



Steven T. Noble
Mayor

City of Kingston LED Street Lighting

Frequently Asked Questions



Why is the City of Kingston upgrading the street lighting to LED?

The City is upgrading over 2,000 streetlights with LED technology to significantly reduce energy consumption, utility/maintenance costs, and greenhouse gas emissions associated with electricity generation for street lighting in the City. This process began in 2014 by hiring a consulting firm to analyze the benefits of switching our streetlights to LEDs, and continued in 2015 by purchasing the lights from Central Hudson Gas & Electric.

Upgrading to LEDs will provide improved light quality and public safety throughout our City. Initial projections are that this improvement will reduce annual municipal energy use by 1,000,000 kWh, and save the City over \$130,000 per year on utility bills and maintenance costs.

What are LED (Light-Emitting Diode) lights?

LED stands for "Light Emitting Diode", these diodes are generally made from semiconductor materials such as silicon or selenium. When electricity passes through the semiconductor material the device emits visible light. LEDs are "directional" light sources, which means they emit light in a specific direction, unlike incandescent and CFL, which emit light and heat in all directions.

How are LEDs different from Kingston's current streetlights?

The majority of our streetlights are incandescent bulbs that use sodium vapor. The two different technologies are entirely different methods of producing light. Incandescent bulbs produce light by heating a wire filament to a temperature that results in the generation of light. Sodium Incandescent bulbs are very inefficient energy consumers because they convert less than 1/20th of the energy they consume into visible light. LEDs are much more efficient than incandescent bulbs because they do not waste energy by producing heat to create light.

How long will it take to upgrade all the streetlights to LED?

It is anticipated that it will take a private contractor 3 to 4 months to replace all of the streetlights in the City. Construction is expected to begin in early 2019. The City will provide updates on locations of installed lights on our website as progress is made.

What are the different types of streetlight luminaires the City currently uses?

Most streetlights currently in place utilize High Intensity Discharge (HID) lamp technologies, which include High Pressure Sodium (HPS), Mercury Vapor (MV), and Metal Halide (MH) lamps. HPS lamps cast a yellowish-white light, whereas MV lamps cast a blueish-green light, and MH lamps cast a bright, white light. LED technology is replacing all three types.

What makes LED streetlights superior to the ones in place now?

Compared to the streetlights using High Intensity Discharge (HID) lamps, LED lights have the following advantages:

1. Longer lifespan and reduced outages (rated for over 100k hours)
2. Reduced maintenance and operating costs
3. Reduced glare to drivers and pedestrians
4. More even distribution of light
5. Better quality of light and higher visibility
6. Higher efficiency (more light produced per watt/energy consumed)
7. Reduced energy consumption, carbon footprint, and utility costs

Will the LED streetlights look different than the ones in place now?

The new LED fixtures will look very similar to what is currently installed. The majority of the existing lights use a High Pressure Sodium (HPS) Lamp that has a yellowish-white light, while the new LEDs have a warm white light. This warm white light allows for an increased ability to perceive colors, definition, and movement of other drivers, pedestrians, and objects. Studies show that this warm white light improves a driver's peripheral vision and reaction time when compared to HPS lights.

What will the color of the new lights be?

Kingston is standardizing on a 3000 Kelvin color temperature LED, which is a warm white light. This is in compliance with current standards and recommended by American Medical Association (AMA) guidelines.

Does the City have any LED streetlights already?

Yes, over the last 2 years as existing HID fixtures fail, the City has been installing LED replacement fixtures. There are

over 300 LED fixtures that have already been installed in Kingston.

Will the LED lights look brighter than the old type of streetlight?

In most cases, the LED streetlights will be an equal replacement of the previous streetlight in terms of light measurement. The difference in color and more uniform distribution can give the illusion of a brighter light.

Will the new LED lights increase light pollution?

Overall the new LED streetlights will reduce light pollution in the city of Kingston. The Philips RoadFocus series of lights that will be used to replace the cobrahead style of lights have a U0 rating which means no uplight is produced, all of the lighting is directed downward on the roadway where it is needed. The RoadFocus series of lights being used in Kingston are "Dark Sky Approved" by the International Dark-Sky Association. The decorative LED lights will have a small amount of uplight generated, but this amount will still be less than the current decorative incandescent lights.

What makes this new LED light smart?

An advanced photocell will be installed on all LED lights, allowing the City to access and communicate with the streetlights remotely, providing additional benefits. For example, if a streetlight goes out today, the City is not aware until it is reported by a concerned citizen. However, with "smart" LED lights, the City will automatically be notified when the light requires attention, reducing down times and improving the efficiency of maintenance practices.

What will these new fixtures look like?

All of the new LED lights installed through this project will match the existing fixture styles.

Is this project part of the NY Smart Street Lighting Initiative?

Yes. In early 2018 Governor Cuomo announced this new statewide program that calls for at least 500,000 street lights throughout the state to be replaced with energy-saving LED technology by 2025. Kingston has contracted with the New York Power Authority (NYPA) to manage this project as part of the Smart Street Lighting initiative. NYPA engineers are reviewing and approving all designs as part of this project.

How do I get more information?

Project details and a updated map of completed LED installations can be found on the City's website at www.kingston-ny.gov/streetlights . You can also contact Sean Koester, the City's Environmental Specialist at skoester@kingston-ny.gov or by phone at 845.334.3969 with any questions regarding the streetlight project.