

LED Street Light Conversion Project Update

The City of Mississauga's street lights are currently being converted from the yellow-orange colour of traditional street lights to the natural white light provided by Light Emitting Diode (LED).

LED Lights May Remain on During the Day at Some Stage in Installation

As the City and its contractors work to install new LED streetlights citywide, you may notice that some lights remain on during the day. This may occur whenever the LED light fixture loses communication during the installation process. Here's why:

Each LED light fixture has a small electronic device called a node. Each node is able to check the on/off status of the street lights including power loss, malfunctions, and energy consumption in real-time. They also serve as a low powered radio that allows nodes to communicate with other nearby nodes in a mesh network. Each network area (approximately 300 nodes) has a central gateway housed on a street light pole and its purpose is to communicate between the node mesh network and the server. The gateway is approximately 0.3 metres square (one square foot) in size and has an antenna and a cellular device to transmit information wirelessly. Together, the nodes, the gateway and the network combine to provide wireless communication for the street lighting monitoring system.

During the LED installation process, temporary communication gaps between the LED lights and the gateways may arise and result in the LED lights staying on during the day. As a safety measure, the LED lights are programmed to turn themselves on when they lose communication with the gateways. This is done to ensure illumination of the roadway at night. This condition is temporary and will be corrected once all the street lights within an area are converted to LED lights and the network is completed.

Facts about the LED Street Light Conversion Project:

- Work crews are converting 49,000 street lights on all of Mississauga's residential, collector and arterial roads to LED lighting from High Pressure Sodium (HPS).
- The project began in November 2012 and will continue until mid-2015.
- The \$26 million project will be financed through debt financing. The City is eligible for a \$1.4 million incentive from Ontario Power Authority's SaveOnEnergy Program.
- Estimated payback period is four years after the project completion.

Energy Savings and Reduced Carbon Footprint

- In 2011, the City of Mississauga had operating costs of \$6.1 million in energy costs and \$2.3 million in maintenance costs for street lighting. The conversion to LED street lights is estimated to reduce the carbon footprint by saving 55 per cent in energy costs and result in a significant reduction in maintenance costs.
- LED street lights have a life expectancy of 20 years compared to the five-year life span of traditional street lights.

Better Visibility, Safer Streets

- LED street lights reduce the amount of light pollution. They are compliant with the International Dark-Sky Association (IDA) in terms of being dark-sky friendly by reducing sky glow.
- The white light of LED provides a safer light source with better visibility to both pedestrians and motorists.
- LED offers better clarity and an improvement in the ability to identify colours at night.

Street Light Monitoring System

- The LED Street Light Conversion Project includes a state-of-the-art street light monitoring system with the ability to detect malfunctioning street lights multiple times daily and transmit this information wirelessly.
- The new monitoring system checks the status of street lights, power loss, malfunctions, and energy consumption in real time.

How will Street Lights be replaced? Areas, within the City, that have the oldest street lights will be relamped first to avoid older lights from malfunctioning.

For more information on the LED Street Light Conversion Project contact 3-1-1 (Outside city limits, dial 905-615-4311)