

# Comparative Energy Analysis Report

Prepared for  
Jurupa Community Services District

Prepared by  
The Energy Coalition

On Behalf of  
The Southern California Regional Energy Network Public Agency Program

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12/12/2018

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## 1. Overview

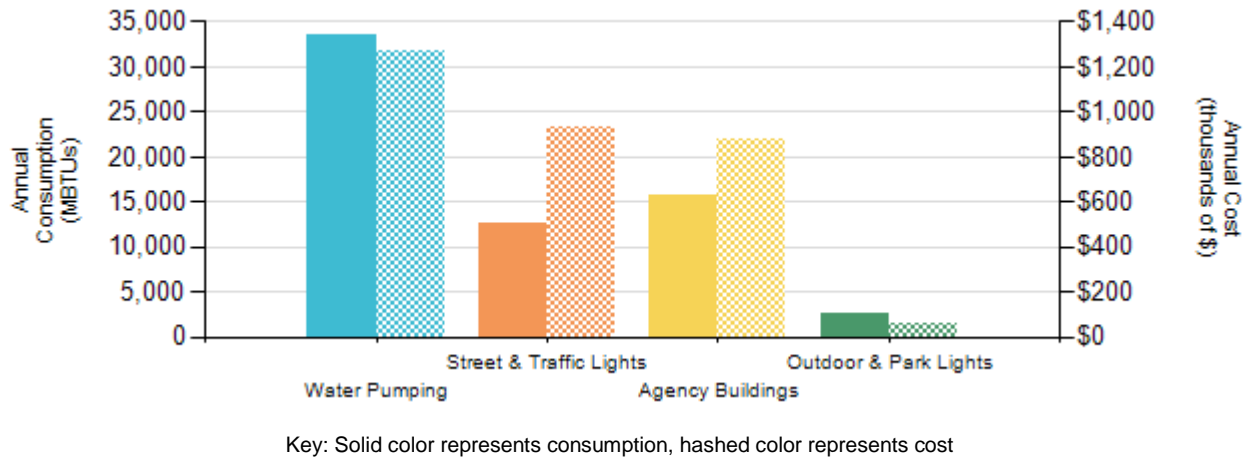
This report is intended to provide a framework for the Jurupa Community Services District, referred to as “Agency” herein, to identify inefficient facilities and infrastructure and prioritize further investigation and energy efficiency retrofit work. This analysis uses only electric billing data provided by the Agency to analyze energy use across Agency assets, and to help identify opportunities for energy efficiency improvements. Many factors affect the energy use in different assets, including age, type of heating, ventilation, air conditioning (HVAC), and lighting equipment, facility occupancy and hours, plug loads, and climate. Once individual opportunities with the greatest potential for energy savings are identified, a more detailed screening of those facilities can be performed to identify the specific sources of the inefficiencies.

This report was created by The Energy Coalition on behalf of the Southern California Regional Network ([www.socalren.com](http://www.socalren.com)). Any questions about this report can be directed to your assigned Project Manager, Angela Vaszily, at [avaszily@energycoalition.org](mailto:avaszily@energycoalition.org).

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## 2. Total Energy Portfolio

Your Total Annual Energy Cost is **\$3,128,665**



Annual Energy Costs

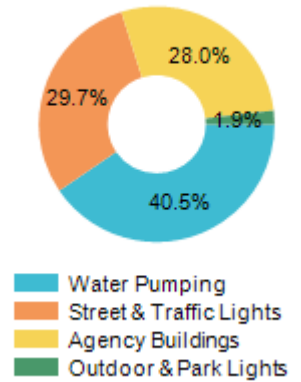


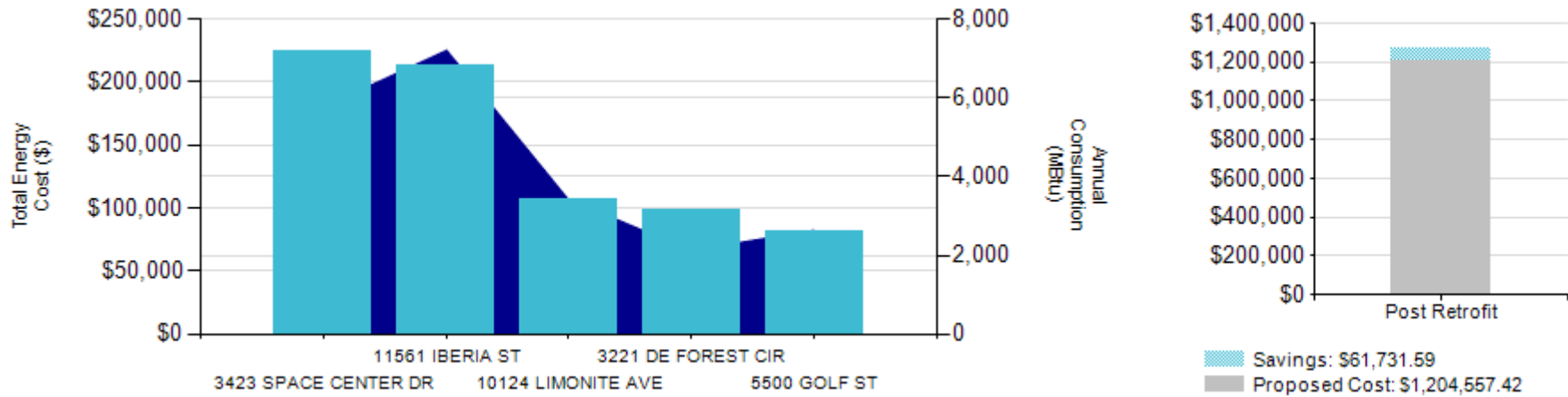
Table 1: Total Energy Portfolio (Annual)

Agency Energy Use	Electric Consumption (kWh)	Electric Cost (\$)	Total Energy Consumption (MBTUs)	Total Energy Cost (\$)	GHG Emissions (lbs CO2)
Water Pumping	9,853,711	\$1,266,289	33,601,154	\$1,266,289	5,094,369
Street & Traffic Lights	3,684,970	\$928,451	12,565,747	\$928,451	1,905,129
Agency Buildings	4,635,121	\$875,819	15,805,762	\$875,819	2,396,357
Outdoor & Park Lights	774,480	\$58,105	2,640,976	\$58,105	400,406



### 3. Water Pumping

Your Annual Energy Cost for Water Pumping is **\$1,266,289** and **40.5%** of the Total Cost.



Key: Displays the top 5 consuming pumping service accounts. Columns represent Cost, Area represents Consumption.

**Assumption** - 65% of all pumps need to be upgraded. Those pumps will reduce consumption by 7.5% kWh post retrofit.

**Calculation** - projected savings are 7.5% of 65% of the total PA consumption (for ALL pump accounts)

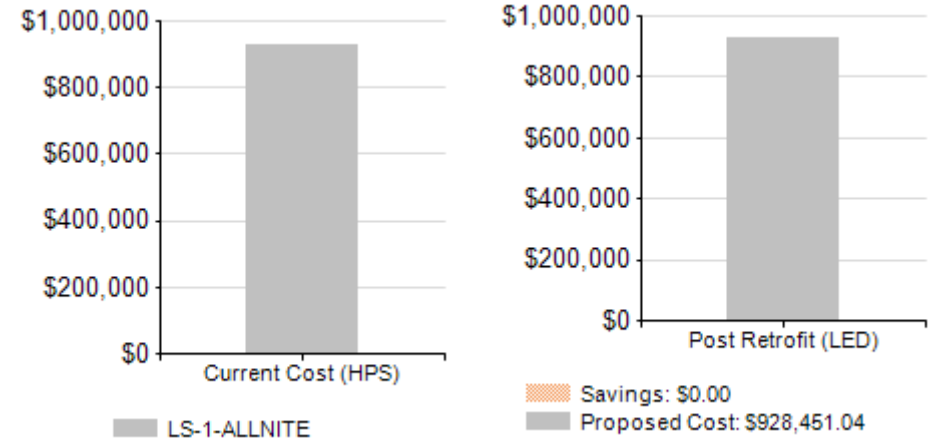
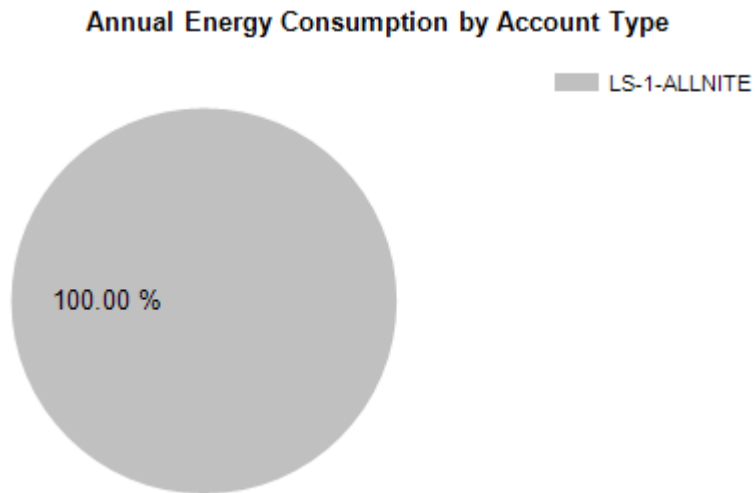
Table 2: Water Pumping (Annual)

Service Account Address	Service Account Number	Tariff Type	Electric Consumption (kWh)	Electric Cost (\$)	Electric Rate (\$/kWh)
3423 SPACE CENTER DR	27947647	TOU-PA3A	1,691,414	\$223,971	\$0.13
11561 IBERIA ST	28193906	TOU-PA3B	2,112,579	\$213,793	\$0.10
10124 LIMONITE AVE	1165147	TOU-PA3B	1,006,022	\$107,644	\$0.11
3221 DE FOREST CIR	2147741	TOU-PA3B	621,319	\$98,168	\$0.16
5500 GOLF ST	1165133	TPA3-SOP1	773,049	\$82,330	\$0.11



## 4. Street & Traffic Lights

Your Annual Energy Cost for Street & Traffic Lights is **\$928,451** and **29.7%** of the Total Cost.



**Assumption** -agencies can save 50% on annual street & traffic light kWh consumption by converting HPS to LED.

**Calculation** – projected savings are 50% of the total kWh consumption of agency owned street and traffic lights (TC-1, LS-2, and LS-3). LS-1 street lights are not included in projected savings.

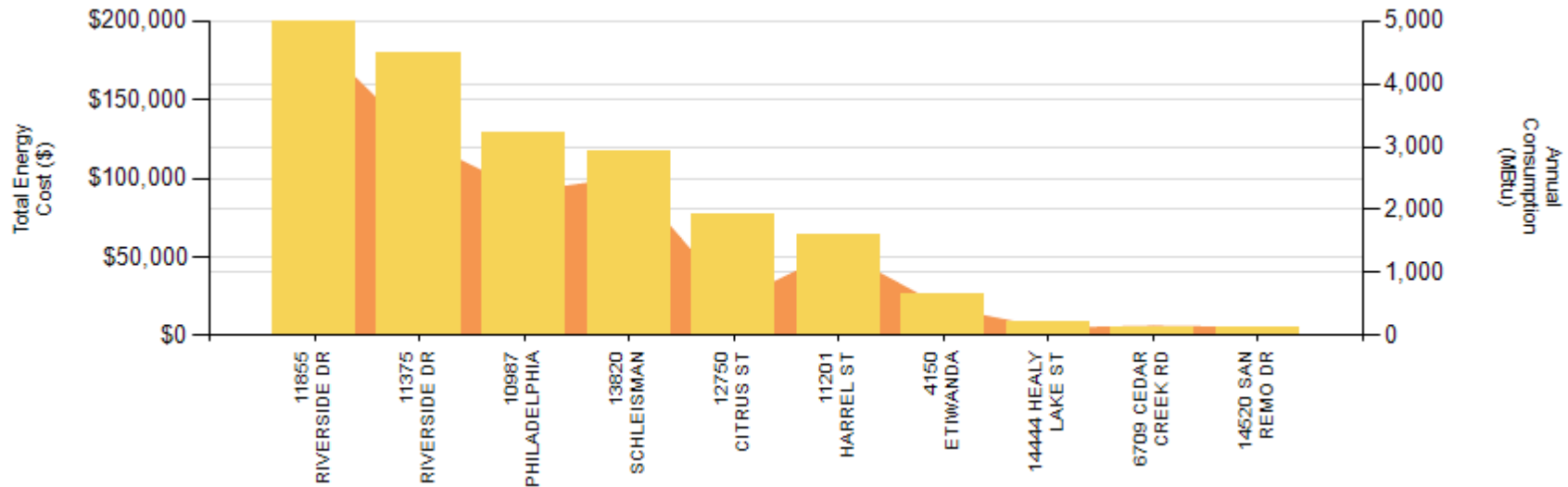
Table 3: Street & Traffic Lights (Annual)

Tariff	Tariff Description	Electric Consumption (kWh)	Electric Cost (\$)	Electric Rate (\$/kWh)
LS-1-ALLNITE	Street Lights (SCE Owned)	3,684,970	\$928,451	0.25

## 5. Building Summary



Your Annual Energy Cost for Buildings is **\$875,819** and **28.0%** of the Total Cost.



Key: Displays the top 10 consuming Buildings. Columns represent Cost, Area represents Consumption.

Table 4: Building Summary (Annual)

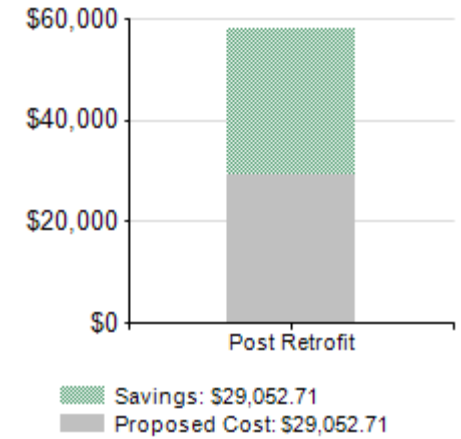
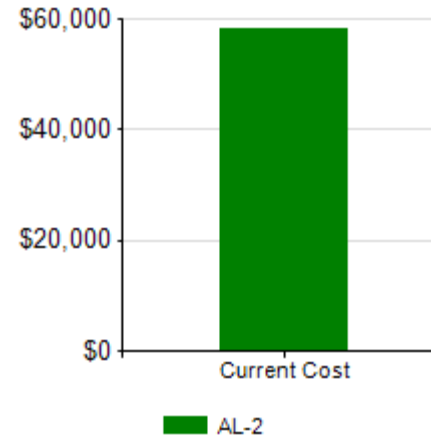
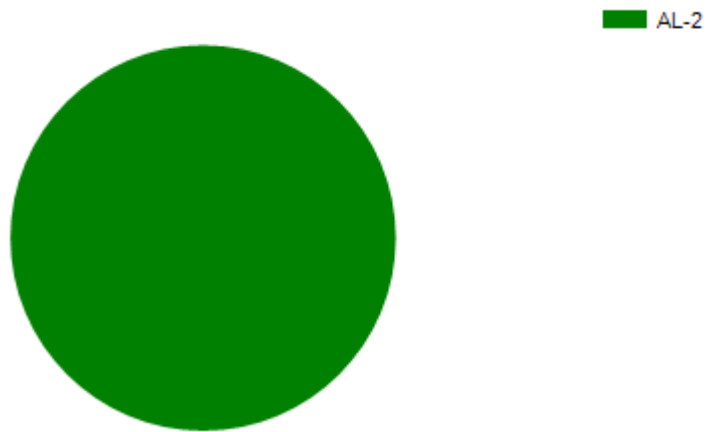
Site Name	Service Account Address	Service Account Number	Tariff Type	Electric Consumption (kWh)	Electric Cost (\$)	Electric Rate (\$/kWh)
11855 RIVERSIDE DR	11855 RIVERSIDE DR	42408977	TOU-8-B	1,383,750	\$199,952	\$0.14
11375 RIVERSIDE DR	11375 RIVERSIDE DR	42408973	TOU-GS3-B	910,665	\$179,310	\$0.20
10987 PHILADELPHIA	10987 PHILADELPHIA	46525938	TOU-GS3-B	668,821	\$129,417	\$0.19
JCSD Parks and Recreation	13820 SCHLEISMAN	38755656	TGS3-CPP	735,981	\$117,095	\$0.16
12750 CITRUS ST	12750 CITRUS ST	41113522	TGS3-CPP	159,368	\$76,592	\$0.48
JCSD Headquarters	11201 HARREL ST	19670962	TOU-GS2B	394,808	\$63,998	\$0.16
4150 ETIWANDA	4150 ETIWANDA	22465419	TOU-GS2B	128,852	\$26,659	\$0.21
14444 HEALY LAKE ST	14444 HEALY LAKE ST	35487429	TOU-GS2A	33,966	\$9,235	\$0.27
Cedar Creek Park	6709 CEDAR CREEK RD	24933246	TOU-GS1B	42,751	\$5,716	\$0.13
14520 SAN REMO DR	14520 SAN REMO DR	32220270	TOU-GS1B	37,233	\$5,403	\$0.15

## 6. Outdoor & Park Lights



Your Annual Energy Cost for Outdoor & Park Lights is **\$58,105** and **1.9%** of the Total Cost.

Annual Energy Consumption by Account Type



**Assumption** -agencies can save 50% on annual outdoor & park light kWh consumption by converting HPS to LED.

**Calculation** – projected savings are 50% of the total kWh consumption of outdoor & park lights.

Table 5: Outdoor & Park Lights (Annual)

Name	Address	Tariff	Electric Consumption (kWh)	Electric Cost (\$)	Electric Rate (\$/kWh)
Area Lighting	Various	AL-2	774,480	\$58,105	\$0.08



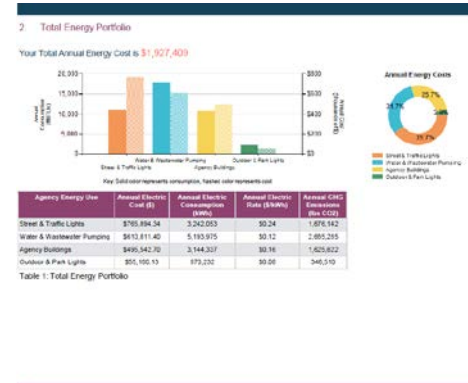
## Appendix A - Methodology

### 1. Data Sources

- Building information, energy usage and cost data used in this analysis were derived from utility consumption billing data provided by agency staff.
- Utility consumption billing data used in this analysis were derived from SCE electric tariffs.
- For more information about the utility tariffs included in this analysis refer to:
  - SCE Electric Tariff: [For more information about Southern California Edison tariffs](https://www.sce.com/wps/portal/home/regulatory/tariff-books/rates-pricing-choices); <https://www.sce.com/wps/portal/home/regulatory/tariff-books/rates-pricing-choices>
- All electricity and results were based on usage during period April 1, 2017 – April 1, 2018.
- In some cases, multiple meters were associated with a single facility or asset type. For such facilities, to generate estimates of facility-wide energy use and energy intensity, energy usage and cost values were aggregated by summing energy usage and cost values for each day in the analysis period.
- GHG emissions data used in this analysis were calculated using the conversion: 517 lb CO<sub>2</sub>/MWh + 11.91 lbs CO<sub>2</sub>/therm [1,2].

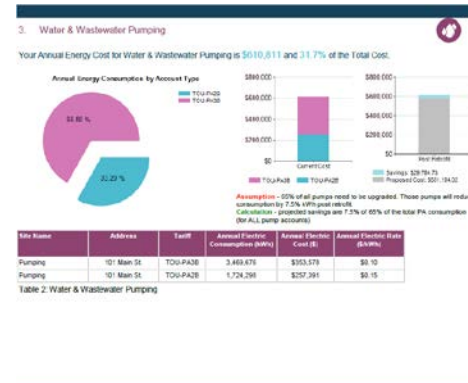
## 2. Total Energy Portfolio

- Total Energy Portfolio data represents an analysis of each agency facility type annual energy costs, annual energy consumption (kWh), GHG Emissions and total annual energy costs for agency facility types based on MBtus.
- The following agency assets are included in the Total Energy Portfolio:
  - Water Pumping
  - Street & Traffic Lights
  - Buildings
  - Outdoor & Parks Lights



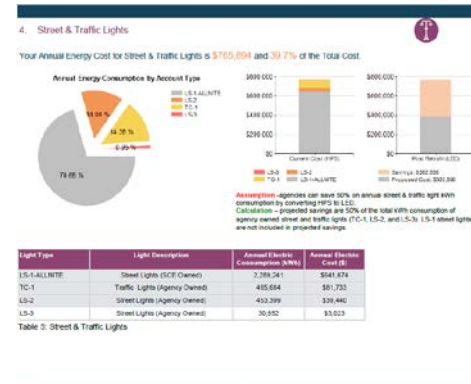
## 3. Water Pumping

- Water pumping data represents an analysis of the top five highest energy consuming water and wastewater pumping SCE service accounts annual energy costs, annual energy consumption (kWh), GHG Emissions, and total annual energy costs based on MBtus.
- Water pump conversion data used in this analysis is derived on the assumption that 65% of all existing pumps need to be upgraded. Of the 65% of pumps requiring upgrades, it is assumed that the pumps will save 7.5% of their annual kWh consumption [3].



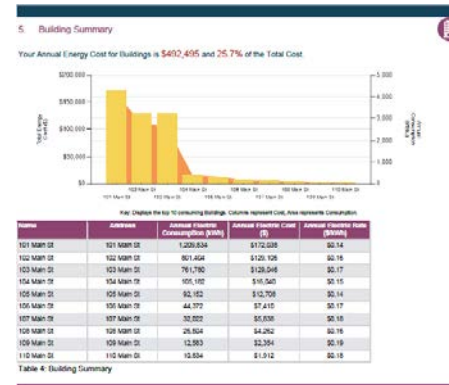
## 4. Street & Traffic Lights

- Street & traffic light data represents an analysis of annual energy costs, annual energy consumption (kWh), GHG Emissions per SCE street & traffic light tariff type.
- Annual cost savings reflects only agency owned street lights in the analysis; assumed cost savings conversion is based on converting HPS to LED agency owned traffic and street lights [3].
- On average, agencies can save 50% on annual kWh consumption by converting HPS to LED, which also results in cost savings [3].



## 5. Building Summary

- Building summary data represents an analysis of the top ten highest energy consuming agency buildings annual energy costs, annual energy consumption (kWh), GHG Emissions, and total annual energy costs based on MBtus.





## Endnotes

[1] Corporate Responsibility Report. (2015). In Southern California Edison. Retrieved from [https://www.sce.com/wps/wcm/connect/c0fcef5-e04a-4287-8301-8e66e3e5fbac/2014\\_Corporate+Responsibility+Report\\_FINAL+single-page.pdf?MOD=AJPERES&ContentCache=NONE](https://www.sce.com/wps/wcm/connect/c0fcef5-e04a-4287-8301-8e66e3e5fbac/2014_Corporate+Responsibility+Report_FINAL+single-page.pdf?MOD=AJPERES&ContentCache=NONE)

[2] Adams, L.S., Nicols, M.D., Goldstene, J. N. (2008). Climate Change Scoping Plan. In California Air Resources Board. Retrieved from [https://www.arb.ca.gov/cc/scopingplan/document/appendices\\_volume2.pdf](https://www.arb.ca.gov/cc/scopingplan/document/appendices_volume2.pdf)

[3] Based on SoCalREN previous project estimates.

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