

Comparative Energy Analysis Report

Prepared for
City of South El Monte

Prepared by
The Energy Coalition

On Behalf of

The Southern California Regional Energy Network Public Agency Project Delivery Programs

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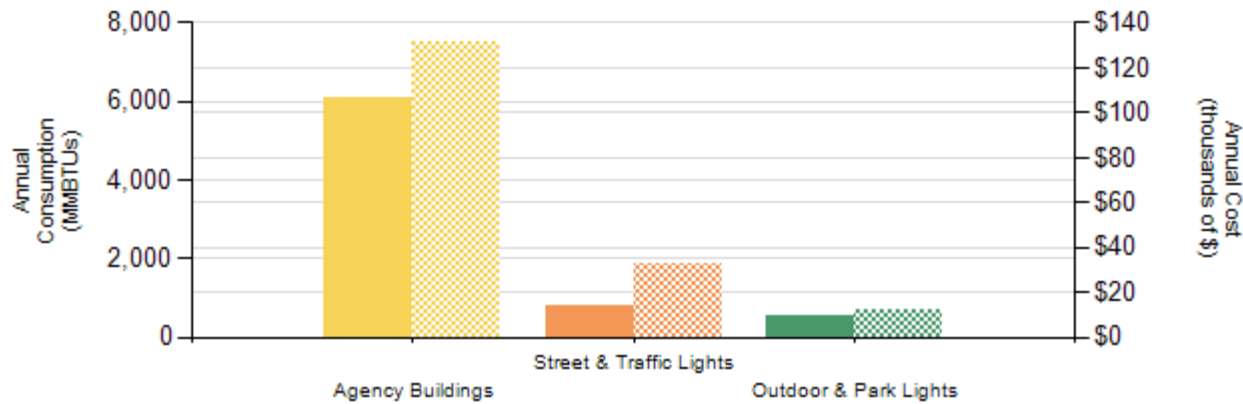
1. Overview

This report is intended to provide a framework for the South El Monte, referred to as “Agency” herein, to identify inefficient facilities and infrastructure and prioritize further investigation and energy efficiency retrofit work. This analysis uses only energy 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, 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.org). Any questions about this report can be directed to your assigned Project Manager, Alex Ricklefs at aricklefs@energycoalition.org.

2. Total Energy Portfolio

Your Total Annual Energy Cost is **\$177,162**



Key: Solid color represents consumption, hashed color represents cost

Annual Energy Costs

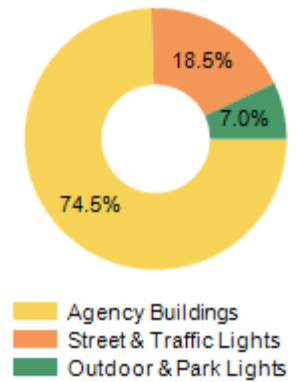


Table 1: Total Energy Portfolio (Annual)

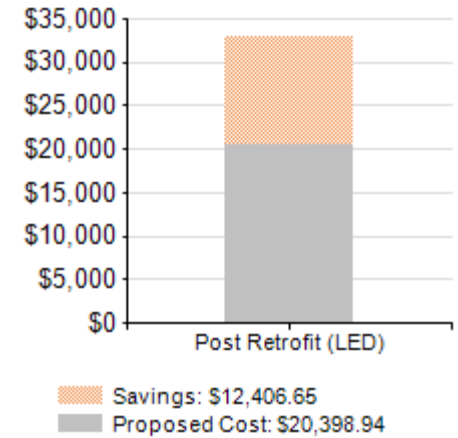
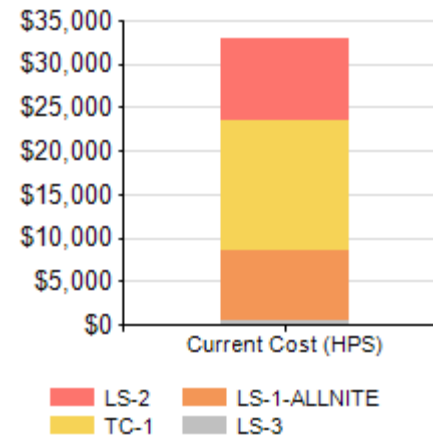
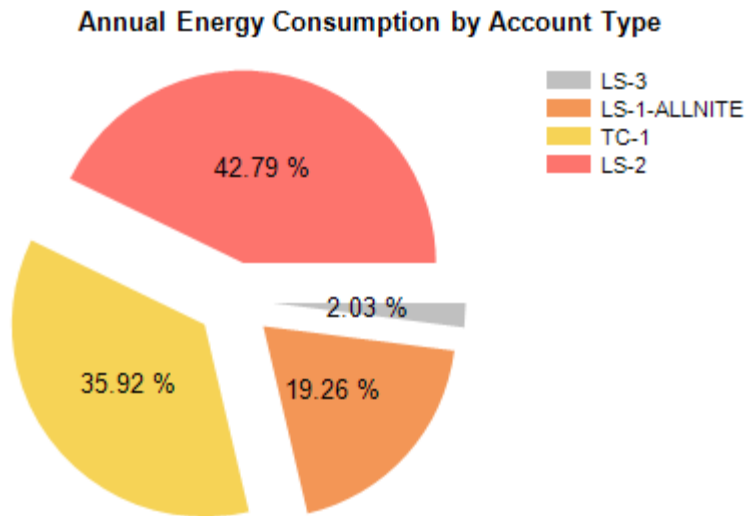
Agency Energy Use	Electric Consumption (kWh)	Electric Cost (\$)	Gas Consumption (therms)	Gas Cost (\$)	Total Energy Consumption (MBTUs)	Total Energy Cost (\$)	GHG Emissions (lbs CO2)
Agency Buildings	605,458	\$99,141	41,610	\$32,811	6,093,254	\$131,952	292,958
Street & Traffic Lights	226,806	\$32,806	0	\$0	773,408	\$32,806	117,259
Outdoor & Park Lights	151,925	\$12,405	0	\$0	518,064	\$12,405	78,545



3. Street & Traffic Lights



Your Annual Energy Cost for Street & Traffic Lights is **\$32,806** and **18.5%** 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)

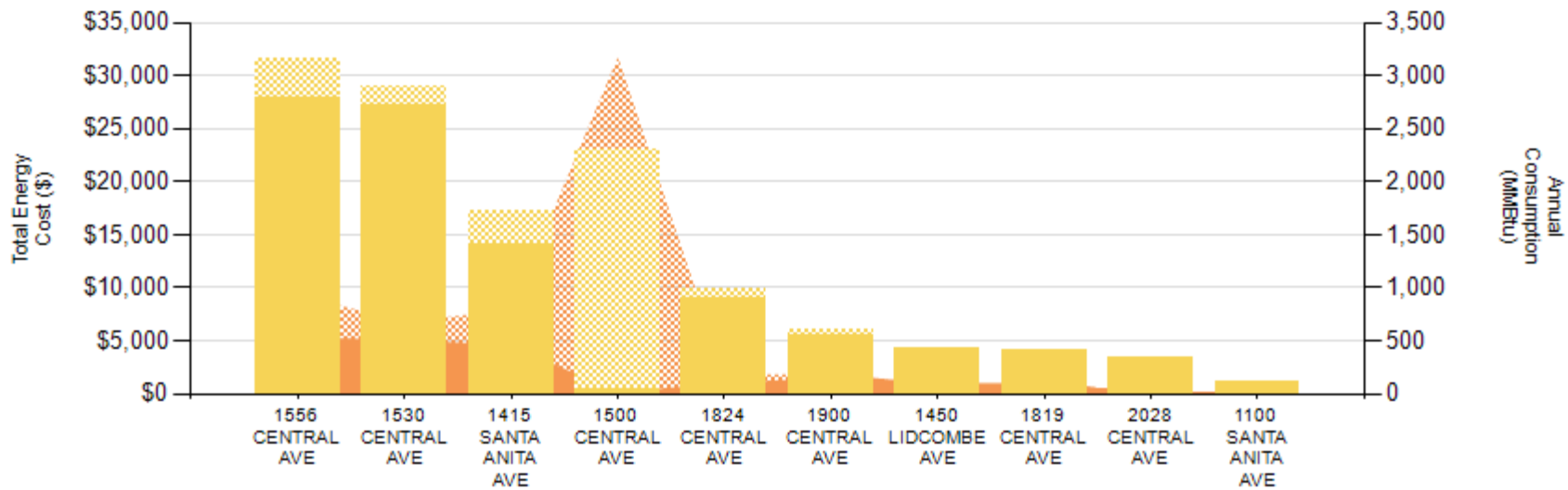
Tariff	Tariff Description	Electric Consumption (kWh)	Electric Cost (\$)	Electric Rate (\$/kWh)

TC-1	Traffic Signal Lights (Agency Owned)	81,467	\$14,988	0.18
LS-2	Street Lights (Agency Owned - unmetered)	97,044	\$9,362	0.10
LS-1-ALLNITE	Street Lights (SCE Owned)	43,680	\$7,992	0.18
LS-3	Street Lights (Agency Owned - metered)	4,615	\$464	0.10

4. Building Summary



Your Annual Energy Cost for Buildings is **\$131,952** and **74.5%** of the Total Cost.



Key: Displays the top 10 consuming Buildings. Yellow columns represent Cost, Orange area represents Consumption. Electricity is the solid shade, Natural Gas is the hashed shade

Table 4: Building Summary (Annual)

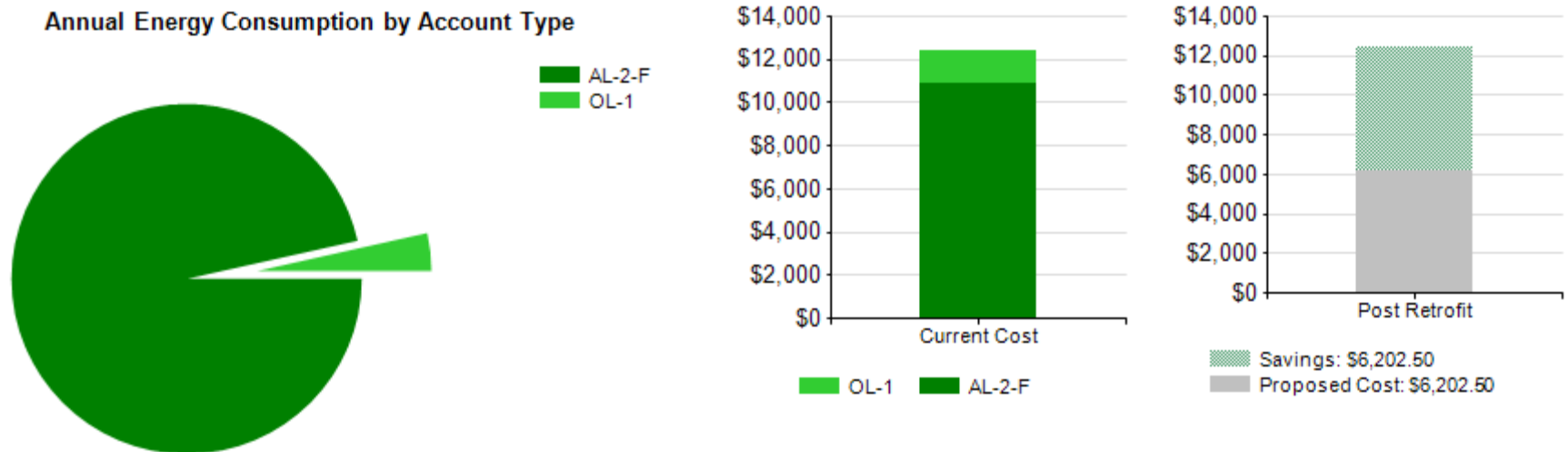
	Address	Electric Consumption (kWh)	Electric Cost (\$)	Electric Rate (\$/kWh)	Gas Consumption (therms)	Gas Cost (\$)	Gas Rate (\$/therm)	Disadvantaged Community (Yes or No)
SR CENTER TRANSPORTATION	1556 CENTRAL AVE	167,948	\$30,294	\$0.18	3,973	\$3,734	\$0.94	YES

COMMUNITY CENTER	1530 CENTRAL AVE	164,337	\$30,520	\$0.19	1,663	\$1,789	\$1.08	YES
CITY HALL	<u>1415 SANTA ANITA AVE</u>	131,275	\$14,151	\$0.11	3,382	\$3,157	\$0.93	YES
1500 CENTRAL AVE	1500 CENTRAL AVE	1,071	\$453	\$0.42	31,500	\$22,652	\$0.72	YES
MINI CENTER	1824 CENTRAL AVE	27,466	\$8,990	\$0.33	731	\$908	\$1.24	YES
MAINTENANCE	1900 CENTRAL AVE	42,368	\$5,432	\$0.13	360	\$571	\$1.59	YES
NEW TEMPLE PARK	1450 LIDCOMBE AVE	24,347	\$4,206	\$0.17	0	\$0	\$0.00	YES
MARY VAN DYKE PARK	1819 CENTRAL AVE	25,563	\$4,154	\$0.16	0	\$0	\$0.00	YES
2028 CENTRAL AVE	2028 CENTRAL AVE	1,647	\$3,450	\$2.09	0	\$0	\$0.00	YES
1100 SANTA ANITA AVE	1100 SANTA ANITA AVE	4,001	\$1,224	\$0.19	0	\$0	\$0.00	YES

5. Outdoor & Park Lights



Your Annual Energy Cost for Outdoor & Park Lights is **\$12,405** and **7.0%** of the Total Cost.



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-F	146,609	\$10,840	\$0.07

Area Lighting	Various	OL-1	5,316	\$1,565	\$0.29
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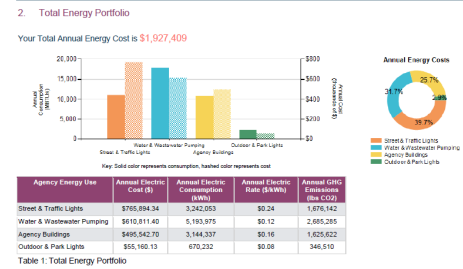
Appendix A - Methodology

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 SCG gas tariffs and SCE electric tariffs
- For more information about the utility tariffs included in this analysis refer to:
 - SCG Gas Tariffs: [For more information about Southern California Gas tariffs;](https://www.socalgas.com/regulatory/tariffs/tariffs-rates.shtml)
<https://www.socalgas.com/regulatory/tariffs/tariffs-rates.shtml>
 - 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 gas results were based on usage during period January 1, 2018 – December 31, 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, 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 CO₂/MWh + 11.91 lbs CO₂/therm [1,2].

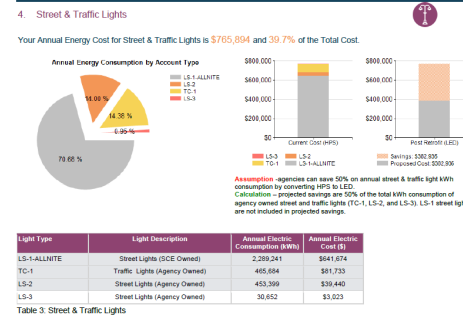
2. Total Energy Portfolio

- 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



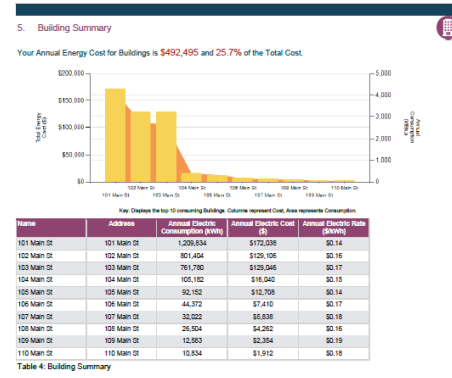
3. Street & Traffic Lights

- 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].



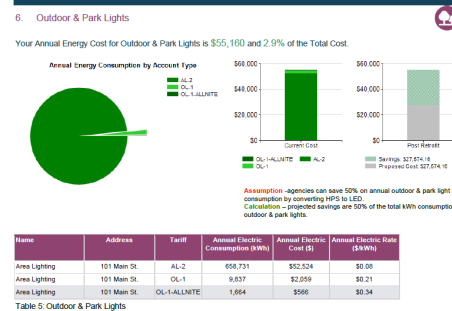
4. Building Summary

- 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.



5. Outdoor & Park Lights

- Outdoor & park lights data represents an analysis of annual energy costs, annual energy consumption (kWh), GHG Emissions, and total annual energy costs based on MBtus per SCE outdoor and park lighting tariff type





Certain properties did not have energy usage data for the range of the analysis period and were excluded:

Tariff Type	Meter Number
Building	17776435 45907980
LS-1-TAP	3671194



Endnotes

[1] Corporate Responsibility Report. (2015). In Southern California Edison. Retrieved from https://www.sce.com/wps/wcm/connect/c0fceef5-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

[3] Based on SoCalREN previous project estimates.
