



SOLUTION AT A GLANCE: COST SAVINGS ANALYSIS OF LED STREET LIGHTING OWNERSHIP

SECTOR

Local Government, State Government

BARRIER

Partnering with my utility, Financing or paying for a project, Identifying or evaluating energy-saving technologies

TOOL TYPE

Energy Savings Calculator

TECHNOLOGY

Lighting

OVERVIEW

The Street Lighting Acquisition Evaluation Tool was developed by the Lawrence Berkley National Laboratory (LBNL) with the support of the U.S. Department of Energy's (DOE) Weatherization and Intergovernmental Program Office for the Better Buildings Outdoor Lighting Toolkit. The ownership structure of street lighting can determine potential retrofit opportunities and benefits available to a municipality. The two most frequent ownership categories of street lighting are utility-owned (IOU) and municipally-owned. This tool focuses on the advantages (and/or disadvantages) of changing street light ownership structure by estimating the cost over time to a municipality for purchasing a utility-owned street lighting system and converting it to LED energy-efficient lighting, giving users an opportunity to determine if an LED conversion is feasible based on asset ownership and ongoing maintenance and operations costs.

Participants in the Outdoor Lighting Accelerator identified asset ownership as one of the main barriers to upgrading municipal street lighting systems to high-performance LED street lighting technology. Based on the ownership category and accompanying responsibilities to provide services like maintenance and replacement of street lighting, it is important for municipalities to understand which LED street lighting conversion strategy is most cost effective for their jurisdiction. Organizations can use this tool to estimate the costs a jurisdiction can expect from municipal ownership versus IOU, allowing direct comparisons between the two options. Instructions are included to guide users with limited technical expertise in street lighting systems assessment.

The Street Lighting Acquisition Evaluation Tool considers the following:

1. Summary information on the stock of street lighting;
2. Information on utility tariffs for both utility-owned and municipally-owned systems;
3. The terms of utility-offered buybacks;
4. Project financing terms available to the jurisdiction.

Additionally, the tool accounts for anticipated lifecycle operation and maintenance costs with municipal street light ownership. This resource is intended for states, cities, and regional energy networks to evaluate various approaches to LED street lighting conversion planning and procurement. It should be used as a preliminary step in assessing the most beneficial street lighting ownership scenario based on the proposed lighting system, acquisition costs, rebates, and other available financial information on the project.

A [video demonstration](#) provides an introduction to the tool and an explanation of inputs to determine the best value proposition based on asset ownership for a street lighting retrofit project.

Users can take advantage of the [Street and Parking Facility Lighting Retrofit Financial Analysis Tool](#) to help determine unknown default project cost information necessary to operate the Street Lighting Acquisition Evaluation Tool, such as annual change in electricity costs, emissions factors, and annual change in labor rate.

To learn more about the field experiences of local governments pursuing and completing street lighting conversion projects, explore the [Outdoor Lighting Financial Resources Toolkit](#) and the [Decision Tree Tool](#). The [State and Local Solution Center](#) provides educational and best practice resources to help states, local governments, and K-12 schools achieve energy and dollar savings through energy efficiency and renewable energy technologies. To contact them, please email stateandlocal@ee.doe.gov.

DISCLAIMER: This tool estimates the cost and return-on-investment for street lighting acquisitions. Outputs from this tool should be used only as an initial indication of project economics; results should not be used to grant final approval to a project without intensive review of all assumptions. LBNL and the Better Buildings Initiative bear no responsibility for the misuse of this tool.

[DOWNLOAD THE TOOL HERE](#)