



## PE3 Action: LED Street Lights

4 Points

8 Points

12 Points

### A. Why is this action important?

Advanced street light technology such as light-emitting diodes (LEDs) can reduce street light energy use by as much as 70 percent. Efficient street lights will save money and energy, also reducing the greenhouse gas (GHG) emissions associated with electricity consumption. Installation of efficient street lights is also a demonstration of the local government's commitment to resource conservation that can be seen by the community it serves.

### B. How to implement this action

This action awards Climate Smart Communities (CSC) certification points for the successful completion of the NYSERDA Clean Energy Communities high-impact action called LED Street Lights. For guidance on implementing this action, see the related toolkit; the toolkit of resources is available at [www.nyserdera.ny.gov/cec](http://www.nyserdera.ny.gov/cec). Municipalities interested in this action can receive free technical assistance from the Clean Energy Communities Coordinators; contact [cec@nyserdera.ny.gov](mailto:cec@nyserdera.ny.gov) for more information.

The following is an outline for the process a local government might follow for converting street lights to LEDs.

#### Plan for Street Light Retrofit

- Perform an outdoor lighting inventory, if one doesn't exist. At minimum, the inventory should focus on street lights and include information such as the name of entity that owns each street light (local government or the local utility), the location or address of each street light, the style of each street light (cobra-head or non-cobra-head), and notes on the condition and effectiveness of each street light. If the resources are available, local governments should consider a comprehensive inventory of all outdoor lighting that covers street lights, traffic signals, and off-street light fixtures (in parking lots and public parks, for example). Such a comprehensive inventory will create a foundation for earning points under all of the Climate Smart Communities (CSC) actions that are focused on outdoor lighting: [PE3 Action: LED Street Lights](#), [PE3 Action: LED Traffic Signals](#), [PE3 Action: Outdoor Lighting Reduction](#), and [PE3 Action: Outdoor Lighting Upgrades](#).
- Define the scope and objectives of the project, in terms of the quantity of street lights to be converted, and if other changes to local street lighting are necessary, such as increasing or reducing number of street lights based on input from residents and businesses.
- CSC points for reducing the number of street lights are available under [PE3 Action: Outdoor Lighting Reduction](#).
- Identify street lights for conversion; focus on the most outdated fixtures.
- Consider performing a pilot of the LED street lights in a limited area, to confirm the technology and lighting output meet local needs.
- Develop project plan and financing strategy.

#### Identify Design Concerns and Constraints

- Determine if existing light fixtures can be retrofitted or if they must be replaced.
- Evaluate which LED conversion and technology options best meet local economic and operational goals.
- Check with utilities regarding options for converting street lights to LEDs.
- Select appropriate technology and understand maintenance impacts.

- Ensure the new technology meets the minimum design standards, such as those from the [DesignLights Consortium Qualified Products List](#).
- Consider other design factors such as glare, light pollution, safety and security, and aesthetic requirements

### Implement New Lighting Technology

- Convert street lights to LEDs, preferably those found on the DesignLights Consortium Qualified Products List.
- Monitor and report on performance of the new fixtures.
- Develop or update ongoing maintenance plans.

For local governments that do not own their own street lights, there are two possible pathways to LED street light conversion: Upgrade to utility-owned LEDs, where available, or purchase existing street lights from the utility and replace with municipally-owned LEDs.

For *off-street* outdoor lighting upgrades such as in parking lots and parks, points should be requested under [PE3 Action: Outdoor Lighting Upgrades](#).

### C. Time frame, project costs, and resource needs

Many local governments carry out LED street light conversion in phases, in part to test the performance of the technology used, and in part because of the upfront cost. For a local government that does not have money in its budget for such a capital investment, implementing a LED street light conversion in a pilot neighborhood may prove more feasible at first.

The local government should investigate whether grants are available for funding support. Incentives may also be available through the electric utility. The project costs will depend on the scope of the project, and will include costs for design, implementation, and materials. Smaller local governments will typically want to hire a contractor to perform the upgrade; larger local governments may have the needed expertise in house to procure and install the upgrade.

The New York Power Authority (NYPA) offers a [LED street light conversion program](#) that includes low-rate financing. Local governments could also consider issuing an request for proposals (RFP) for an energy performance contract (a common tool used for financing and implementing energy efficiency improvements with little or no up-front capital costs) or piggybacking on a contract from another municipality.

For local governments planning to purchase existing street lights from their utility to then replace them with municipally-owned LEDs, the purchase price will need to be negotiated with the utility. (In October 2015, Governor Cuomo signed into law the Streetlight Replacement & Savings Act (PSL § 70-a), which establishes procedures for the transfer of street light system ownership from a utility to a municipality.)

### D. Which local governments implement this action? Which departments within the local government are most likely to have responsibility for this?

This action is applicable to local governments that own and operate street lights but is also applicable to local governments that lease or pay fees for utility-owned street lights. Local governments that do not own their street lights may upgrade to utility-owned LEDs or purchase existing street lights from the utility to install municipally-owned LEDs. The department likely to be responsible for spearheading this action would be a public works, transportation, or engineering department.

### E. How to obtain points for this action

CSC points are available for local governments that submit documentation showing NYSERDA approval for the following Clean Energy Communities high-impact actions (HIA):

	POSSIBLE POINTS
Decorative Street Lights HIA	4

## F. What to submit

Submit a copy of the approval from NYSERDA that indicates completion of the Clean Energy Communities LED Street Lights high-impact actions (HIA).

All CSC action documentation is available for public viewing after an action is approved. Action submittals should not include any information or documents that are not intended to be viewed by the public.

## G. Links to additional resources or best practices

- NYSERDA Clean Energy Communities Program LED Street Lights Toolkit: available at [www.nyserda.ny.gov/cec](http://www.nyserda.ny.gov/cec)
- [NYPA Smart Street Lighting NY](#)
- [Mid-Hudson Street Light Consortium](#): This website has guidance documents and tools applicable to for municipalities outside of New York's Mid-Hudson region.
- [Case Study: Lewiston, NY, Effective Energy Efficient Street Lighting Project](#)
- [Case Study: Yonkers Streetlight Installation—Climate Smart Communities Anchor Project](#)
- [Green Light: Sustainable Street Lighting for NYC](#)
- [Efficiency Vermont: Improving Efficiency in Municipal Street and Public Space Lighting](#)

## H. Recertification requirements

The recertification requirements are the same as the initial certification requirements.