



Municipal LED Streetlight Project

Frequently Asked Questions

What is this project about?

Cape Light Compact, through its energy efficiency program and on behalf of the participating Cape Cod & Martha's Vineyard towns and fire districts, is advancing a demonstration project to evaluate new light emitting diode (LED) streetlight technology to save energy and money, while meeting or exceeding the current light levels of older technology lights.

What are the benefits of LED streetlights?

- 40 - 50% lower electric use than older less efficient high-pressure sodium or mercury vapor lamps
- Save ratepayer, taxpayer and municipal budget dollars
- Are better for the environment
- 30% lower maintenance costs because LED lights don't need to be replaced as often as older lamps
- Bright direct light increases visibility and public safety

How can the public comment on these new LED streetlights?

Cape Light Compact encourages the public to provide feedback by completing a web based-survey at <https://www.surveymonkey.com/s/LEDdemo> or by calling 800-797-6699 to request a hardcopy of the survey.

What will happen after the demonstration project?

In Spring 2013, Cape Light Compact will evaluate the performance of the demonstration LED streetlights, consider all feedback from the public, and plans to develop a comprehensive scope of services that

will be competitively procured to replace and maintain over 14,000 municipal streetlights across Cape Cod & Martha's Vineyard. When this initiative, which is a part of its 2013-2015 energy efficiency plan, is complete the estimated energy savings is over \$500,000 per year. The benefits of energy and maintenance savings over the extended life of LEDs will provide a cost-effective return for the estimated investment of approximately \$5 million.

What happens to the old lights?

The inefficient old lamps will be taken out of service, recycled and/or properly disposed of.

Can new LED lights be installed in other locations?

The LED streetlights that are part of this initiative are being installed on municipally owned "cobra-head" style roadway fixtures.

Lighting retrofits are an important part of a comprehensive approach to achieve long-term energy savings. Please contact 1-800-797-6699 at Cape Light Compact to help evaluate more efficient public and private outdoor lighting and many more opportunities that may be eligible for energy efficiency program incentives.

How do I report a problem with streetlights?

Please call 1-800-LIGHTS-ON (800-544-4876) and provide the nature of the problem (light out, light cycling on/off, light on during the day), utility pole number (99-99), street name and closest house number and cross street. Cape Light Compact assisted nearly all of the towns on Cape Cod & Martha's Vineyard in purchasing their streetlights from NSTAR Electric beginning in 2001 and contracts the maintenance of streetlights to Republic Electric ITS (now part of Siemens) bringing significant annual cost savings.

How do LED fixtures compare to the old HPS lights?

There are many benefits of LED streetlights as compared to the high intensity discharge high pressure sodium (HPS) lamps. The table below compares two streetlights - a 100 watt HPS to an equivalent 52 watt LED that has been installed as part of the demonstration project.

	Type	Approximate Cost	Initial Lumen Output	Efficacy (lm/W)	Life (hrs)
HPS	100 W ¹	\$205 ²	9,500 ³	69	< 24,000
LED	52 W ⁴	\$340	4,076	78	> 150,000

¹ Effective wattage is 138 W due to ballast power consumption with HPS that is not a factor with electronic driver of LED.

² Quote for MAX-D26-HPS-100-MT3 with photocell.

³ Nighttime vision is generally dominated by scotopic mechanisms (for very dark conditions with no ambient light) or mesopic mechanisms (for semi-dark conditions, such as a full moon and heavily lit roadways). Unfortunately, virtually all photometric tests and light standards used to determine light output are done using daylight (photopic vision) assumptions which are not representative of the human response to light under low light nighttime conditions with roadway streetlighting. A scotopic/photopic ratio is used to provide a better comparison of different light sources, for example a 100 W HPS light source with 9,500 photopic lumens provides only 5,890 initial scotopic lumens based on a 0.62 conversion factor. However, a typical 4,076 LED light source provides 7,744 initial scotopic lumens based on a 1.9 conversion factor. (For more information on this topic please visit the Lighting Research Center at Rensselaer Polytechnic Institute at www.lrc.rpi.edu.)

⁴ LEDway BetaLED catalog # STR-LWY-4M-UT-03-D-UL-SV-525-R with a 6000K Correlated Color Temperature.

When will all the streetlights be changed to LEDs?

All municipal owned streetlights are planned to be changed to LEDs by June, 2014.

Feedback through the demonstration project will continue to be gathered through early May, 2013. In early May, all Participating Towns and Fire District streetlight owners will meet to review results of the demonstration project, evaluate the performance of the fixtures and review all feedback. The Towns and Fire Districts will then indicate their desire to be included in the next phase of the Cape Light Compact energy efficiency program that will develop a scope of services, specifications and schedule to retrofit all municipal streetlights on Cape Cod & Martha's Vineyard to new energy-saving LEDs. If a Town or Fire District indicates at that time that it does not

wish to proceed with the full retrofit, the old streetlights can be put back in place of the demonstration LED lights.

Upcoming schedule:

- Feedback continues through early May, 2013
- Meet with DPW, Highway and Town/FD lead contacts
- Decision to proceed with retrofit of all streetlights
- Scope, specifications, schedule developed
- RFP issued in July, 2013
- Award by September, 2013
- Installations complete by June, 2014