

LED Lighting Continues to Impress in Demonstration Project

Since our last update, Newport’s Residential LED Lighting Project has entered the home stretch in the data collection phase. On behalf of the New York State Energy Research and Development Authority (NYSERDA), Newport has installed 100% LED lighting systems in five new construction, single-family homes throughout the state. The lighting design for each home was developed by a professional lighting designer and the homeowners or builders, and incorporates integrated LED technologies and smart lighting controls. The homes are then monitored for period of 9 months to collect energy consumption and cost data for the lighting systems.



All five homes are now occupied and are being monitored. To date, we have completed the data collection on 2 of the 5 homes, are closing in on completion of two others, and have just started the process on the final demonstration home. The table below provides a quick snapshot of the data we have collected so far.

Data	New Paltz (9 Months)	Saratoga (9 Months)	Fairport (7 Months)	Canadaigua (4 Months)	Total
Current Electric Rate	.13	.13	.05	.13	N/A
Total Number of Bulbs/Fixtures	97	71	74	52	294
Total kWh Consumed	339.46	291.4	671.78	118.7	1421.34
% of Whole House Electrical Consumption ¹	4%	7%	5%	6%	N/A
Total Lighting Costs ²	\$44.13	\$37.88	\$33.59	\$15.34	\$130.94

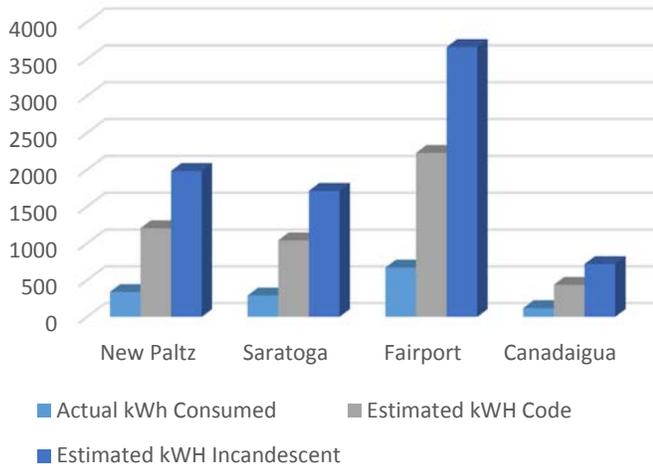
The tables below show a snapshot of the actual energy consumption and cost of the LED homes compared to estimated consumption and cost for a “code built home”³ and a home using 100% incandescent lighting. While, code is technically the minimum standard to which all homes should be constructed, there is evidence that a recent [U.S. Department of Energy Field Study](#) shows that a significant number of homes nationwide are not meeting this requirement. Because homes with no high efficacy lighting are not uncommon, it is important to include this comparison when analyzing the data. The current New York State Energy Code requires 50% high efficacy bulbs or fixtures. That requirement is expected to increase to 75%, when the state updates its energy code which is anticipated to be in Spring/Summer of 2016.

¹ Estimated electrical consumption is based on all lights in the home operating for 1.6 hours per day (US DOE: Residential Lighting End-Use Consumption Study)

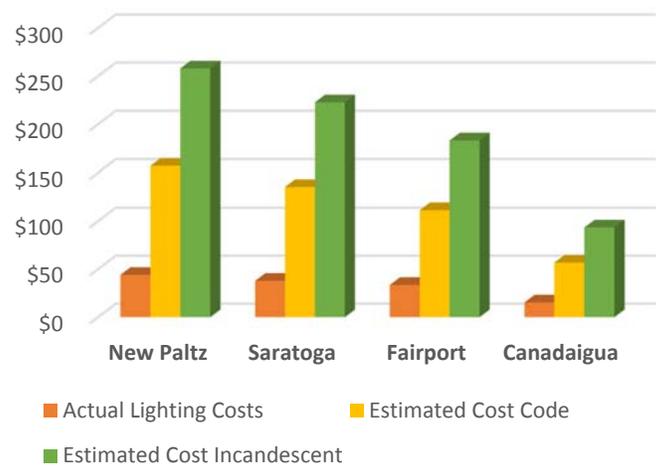
² Estimated cost data is based on estimated electrical consumption and the current electric rates for the providers in each of the 5 homes.

³ Code built home assumed to have 50% 60W Incandescent and 50% 13W CFL bulbs

Energy Consumption (kWh) LED vs. Code vs. Incandescent

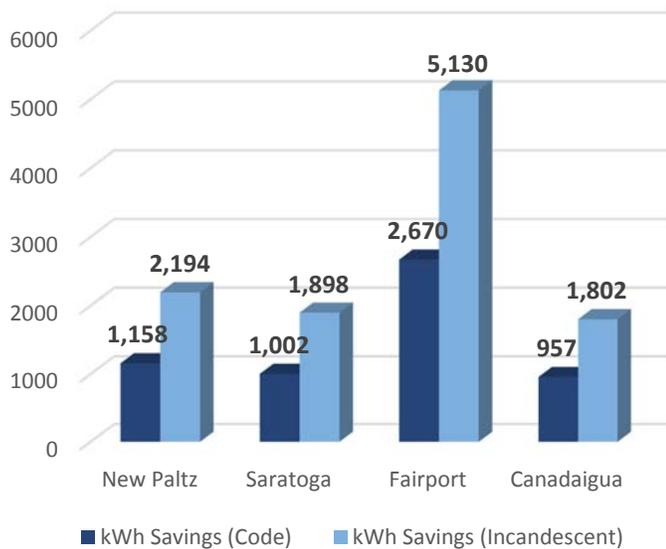


Total Lighting Cost (\$) LED vs. Code vs. Incandescent

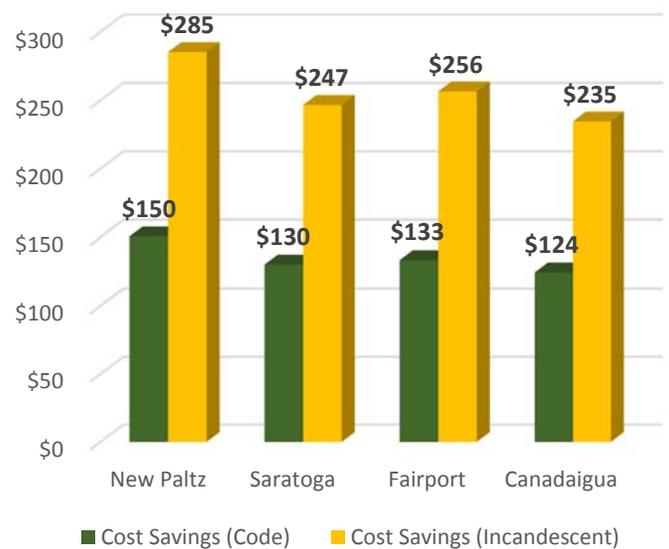


The above tables highlight the potential for energy and cost savings when comparing LED lighting to other lighting options. The tables below show the projected yearly savings in both consumption and cost when comparing the LED lighting to the others.

Projected Yearly kWh Savings LED vs. Code vs. Incandescent



Projected Yearly Cost Savings LED vs. Code vs. Incandescent



More than just savings

By now, most consumers have heard that LED lighting is supposed to be long-lasting, highly efficient lighting. Imagine only changing your light bulb every 20 years or so! The data we presented above clearly indicates that LEDs are performing as expected with regards to efficiency and cost savings, but again, we expected that to take place.

Unfortunately, efficiency is not enough to drive market growth of LED lighting technology. If consumers don't like them, they won't buy them. If there is no demand for them, builders and electricians won't include them in their homes. Yes, code requirements are helping to push the use of "high efficacy" lighting, but as we pointed out previously, we know that standard is not always being applied.

Many consumers are wary of energy efficient lighting products, partially due to bad experiences with CFLs, and the savings are not enough to persuade them to take the LED leap. But LED technology has seen rapid advancement and product expansion in recent years and their capabilities and benefits far exceed simple energy and cost savings. When Newport first started this project, the number of different types of bulbs and fixtures was extremely limited. That was just two short years ago! Fast-forward to today, and our options are virtually limitless. Bulbs and fixtures come with all different specifications for brightness (lumens), color (kelvin), and efficacy (lumens/watt). They are more compatible with smart light systems and have capabilities that far exceed than their predecessors.

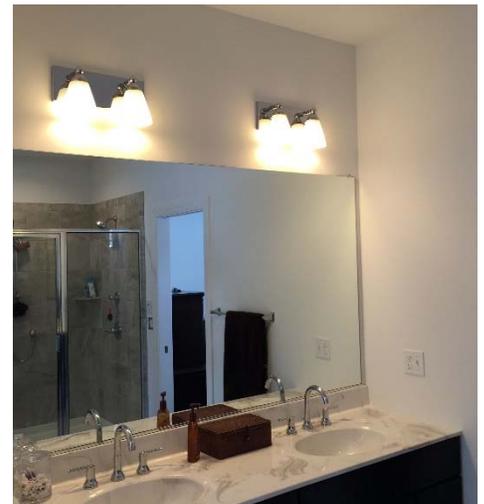


And what's most important is that when experiencing LED lighting first hand, the vast majority of people not only like the LEDs, but they actually prefer them to other options. Our [Consumer Perception Report](#) highlights the results of several lighting survey's conducted over the first year of the project. The results clearly show that most participants (over 60%) prefer the LED light when compared side by side with an equivalent incandescent and CFL bulb.

Ok, but lighting in a small box is a lot different than lighting a big room or an entire home. As part of the project, we asked our participating builders and homeowners to provide some feedback about the lighting systems in their homes. Here's what they had to say:

Homeowner Testimonials

We tried CFLs in our old house and they would burn out in less than a year. We are very happy with the LED's that are in this home. We like and use the dimmers all the time. We would have not chosen dimmer switches to start but, since we have them now we really enjoy using them. We are especially fond of the under cabinet lights, which we like to use at night, and the LED lights in the ceilings." (Homeowners- Canadaiqua, NY)



*The LED lighting and Lutron system rocks! It was extremely easy to install and program. As for the convenience, life changing. You approach leaving and coming home in a whole new manor. We never forget to turn a light off, or struggle to find a switch on the way in with our hands full. Going to bed has changed as well. It will change the way you think about moving from room to room. **(Homeowners- Saratoga, NY)***

*"I really like the quality of light and that it is low cost. The lighting in our new home is much better than the lighting in our previous house. Overall, our experience with the LEDs has been very positive, it's low-cost, modern, and easy to use. I will continue to purchase LEDs in the future and would definitely recommend them to friends and family." **(Homeowners- New Paltz, NY)***

Builder Testimonials

*"The LED lights in the home exceeded all of our expectations. The whole process, from design to installation was very smooth and the lights really make the home look beautiful. The Lutron Caseta control system is awesome and so easy to install. We are so impressed with the system we are now offering it to our other homeowners." **(Fedyk Builders- Fairport, NY)***



The homeowners in New Paltz, NY were so happy with the lighting in their home and the Lutron Caséta system that the builder (Greenhill Contracting) now offers it as a package available with every home. Since, completing the home for this project, the builder now installs 100% LED lighting in all homes.

*"Since installing the LED lights in 20 Cooper St., I install LED 100% in all of my homes." **(Greenhill Contracting- New Paltz, NY)***