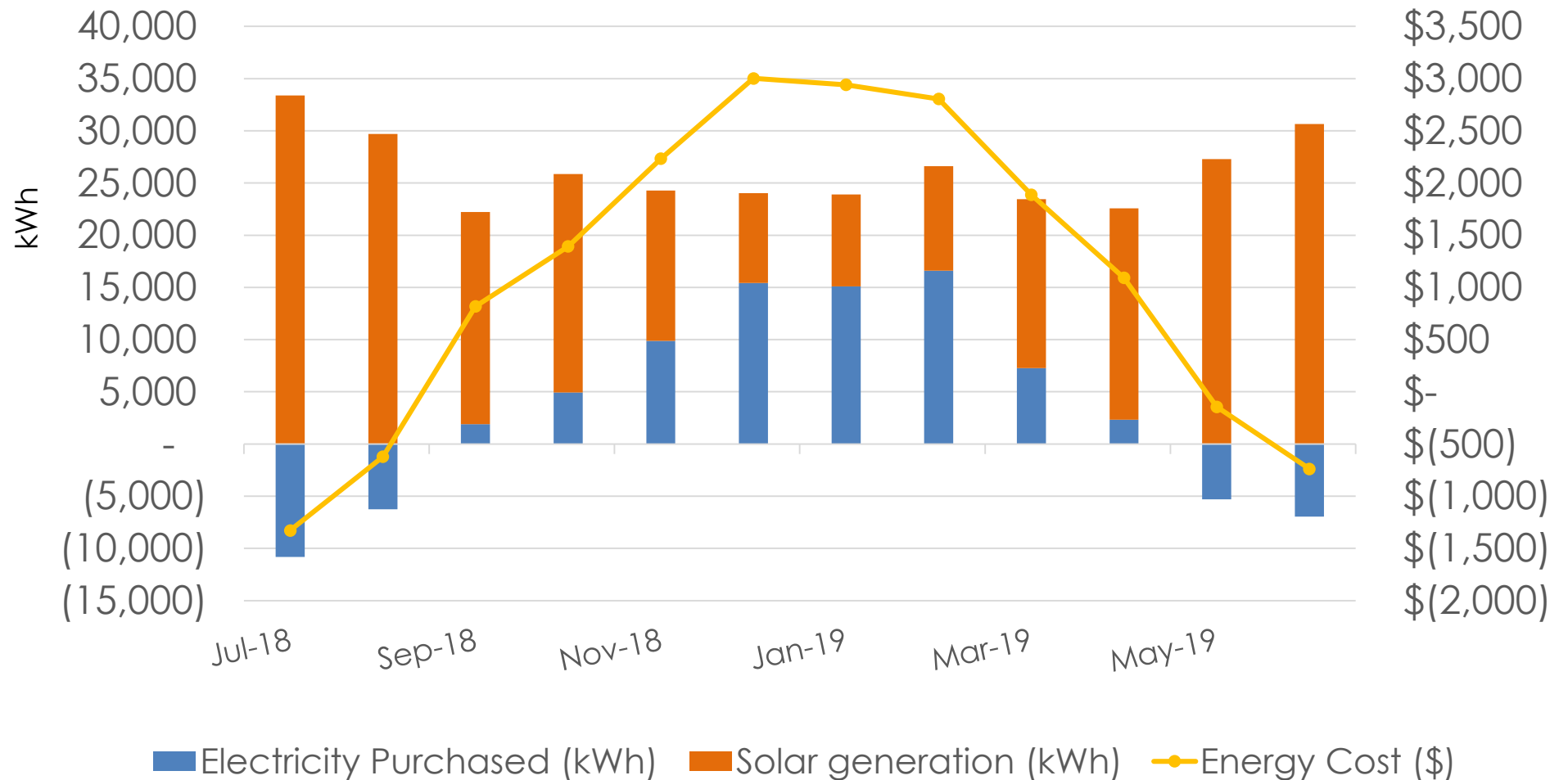
## City Hall 2018-2019 Electricity Usage and Cost



# City Hall

- Solar power covered **85%** of annual electricity usage.
- Annual costs are down **67%**
- Annual solar generation is **240,542 kWh-GHG equivalent of taking 36 cars off the road**

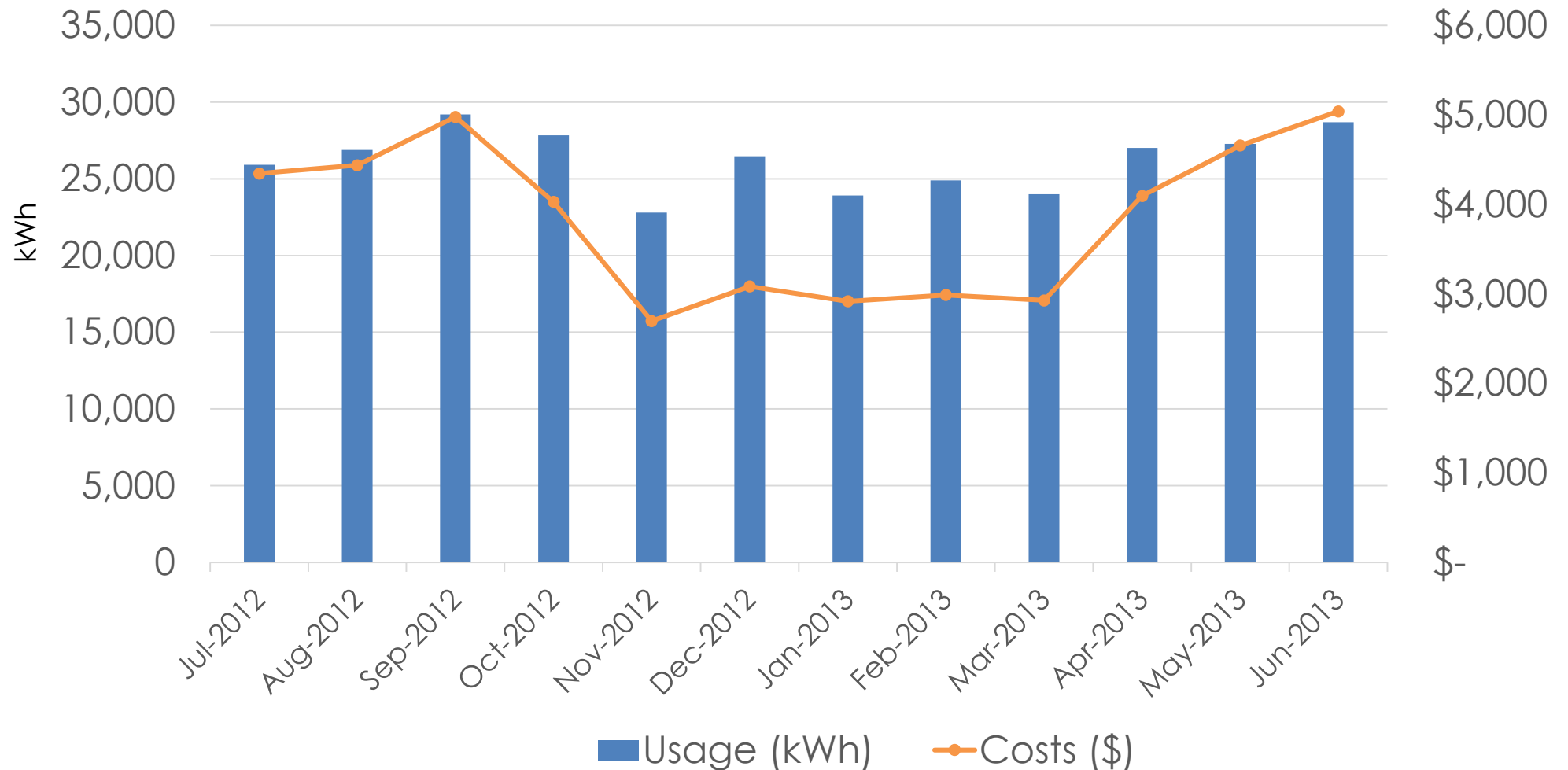
## City Hall 2018-2019 Electricity Usage, Generation & Cost



# Police Department- Before Solar

## 2012-2013 Police Department Electricity Usage & Costs

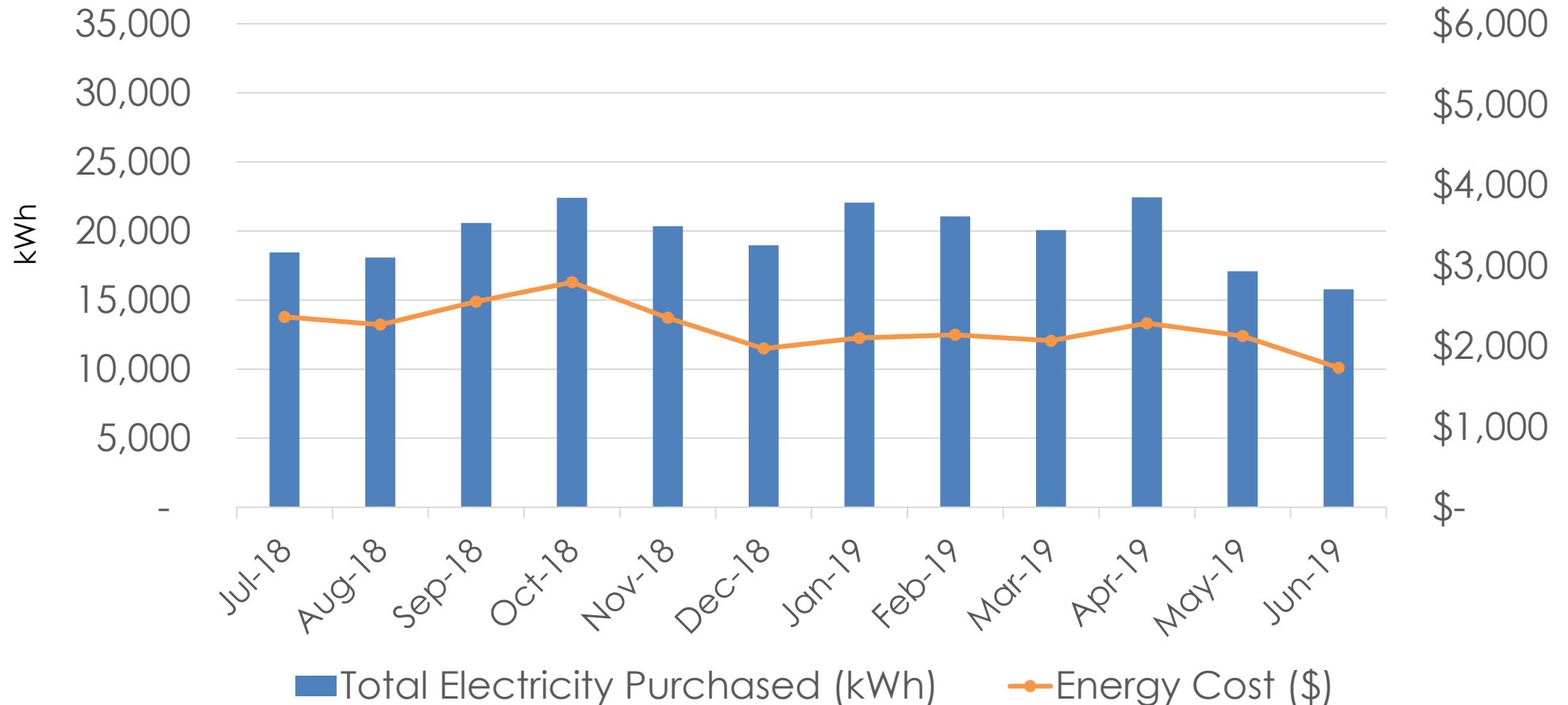
- Average monthly purchased electricity **26,243 kWh**
- Average monthly costs **\$3,850**



# Police Department- After Solar

- Average Monthly Purchased Electricity **17,989 kWh**
- Average Monthly Costs **\$2,277**
- Average Monthly Solar Generation **11,232 kWh**

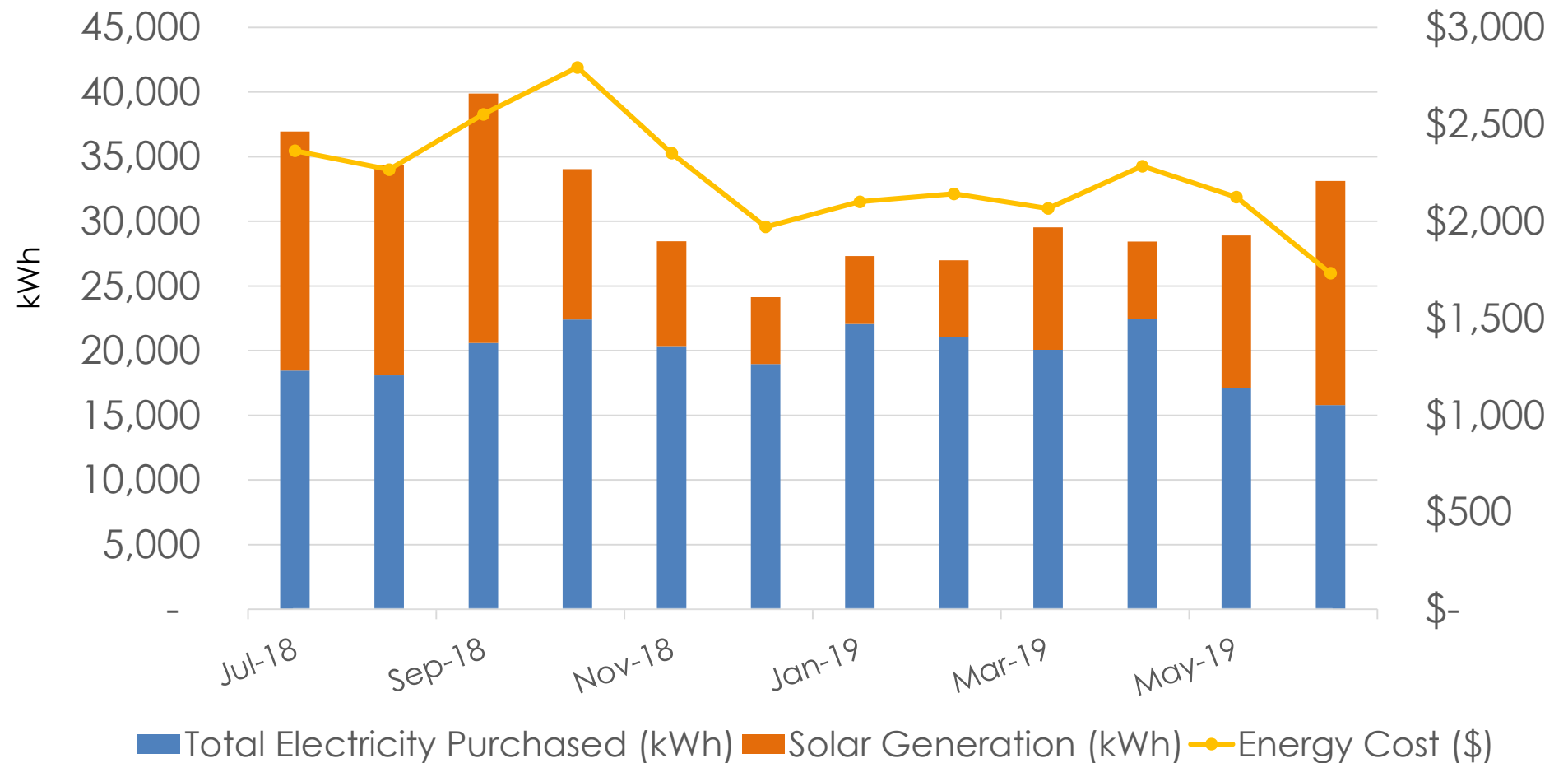
PD Electricity Usage and Cost



# Police Department

- Solar power covered **36%** of annual electricity usage.
- Annual costs are down **41%**
- Annual solar generation is **134,780 kWh-GHG equivalent of taking 20 cars off the road**

## 2018-2019 PD Total Electricity Use, Generation and Costs

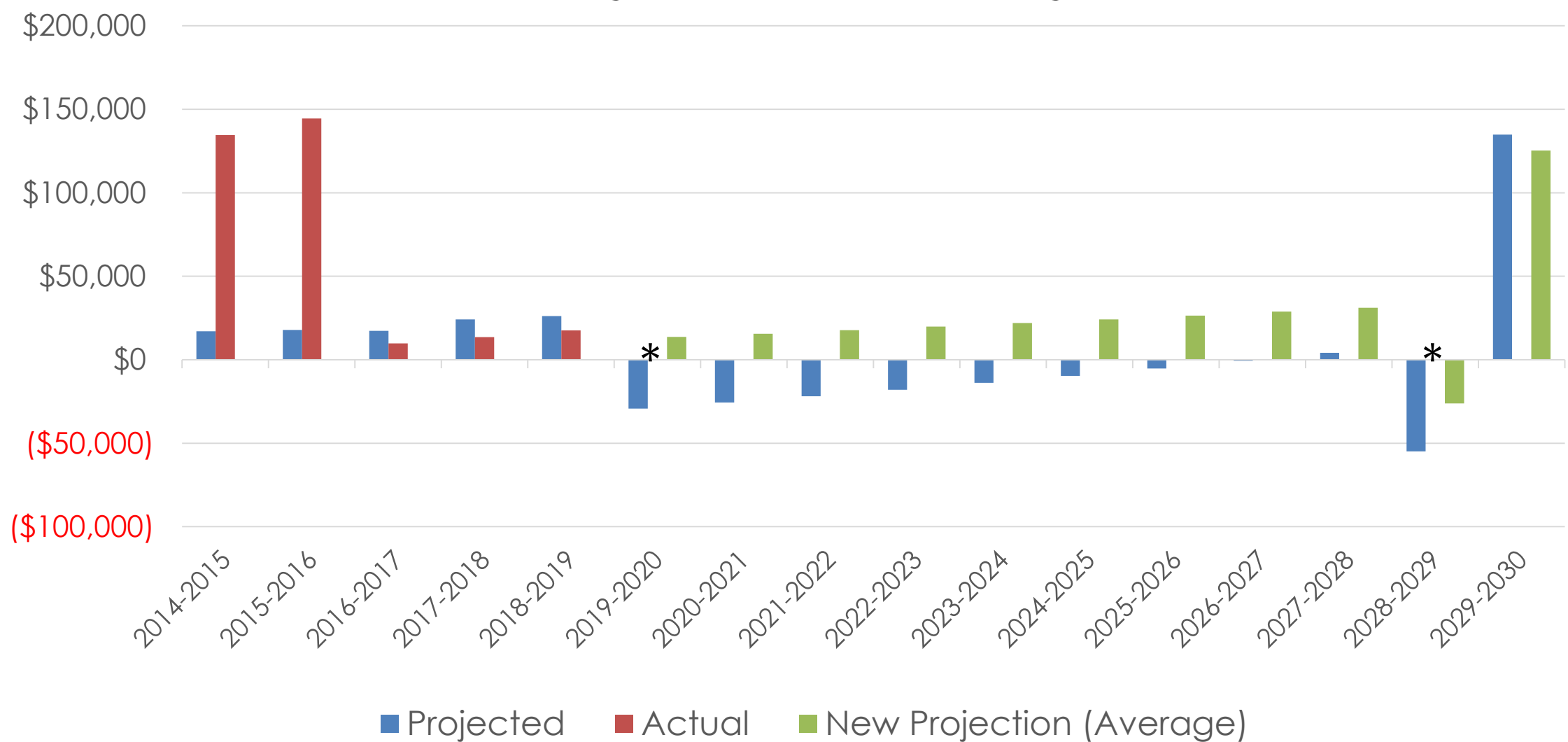


# Total Project Saving and Expected Payback

	Baseline/ Projected	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	Baseline Comparison	Previous Year Comparison
Annual Usage (kWh)	626,872	667,114	695,421	690,018	703,498	680,464	90%	100%
Annual PV Generated (kWh)	437,244	428,340	423,167	431,050	438,395	408,360	93%	93%
Annual Savings (\$)	\$87,826	\$88,845	\$88,586	\$95,620	\$97,886	\$91,302	104%	93%

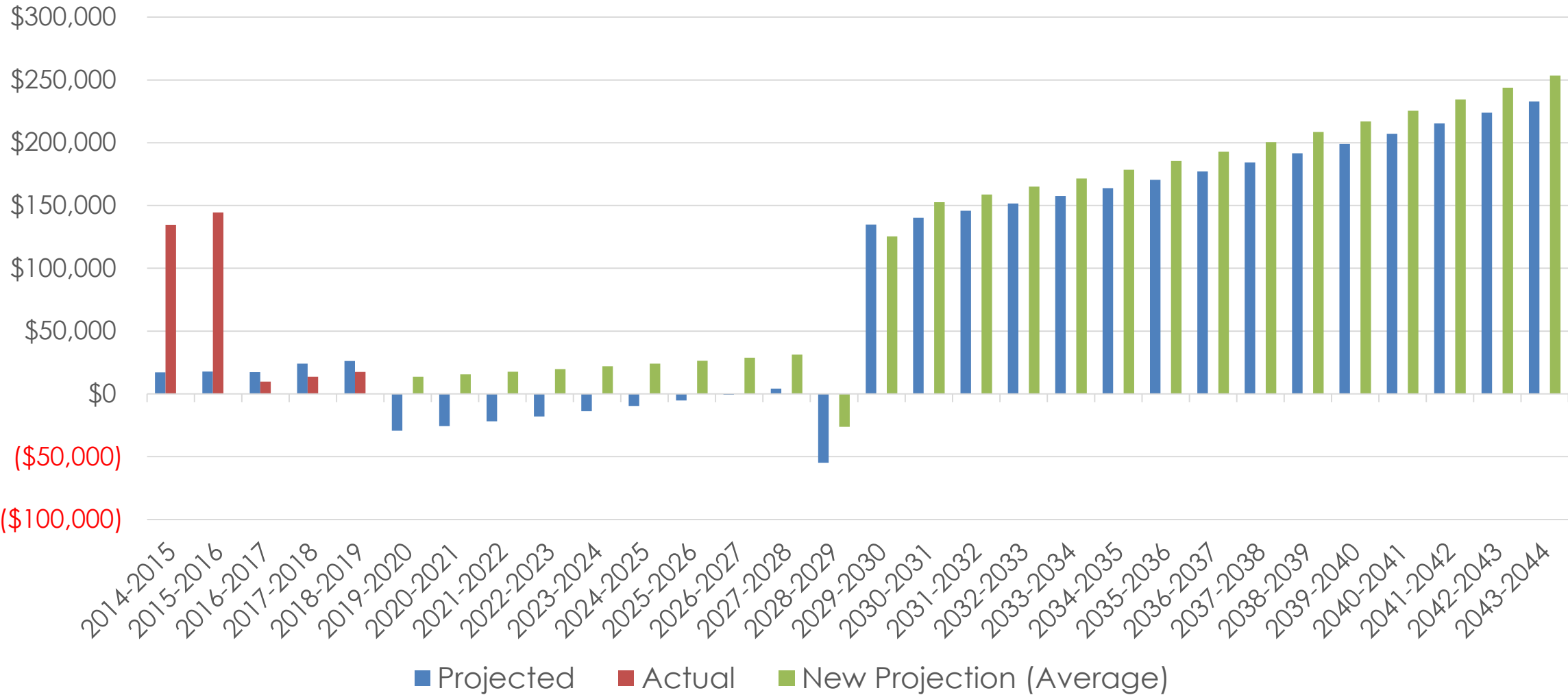
# Projected Vs Actual Project Cash Flow to 2030

Projected Vs Actual Project Cash Flow



# Projected Vs Actual Cash Flow Over Project Lifetime

Projected Vs Actual Project Cash Flow





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**Questions?**