

Spartanburg District Five LED Lighting Project

Providing District 5 with energy efficient, high quality lighting while moving the cost of upgrading from a one time capital expense to an on going operation expense.

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**Better Lighting
for Students**

Energy Savings

(The Energy Savings Services the Project Cost)

Revenue

(Life Expectancy of technology
specified: 38.5 years)

**Maintenance
Savings**

**Continuous
Updated Technology**

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Better Lighting for Students

Appropriate and well made LEDs, provide a significant improvement in the lighting for students and teachers. Studies have proven that LED Lighting can improve performance in students.

Extensive physical audits of the Districts facilities show that current lighting accounts for 40% of the total power use. Retrofitting to performance guaranteed LED lighting will reduce that to 22.4%.

Energy Savings

(The Energy Savings Services the Project Cost)

Revenue

(Life Expectancy of technology
specified: 38.5 years)

The estimated energy savings (revenue) the District will realize from the LED Retrofit will be significant. An analysis has shown the following

Years 1 thru 10: \$1,600,000.00+

Estimated Revenue over Life: \$20,000,000.00+

All maintenance for all the lighting will be eliminated from the Districts responsibility. The contractor awarded the project will assume all responsibility for on-site lighting maintenance for 10 years. Maintenance beyond the 10 years is expected to be non-occurring.

Maintenance Savings

Continuous Updated Technology

Through a maintenance agreement with the awarded contractor, that contractor will continue to replace the initial lighting with the newest most robust versions of the technology and provide performance reporting during the warranty and maintenance periods.

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Turnkey Project Cost	\$2,329,757.00
Duke Energy rebate assigned to NetZero USA	<u>-\$776,003.00</u>
Net Project Cost	\$1,553,764.00
Capital Contribution Required	\$0.00

7 Year Combined Savings	\$2,353,377.00
Reallocated Utility Payments	<u>-\$1,888,488.00</u>
Cash Flow (7 Years) for Spartanburg Dist. 5	*\$464,889.00

10 Year Warranty Period Combined Savings	\$3,540,704.00
Reallocated Utility Payments (years 1-7)	<u>-\$1,888,488.00</u>
Combined Savings over 10 Year Warranty Period	*\$1,652,216.00

Energy Analysis	
Current Annual Total Power:	11,529,713 kWh
Current Lighting kWh:	4,592,271 kWh
Percentage Lighting of Total kWh:	39.83%
Lighting kWh Reduced by:	2,582,848 kWh
Lighting kWh after LED conversion:	2,009,423 kWh
Percent Reduction Lighting kWh:	56.24%
Percent Reduction of Total Power:	22.40%

Includes:

- All Products, Materials and Disposal
- Installation by NetZero USA, a Licensed Electrical Contractor, licensed in SC
- A Performance Guarantee on all products
- Permitting where applicable
- 7 Year Warranty and 3 year Maintenance Agreement including on-site maintenance
- Includes product upgrades as standard maintenance during warranty and maintenance agreement

Product Life Expectancy based on SDF Operating Hours: 38.5 Years

Energy (kWh) Only Savings over Life (38 Years)	\$19,895,391.00
Maintenance Savings over Life (38 Years)	\$2,837,564.00
Cumulative Net Cash Flow over Life (38 Years)	\$20,844,398.00

Savings and Cash Flow Analysis

	Yearly kWh Savings Only (3.5% annual increase)	Yearly Mainte. savings (2.5% annual increase)	Yearly Combined Savings	Monthly kWh Savings	Monthly Mainte. Savings	Monthly Combined Savings	Monthly Payment 7 Years	Yearly Payments	Yearly Cash Flow kWh Savings Only	Yearly Cash Flow Combined Savings	
7 Year Warranty Period with On-Site Maintenance	Year 1	258,284	45,600	303,884	21,523	3,800	25,323	22,482	269,793	(11,509)	34,091
	Year 2	267,324	46,740	314,064	22,277	3,895	26,172	22,482	269,793	(2,469)	44,271
	Year 3	276,681	47,904	324,585	23,056	3,992	27,048	22,482	269,793	6,888	54,792
	Year 4	286,365	49,092	335,457	23,863	4,091	27,954	22,482	269,793	16,572	65,664
	Year 5	296,387	50,316	346,703	24,698	4,193	28,891	22,482	269,793	26,594	76,910
	Year 6	306,761	51,573	358,334	25,563	4,297	29,860	22,482	269,793	36,968	88,541
	Year 7	317,497	52,853	370,350	26,458	4,404	30,862	22,482	269,793	47,704	100,557
	Totals	2,009,299	344,078	2,353,377					1,888,556	*106,972	*464,826
*see attached for detailed financial analysis											
3 Year On-Site Maintenance Agreement	Year 8	328,610	54,169	382,779			0	0	328,610	382,779	
	Year 9	340,111	55,523	395,634			0	0	340,111	395,634	
	Year 10	352,015	56,899	408,914			0	0	352,015	408,914	
	Totals	3,030,035	510,669	3,540,704			0	0	*1,127,708	*1,652,153	

Misc.:

- * Does not include Byrnes High School Existing LED
- * No rebates for Abner Creek Elementary School
- * All other schools/facilities opted into Duke Energy Rebates
- * An average rate of \$0.10 kWh

* 7 Year Warranty Period (full value/full term, non-prorated) plus a 3 year Maintenance Agreement (at no charge). Both Warranty and Maintenance Agreement provide on-site maintenance for the full terms. Warranty and Maintenance Agreement combine for a 10 year performance warranty. NZUSA will respond directly to schools/facilities to replace product as needed.