



Light Emitting Diode Rental Light Review

A Review of Parking Lot Lighting Options

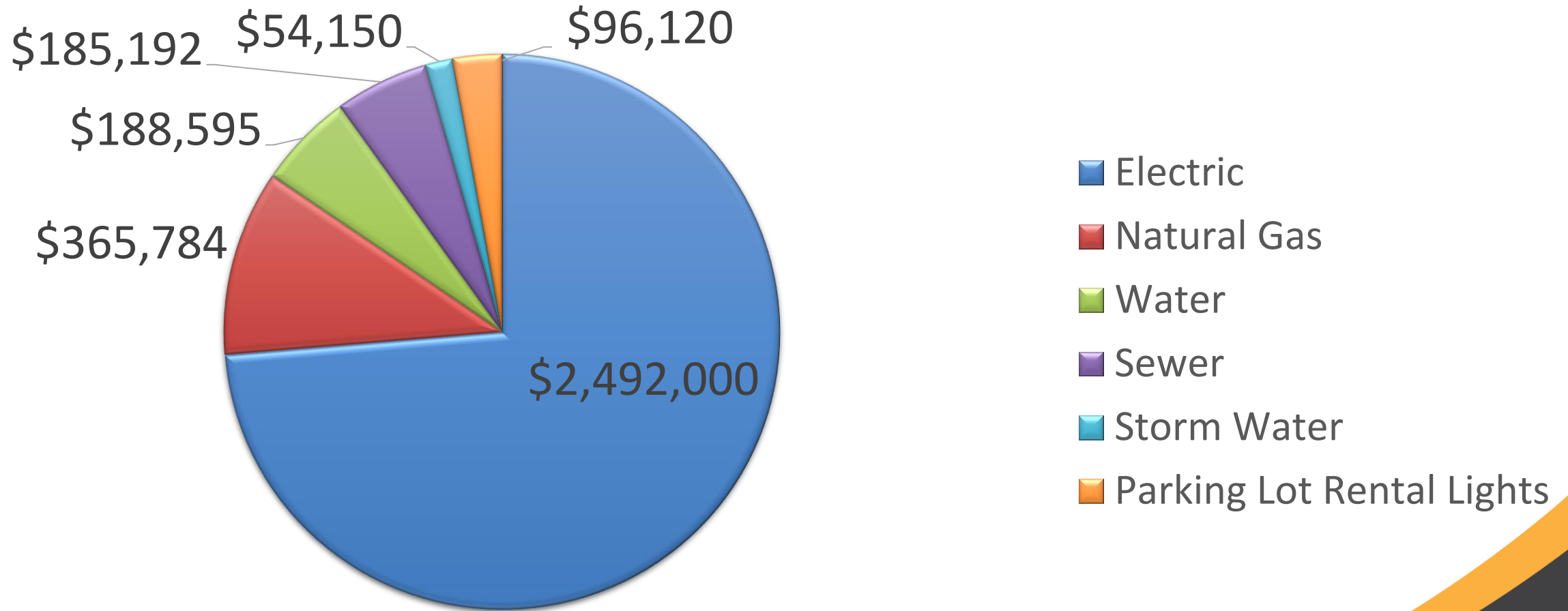
Project Scope

- Analysis of status quo vs. Light Emitting Diodes (LED) lights (County-owned), LED rented, and LED lights with solar (County-owned) options
- Report considered rental lights in the GRU service area and rate structure
- Analysis is a general review of lights not a photometric study of a parking lot

Current Conditions

- County maintains roughly 1.3 M square feet of facilities with a broad mix of rental and parking lot lights in the GRU service territory
- In general the most common rental lights are in the 100-400 watt range of High Pressure Sodium (HPS) class lights
- Estimated annual energy cost, all rental lights: \$59,000
- Estimated annual energy use, all rental lights: 428,000 kWh

Proportion of Yearly Utility Cost



Comparisons of First Year Options

	GRU Rented HPS	GRU Rented LED	County-Owned LED	+ Solar Option
Total Fixture Cost	In place now	\$0 up front cost	\$3,742,907	\$9,036,000
Annual Energy (kWh)	428,079	253,028	253,028	0
Annual Energy Cost	\$58,990	\$34,868	\$34,868	\$0
Est Maintenance Cost	\$0	\$0	\$1,141	\$0
Est Cost Avoidance	\$0	\$24,122	\$22,981	\$58,990

Review and Next Steps

Replacement Method	Replacement Cost	Annual Energy Savings	Payback Period
Existing HPS	\$0	\$0	0
GRU Rental LED	\$0	\$24,122	0
County Owned LED	\$3,742,907	\$22,981	158 years
County Owned LED+Solar	\$9,036,000	\$58,990	151 years

Staff are proceeding with swapping all HPS rental lights for LED rental light equivalents.