

How did LAS select Real-Term Energy

Throughout the fall of 2012 a significant number of municipalities asked for LAS' assistance in selecting a provider for LED street lights. The LED streetlight marketplace was and is still crowded and confusing to the average municipal staff. Municipal staff told us they wanted LAS to develop a complete turn-key service that provided product, project management, design, finance and all other required services in one single offering.

While LAS had been monitoring developments in streetlight technology since 2008 and we ramped up our analysis in Fall 2012 and selected a service provider in March 2013. A three-person selection committee conducted a market scan that included interviews with all available providers in the Ontario marketplace and finally direct negotiations with the two firms.

Market Scan

A number of government agencies and institutions had small installations or pilot projects by the end of 2012. Many of these agencies and institutions had engaged electrical and lighting experts, either independently or through their local utilities, to assist in evaluating product. The importance of independently confirming the manufacturer's specifications was established through these pilot projects as in some instances the actual product performance was over stated and the results did not always match the claims. Almost none had included independent photometric design—although many had wished they had as it would have improved the appearance as well as the efficiency of the project overall.

The LAS Selection Committee utilized pilot studies, protocols and standards, and tender documents from the following:

- Canadian Standards Association (CSA)
- City of Edmonton
- City of Greater Sudbury
- City of Hamilton
- City of Mississauga
- City of North Bay
- City of Los Angeles Bureau of Street Lighting
- Designlights Consortium's Product Qualified Products List
- Illuminating Engineering Society of North America (IESNA)
- International Dark-Sky Association (IDSA)
- Lighting Design Lab
- Lightsavers
- Ontario Municipal Street lighting Focus Group (OMSLFC)
- Solid State Lighting Network (SSLN)
- Toronto Atmospheric Fund Pilot Projects
- U.S Department of Energy (DOE)



A series of interviews were conducted by phone and email of all the LED Streetlight Installations that had progressed beyond a small pilot at the time. Interviews were conducted with representatives from:

- Canadian Urban Institute
- City of Edmonton
- City of Greater Sudbury
- City of Hamilton
- City of Mississauga
- City of North Bay
- Solid State Lighting Network
- Toronto Atmospheric Fund
- Town of Fort Frances
- Town of Penetanguishene
- Utilities Kingston & Kingston Hydro

These interviews provided numerous helpful insights into lessons learned and best practices in terms of a complete streetlight installation. Common themes included realization that product selection was only one small part of the overall project, full photometric design is essential, and that it is crucial to have the local utilities involved in the process throughout. As a result the LAS Selection Committee included the following Technical Standards into our selection criteria.

Technical Standards

The primary standard for streetlight installations throughout North America is the RP-8 American National Standard Practice for Roadway Lighting developed by the Illuminating Engineering Society of North America (IESNA), which is the technical authority on lighting. To ensure that a selected service provider would exceed municipal procurements standards, LAS sought a service provider that had qualified personnel competent to perform independent photometric analysis and roadway design to meet and exceed RP-8.

RP-8-00 American National Standard Practice for Roadway Lighting

This Recommended Practice provides the design basis for lighting roadways, adjacent bikeways, and pedestrian ways. It deals entirely with lighting and does not give advice on construction. It is not intended to be applied to existing lighting systems until such systems are redesigned.

More specifically, it became very clear to LAS that we did not want to rely on any manufacturer to provide design (since this is product driven and not always optimum from a life cycle costing perspective) and we wanted a service provider that could provide:

- Lighting design solutions that includes Photometric Lighting Layouts, 2D Line Drawings, 3D Full Image Drawings, Material Specifications, Virtual Streetscapes, and Budget Analysis. All of which must show design data at 50,000 hours or greater and focus on Downward Delivered Lumens using acceptable colour temperature range in accordance with IES testing standards.



- Design work should be a complete street by street offering and not simply a representative sample of roadway types
- Complete GIS/GPS mapping of existing streetlight inventory for municipal asset management purposes
- Ready access to contractor/installer base throughout the province
- Complete recycling and disposal of removed products to meet or exceed requirements under the saveONenergy incentive program
- An optional financing component to interested municipalities
- Robust project management and quality management processes backed by delivery guarantees

Moreover, this service provider had to be able to fulfill objectives related to the core mandate of LAS, which is to help municipalities *save money* and *build capacity*, and deliver on these services all across Ontario.

Interviews of Available Service Providers

The LAS Selection Committee scoured the Ontario marketplace to develop a list of all firms engaged in the LED streetlight service. LAS met with and conducted interviews with individual firms from the following categories during Jan-Feb 2013:

- Subsidiaries of Local Distribution Companies (LDC) involved in streetlight installations (2)
- Lighting Distributors (3)
- Finance Firms (3)
- Lighting Agents (3)
- Energy Service Companies (ESCOs) that could provide streetlight installations (4)
- Project Management and Finance Firms (2)

It became very clear that only one firm was able to provide the full suite of services that we were seeking and that had the financial capacity to support the complete Ontario municipal marketplace.

Final Selection Process

LAS determined that we should enter into direct negotiations with two firms to ensure we offered the best value to our municipal clients. LAS selected RealTerm Energy (RTE) as our service partner in March 2013 because they offered a wide range of streetlight specific services at the best value. LAS and RTE signed a three-year agreement in effect until December 31, 2016, with a provision to renew annually thereafter. Due to the continuing demand from the municipal sector for this service, the agreement has been extended until end 2017.

