



Risk Management Considerations for LED Street Lighting

Light emitting diode (LED) streetlight fixtures are emerging as a high efficiency alternative to traditional street lighting. LED fixtures can reduce energy consumption by as much as 70% while reducing energy costs, emission of greenhouse gases (resulting from energy conservation) and maintenance costs. As more municipalities are replacing their current streetlights with LED luminaires, we've attempted to address some common concerns.

Installation, Maintenance and Replacement of LED Street Light Fixtures:

If the purchasing, installation or maintenance of the LED system is handled directly by the municipality, ensure that staff are fully trained and knowledgeable of the manufacturer's specifications for each type of luminaire used. Outside contractors may provide a complete turnkey solution which can include things such as financing and labor warranties. Some municipalities may prefer the simplicity of this approach.

Like all street light fixtures, LED luminaires are subject to "dirt depreciation" that will reduce light output over time. Because less heat is generated on the LED lenses, less dust and debris will adhere when compared to traditional outdoor luminaires. But like all street light fixtures, LED luminaires are still subject to the "dirt depreciation" that will reduce

light output over time. Always follow the manufacturer's recommended cleaning procedures.

Municipalities considering moving forward with an upgrade to LED fixtures should ensure they are getting the best value offering available. Key questions to ask potential suppliers include but are not limited to:

- How long is the warranty? Does it include all components? How is it triggered and who honours it?
- Does your firm have the balance sheet to back up your warranty?
- Does the proposal include Photometric Lighting Layouts?
- Does the proposed manufacturer's products meet or exceed the following standards: (1) IES LM-79-08 Electrical and Photometric Measurements of Solid-State Lighting Products, (2) IESNA LM-80-2008 Approved Method for Measuring Lumen Maintenance of LED Light Sources, (3) Illuminating Engineering Society (IES) and International Dark Sky Association (IDSA) Model Lighting Ordinance, (4) IES G-2, Guideline for the Application of General Illumination ("White") Light-Emitting Diode (LED) Technologies, (5) TM-21-11 Projecting Long Term Lumen Maintenance of LED Light Sources, and (6) ISO 9001 Quality Management System

Minimum Maintenance Standards:

When it comes to street lighting, Section 10 of the Minimum Maintenance Standards for Municipal Highways (Municipal Act, 2001, O Reg. 239/02) focuses more on keeping light fixtures in a state of good repair. New lighting technologies and important municipal objectives, such as increased efficiency, greenhouse gas emissions and light pollution are not addressed. These objectives are best addressed through the development of an outdoor lighting policy. Having a municipal outdoor lighting policy can contribute to overcoming design inconsistencies, capital costs, unfamiliarity with LED street light technology, etc.

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