

Grant Submittal - Sustainability Funds
Alliant Energy Center
Exterior & Lobby LED Lighting Upgrades

	Coliseum Entrances	Entrance Signs 1	Entrance Signs 2	Ex Hall Canopy	Ex Hall Lobby 1	Ex Hall Lobby 2	Total
Existing Lights							
Current Power Use	175	1,000	500	50	90	52	1,867 watts
Number of Fixtures	32	6	4	54	22	230	348 fixtures
Use is 8 hrs.day =	2,920	2,920	2,920	2,920	2,920	2,920	17,520 hours per year
	16,352,000	17,520,000	5,840,000	7,884,000	5,781,600	34,923,200	88,300,800 watts per year
	1,000	1,000	1,000	1,000	1,000	1,000	1,000
	16,352	17,520	5,840	7,884	5,782	34,923	88,301 kilowatts per year
Rate per kilowatt	0.1483224	0.1483224	0.1483224	0.1483224	0.1483224	0.1483224	0.1483224
	\$2,425.37	\$2,598.61	\$866.20	\$1,169.37	\$857.54	\$5,179.89	\$13,096.98 Annual Electrical Cost
Annual Maintenance Cost:	\$320	\$60	\$40	\$540	\$220	\$2,300	\$3,480
	\$2,745.37	\$2,658.61	\$906.20	\$1,709.37	\$1,077.54	\$7,479.89	\$16,576.98 Total Annual Cost
LED Option							
Proposed Power Use	39	52	39	40	50	27	247 watts
Number of Fixtures	32	6	4	14	22	230	308 fixtures
Use is 8 hrs.day =	2,920	2,920	2,920	2,920	2,920	2,920	17,520 hours per year
	3,644,160	911,040	455,520	1,635,200	3,212,000	18,133,200	27,991,120 watts per year
	1,000	1,000	1,000	1,000	1,000	1,000	1,000
	3,644	911	456	1,635	3,212	18,133	27,991 kilowatts per year
Rate per kilowatt	0.1483224	0.1483224	0.1483224	0.1483224	0.1483224	0.1483224	0.1483224
	\$540.51	\$135.13	\$67.56	\$242.54	\$476.41	\$2,689.56	\$4,151.71 Annual Electrical Cost
Annual Maintenance Cost:	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	\$540.51	\$135.13	\$67.56	\$242.54	\$476.41	\$2,689.56	\$4,151.71 Total Annual Cost
Project Energy Cost Savings	\$1,884.86	\$2,463.48	\$798.64	\$926.83	\$381.13	\$2,490.33	\$8,945.27
Projected Maintenance Cost Savings	\$320.00	\$60.00	\$40.00	\$540.00	\$220.00	\$2,300.00	\$3,480.00
Total Projected Cost Savings	\$2,204.86	\$2,523.48	\$838.64	\$1,466.83	\$601.13	\$4,790.33	\$12,425.27
Cost of Proposed Fixtures	\$7,544.00	\$1,704.30	\$943.00	\$1,610.00	\$2,605.90	\$11,241.25	\$25,648.45
Payback Period	3.42	0.68	1.12	1.10	4.34	2.35	2.06
Energy Savings	12,708	16,609	5,384	6,249	2,570	16,790	60,310
Greenhouse Gas Reduction (Metric Tons)	9.00	11.70	3.80	4.40	1.80	11.90	42.60