



sure bet program



Lighting Retrofit Fact Sheet

Sample of Typical Lighting Retrofits

Existing Equipment	Energy Efficient Equipment	Watts Existing	Watts Retrofitted	Wattage Reduced
75 Watt Incandescent Lamp	18 Watt Compact Fluorescent Lamp (CFL)	75	18	57
Standard 40 Watt Incandescent Exit Sign	LED Exit Sign	40	5	35
4 Lamp 4-Foot T12 Fixture	4 Lamp 4-Foot 32 Watt T8 Lamp, Low Power Ballast	168	100	68
5 Lamp 4-Foot T12 Fixture	2 Lamp 4-Foot High Power T8 Fixture w/ Reflector	168	72	96
400 Watt Metal Halide Fixture	4-4' 54 Watt T5HO Lamp	458	234	224

Sample Project Costs

Qty	Existing Fixture Description	Wattage per fixture	Replacement Fixture Description	Wattage per fixture	Typical Costs	Incentives	Savings (kW)	Savings per year (kWh)*
15	60 Watt Incandescent	60	13 W Screw-in CFL	13	\$165	\$22.50	0.705	2,126
10	2 lamp 4' 34 Watt T12 with std ballast	84	2 lamp 4' 32 Watt T8 with low power ballast	51	\$380	\$75.00	0.33	995
2	4 lamp 4' 34 Watt T12 with 2 std ballasts	168	4 lamp 4' 32 Watt T8 with low power ballast	100	\$96	\$30.00	0.136	410

*Assumes the lighting operating hours are 3,000 hours per year (58 hours per week)

The following table summarizes the outcome of the project above. The total Prescriptive Lighting incentive would be \$127.50, which represents approximately 20% of the project cost. The payback period is approximately 1.6 years. In other words, it would take a little over one year and 7 months to payback the cost of the project after taking into account the dollar savings (on electricity bills) and the Sure Bet incentive amount.

Total Peak kW Reduced	1.17	Total Project Cost**	\$641.00
Total Annual kWh Savings	3,532	Total Rebates	\$127.50
Total Annual Therm Savings	0	Total Customer Payment	\$513.50
Total Annual Dollar Savings*	\$317.88	Payback Period (in years)	1.6

*Assumes that the electricity rate is \$0.09/kWh

Where,

- Demand Savings (kW) = # of fixtures X kW/1000 Watts X (Existing wattage – Retrofitted wattage)
- Total Peak kW Reduced = Percent on peak X kW Savings per line item (Percent on peak is 100% in this example – lights are on during business hours)¹
- Total Annual kWh Savings (for lighting only) = kW Savings * operating hours
- Total Annual Dollar Savings = kWh savings per year X electricity rate
- Total Customer Payment = Total Project Cost – Total Rebates
- Payback Period = (Project Cost – Rebate Amount) / Total kWh cost savings, # of years it will take to payback the cost of the project

The Total Annual Dollar Savings are based on electricity/gas rates. These rates can vary based on the business' electricity/gas rate schedule.

Occupancy Sensors

Savings for occupancy sensors are typically only energy savings (i.e., no demand savings). The following equation shows the calculation used for determining savings with occupancy sensors. The percent savings is an estimate of the amount of time lighting will be turned off due to areas being unoccupied. Typical savings are 30 percent for rooms such as private offices, conference rooms, and restrooms. Total fixture wattage is the wattage of the lighting controlled by occupancy sensors.

Energy Savings (kWh) = Operating Hours X % Savings X Total Fixture Wattage X kW/1000 Watts

¹ The peak period is June through September, Sat – Sun, 1pm – 7pm.