

UTAH STATE CAPITOL CAMPUS LIGHTING EFFICIENCY UPGRADES

FALL 2017 PROGRESS UPDATE



DIVISION OF FACILITIES
CONSTRUCTION AND MANAGEMENT
CAPITOL PRESERVATION BOARD



Division of
**Facilities Construction
& Management**

PRIMARY GOALS

- Increase Energy Efficiency → Decrease Costs:
 - Lower Electrical Operating Costs Campus-Wide
 - Reduce Materials Purchases
 - Improve Labor Efficiencies and Safety
- Modernize Aesthetics
 - Uniform Lighting
 - Minimize Variability
 - Application Specific
- Strengthen Security
 - Increased Areal Coverage
 - Camera Range Illumination
 - Safer Parking Lots and Walks



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INTERIOR APPLICATIONS



32W → 14W



54W → 42W



32W → 14.5W



26W → 18W



32W → 14W

INTERIOR APPLICATIONS



60W → 2W



60W → 13W



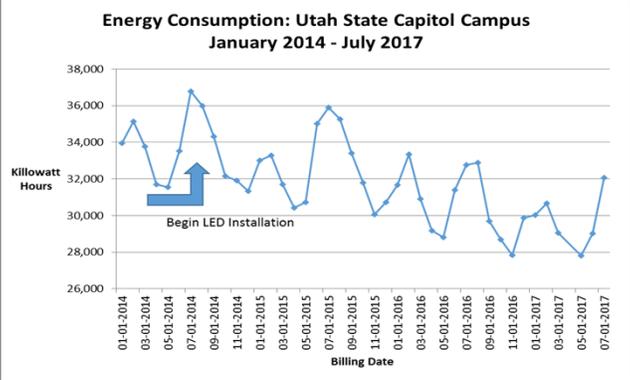
26W → 12W

EXTERIOR APPLICATIONS



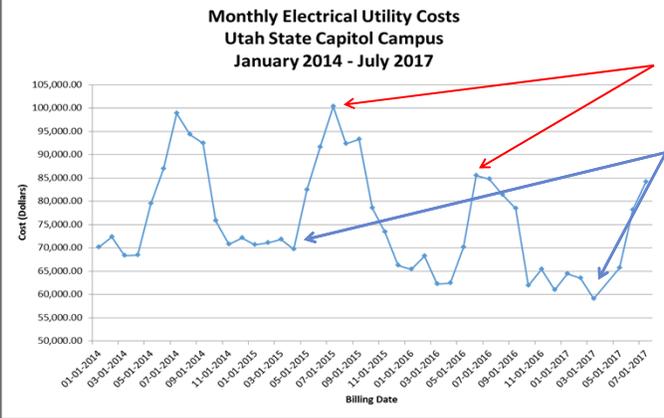
Post-LED Energy Consumption

Year	Kilowatt Average	Peak Kilowatt	Total Annual kWh
2014	2,008	2,412	12,225,600
2015	2,009	2,300	11,898,000
2016	1,861	2,171	11,160,000
2017 Through July	1,595	2,203	6,213,600



Post LED Energy Costs

Year	Average Bill Dollars (\$)	High Bill Dollars (\$)	Total Energy Expenditure (\$)	Cost/KW (\$)
2014	79,173.35	98,897.26	950,080.14	0.077
2015	80,123.02	100,306.25	961,476.29	0.08
2016	70,569.57	85,478.74	846,834.81	0.075
2017 Through July	67,581.74	84,081.90	473,072.18	0.076



Peak Summer Savings of ~ \$15,000/ Billing

Peak winter Savings of ~ \$10,000/ Billing

Overall Savings of \$103,245.33 from 2015-2016

MOVING FORWARD

- Capitol Improvements Funding
 - Approved \$600,000 for Lighting Upgrades
 - Campus Wide Scope
 - Commonplace Fixtures ~ 20,000 Lamps
 - Reduce Wattage from 32W to 10W

- Stay Abreast of Change and Opportunity
 - Awareness of Specialized Options for Traditional Fixtures
 - Maintaining Aesthetic Values
 - Cooperation with Vendors and Utilities
 - Rocky Mountain Power Incentives



IT'S NOT JUST LIGHTS...

- ▣ Flat Plate Heat Exchanger
 - Maintains Chilled Water Demand Off Peak
 - Eliminates a Chiller, Eliminates Power Usage
 - Increases Redundancy for Cooling
- ▣ Building Schedules and Occupancy
 - HVAC and Lighting
- ▣ Diligence in Maintenance
 - Boilers, Pumps, and Heat Exchangers
 - Variable Frequency Drives

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Questions?

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