



Golden Urban Renewal Authority, Garage - 702 12th Street, Golden, CO

Project Savings

	<u>Currently</u>	<u>After Retrofit</u>
Number of Lighting Fixtures	77	77
Lighting System Energy Consumption (kWh)	121,063	32,182
Current Utility Rate	\$0.0900	

Financial Savings

Cost Avoidance per Year - kWh Reduction	\$6,123.51
Cost Avoidance per Year - Sensor Reduction	\$1,875.76
Cost Avoidance per Year - Maintenance Costs	\$1,088.38
Cost Avoidance per Year - HVAC Savings	\$0.00
Cost Avoidance per Year - Supplemental Cooler	\$0.00
First Year Total Savings	\$9,087.65
Total Project Cost	\$23,689.95
Total Utility Subsidy	\$5,807.00
Net Project Cost	\$17,882.95

Payback Period (In Years)	1.97
First Year Return on Investment	51%

Energy and Demand Reduction

Kilowatt Hour (kWh) Reduced	88,880
Peak Demand Kilowatts (kW) Reduced	7.77

Monthly Cost of Delay	\$757.30
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Scope of Work

Fixture Location Data				Existing Lighting System		Proposed Lighting System			Total Savings
Ln	Fl	Location	Hours	Description	Qty	Description	Post Qty	Lighting Control	Cost Reduction
Golden Urban Renewal Authority / Garage - 702 12th Street, Golden, CO									
1	1	Garage (ceiling)	8,760	HPS 150w	58	New 1x4 w/ Elect. NP Bal. & (3) 4' XL HL T8's, VR 50K & PC	58	Yes	\$5,579
2	1	Roof exterior pole tops	8,760	HPS 250w	12	New 1x4 w/ Elect. NP Bal. & (4) 4' XL HL T8's, VR 50K & PC	12	Yes	\$2,172
3	1	Stairwells	8,760	Inc 60w	7	Compact One Piece 15w R30 50K	7		\$248
									<u>\$7,999</u>
<u>77</u>							<u>77</u>		<u>\$7,999</u>

Environmental Impact Data

Prepared For:
Golden Urban Renewal Authority



Lime Energy has earned its reputation by consistently finding ways to dramatically reduce our customer's energy cost and improve the quality of light in the workplace. Our work has been recognized by the US EPA which named Lime Energy, the 1996 Lighting Management Company Ally of the Year for their Green Lights Program for work completed throughout the United States.

Reducing energy use is the quickest, safest, most cost-effective way to reduce the emission of greenhouse gases that accompanies the generation of electricity from fossil fuels.

With the implementation of this project we estimate the following: kWh Saved: 88,880

$$88,880 \text{ kWh Saved} \times 1.33 \text{ lbs. of CO}_2 \text{ per kWh} = 118,122 \text{ lbs of CO}_2 \text{ Saved per Year}$$



$$\text{Equivalent to} = 10 \text{ Cars off the Road}$$

Carbon Dioxide is a leading cause of Global Warming

$$88,880 \text{ kWh Saved} \times 5.20 \text{ grams of SO}_2 \text{ per kWh} = 462,176 \text{ lbs of SO}_2 \text{ Saved per Year}$$



Sulfur Dioxide is a leading cause of Acid Rain

$$88,880 \text{ kWh Saved} \times 1.50 \text{ grams of NO}_x \text{ per kWh} = 293 \text{ lbs of NO}_x \text{ Saved per Year}$$



Nitric Dioxide is a leading cause of Smog & Acid precipitation

$$88,880 \text{ kWh Saved} \times \frac{10,000 \text{ BTUs per kWh}}{13,700 \text{ BTUs per lb Coal}} = 64,876 \text{ lbs of Coal Saved per Year}$$

