

Cost Savings Analysis

**Carmanah LED Edge-Lit Illuminated Street Signs
vs
Traditional Fluorescent Street Signs**

Prepared By
(unknown)



Carmanah

Savings Calculator 1.1

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Cost Savings Analysis

Internally Illuminated Street-Name Signs

Carmanah LED Edge-Lit vs Traditional Fluorescent

Total Number of Signs: 50

1. Annual Energy and Maintenance Costs

	Traditional Fluorescent	Carmanah LED Edge-Lit
A. Energy Costs		
Average Wattage of Sign (W)	192	15
Annual Power Used - All Signs (kWh)	42,048	3,285
Energy Rate (\$/kWh)	\$0.07	\$0.07
Annual Energy Costs	\$2,943	\$230
B. Maintenance Costs		
Average Cost of Replacement Materials	\$50	N/A
Estimated Labor to Service a Sign	\$200	N/A
Average Time Between Servicing (months)	12	N/A
Annual Maintenance Costs	\$12,500	N/A
Total Annual Energy and Maintenance Costs	\$15,443	\$230
Annual Energy and Maintenance Savings		\$15,213

2. Sign Costs

	Traditional Fluorescent	Carmanah LED Edge-Lit
Purchase Cost per Sign	\$1,000	\$1,400
Basic Installation Costs	\$250	\$250
Total Installed Cost (all signs)	\$62,500	\$82,500
Alternate Energy Rebate	N/A	\$0
Total Installed Cost (after rebate)	\$62,500	\$82,500

3. Summary of Cost Savings

Comparison Period	5 years
Annual Energy Cost Increase	2.0 %
Energy and Maintenance Cost Savings for Comparison Period	\$76,621
Sign Cost Differential (installed)	(\$20,000)
Total Savings for Comparison Period	\$56,621
Payback Period	1.3 years

4. Green Savings*

Estimated Energy Savings Over Comparison Period	193,815 kWh
Carbon Dioxide (CO2) Savings for Period	131.8 metric tonnes
Sulphur Dioxide (SO2) Savings for Period	1,318 kg
Nitrous Oxides (N2O) Savings for Period	446 kg

* Formulas based on energy generation data extracted from: "How Many Tons of CO2 Are You Responsible For?" by Robert Farmer, Energy News, March 1998, Volume 11, Number 3 Published by the Association of Energy Engineers (Southeast Florida Chapter)