

LED Project Update

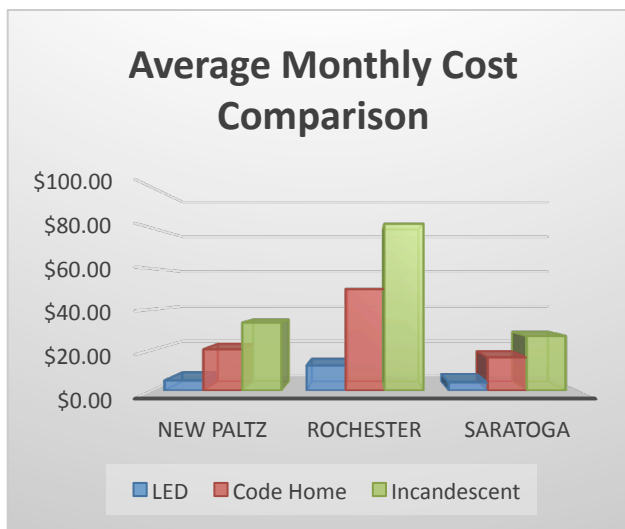
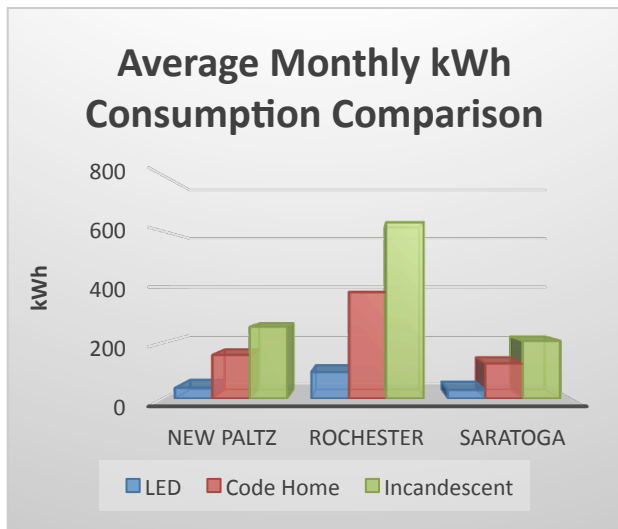
Newport Ventures is well into the data collection phase in our LED Lighting Demonstration project being conducted on behalf of NYSERDA. The project, which includes 100% LED lighting in 5 homes throughout the state, has now completed installation on 4 out of 5 of the homes, with the last one to be completed this fall. Each of the homes will be monitored over the course of three seasons.

The table below highlights the results of the data collection to date. The top portion shows average monthly kWh and costs, as well as the total consumption and cost of the LED lighting to date for each home. The bottom portion provides estimated savings if the same home were to have alternate lighting packages. The first is a typical code built home, using 50% incandescent bulbs and 50% high efficacy bulbs.¹ The second shows the savings if the same home were to have 100% incandescent bulbs.

	New Paltz	Rochester	Saratoga
Monitoring Period (Months)	8	3	4
Avg. kWh/ Month	39	95	31
Avg. Cost/ Month	\$5.02	\$12.31	\$4.04
kWh Total	309	284	124
Cost Total	\$40.14	\$36.94	\$16.14
Savings To Date Compared To:			
Code Home (50% Incandescent/ 50% CFL)			
kWh Savings	943.83	859.58	379.35
Cost Savings	\$122.68	\$112.96	\$49.32
100% Incandescent			
kWh Savings	1750.34	1610.8	703.56
Cost Savings	\$227.56	\$209.41	\$91.46

¹ Code home assumed 60W bulbs for incandescent and 13W for high efficacy bulbs.

Certainly the LEDs are saving these homeowners money today and helping to lower their utility bills each month, as seen in the charts below. However, the real results will be seen over the lifetime of these bulbs. A typical incandescent bulb lasts maybe 2 years, while a CFL is expected to last maybe 5. LEDs however have a rated lifetime of 22 years! Multiply the cost savings of each of these homes over that time period, and the savings are now in the thousands and you never had to replace a light bulb!



A Bulb Comparison

Our most recent home to have completed the installation of the LED lighting system is located in Canandaigua, NY. Data collection is set to begin this month. To finish off the 100% LED system, we recently replaced 3 of their plug in lamp bulbs, using 3-way incandescent bulb, with a single wattage LED bulb. Over the course of the project these bulbs will be monitored with Kill-A-Watt meters to determine electrical consumption. This “real use” data collection will be useful in determining actual savings and not just assumed savings.



We considered installing 3-way LED bulbs, however the homeowners were satisfied with the light output of the single wattage bulb. The table below highlights the expected operational costs of their old 3-way incandescent, the replacement single wattage LED, as well as a standard 3-way LED bulb.

	3-Way Incandescent	3-Way LED	LED
Approximate cost per bulb	\$1.98	\$19.97	\$7.97
Avg. lifespan (years)* <i>*Assumes 3 hrs/day</i>	1.1	22.8	22.8
Avg. Watts	100	10	11
Number of Bulbs	21	1	1
Total purchase price of bulbs (22 years)	\$41.58	\$19.97	\$7.97
Total cost of electricity used (kWh)	\$0.11	\$0.11	\$0.11
Total operational cost (22.8 years)	\$274.66	\$26.53	\$30.10

As you can see, buying longer-lasting, more efficient light bulbs can really pay off over time. Over a 22+ year period, it will cost you over \$270 to keep one lamp lit with a 3-way incandescent bulb. By comparison, it would cost \$30 using a single LED light bulb, a savings of more than \$240. And that's just 1 bulb! Now think about how many bulbs you have in your home. The average home in New York has somewhere around 50-55 bulbs. Do the math and that's some serious cash kept in your pocket!