



PE3 Action: Interior Lighting Upgrades

1 Points

2 Points

3 Points

4 Points

5 Points

A. Why is this action important?

Lighting represents close to 35 percent of the electricity used in commercial buildings in the US, according to the EPA ENERGY STAR program. Upgrading to more efficient lighting saves money and reduces indirect greenhouse gas (GHG) emissions associated with electricity consumption.

B. How to implement this action

Evaluate existing lighting throughout local government buildings and identify opportunities to upgrade to more efficient, longer lasting options. Gather information on rebates, financing, or incentives provided through local utilities, or available through the New York State Energy Research and Development Authority (NYSERDA) or the New York Power Authority (NYPA).

Recommendations for interior lighting upgrades are often provided in energy audits (see [PE3 Action: Government Building Energy Audits](#)). If the audit is more than two years old, the Climate Smart Communities (CSC) program recommends that an energy specialist or lighting specialist provide updated recommendations based on the latest available lighting technologies. If an audit has not been done, but the local government wants to pursue lighting upgrades, the following are a sample of efficient interior lighting options:

- Light-emitting diode (LED) fixtures and bulbs
- Compact fluorescents
- T5 or T8 linear tube fluorescents

C. Time frame, project costs, and resource needs

Lighting upgrades tend to have a relatively short payback period and newer lighting options, such as LED, last significantly longer, thus reducing replacement and maintenance costs. Costs for lighting upgrades are lower if replacement of fixtures is not necessary in addition to replacement of ballasts and lamps. A local government may have the staff and resources to do the lighting upgrade work in-house or may opt to hire a contractor. There might be opportunities to offset costs through rebates, financing, or incentives provided through local utilities or through NYSERDA or NYPA.

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 any local government who owns and operates buildings with interior lighting. Facilities managers or staff within the public works department would likely be responsible for implementing this action. Such staff should work with procurement staff for purchase of lighting products and possibly the procurement of a lighting contractor.

E. How to obtain points for this action

Local governments can earn points for this CSC action by increasing the percentage of interior lighting in government buildings that is energy-efficient, according to a standard set by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE). The fixtures must exceed the [ASHRAE Energy Standard for Buildings Except Low-Rise](#)

[Residential Buildings, 90.1](#) by at least three percent. This standard is known as ASHRAE 90.1.

An increase in the percentage of energy-efficient fixtures can be accomplished through upgrades of existing fixtures or through using efficient fixtures in new construction. Installation must have been performed within seven years prior to the application date.

Local governments must provide information on the number of existing lighting fixtures upgraded (and/or contained in newer buildings) in proportion to total interior fixtures across government buildings. If applicants do not know the total number of fixtures or other fixture details required, they can use the percentage of total building portfolio square footage as a proxy for estimating the scope of the installations.

Points are tiered based on the percentage of lighting that exceeds ASHRAE 90.1 by at least three percent:

| | POSSIBLE POINTS |
|--------------------------------------------|-----------------|
| 5% of lighting fixtures or square footage | 1 |
| 10% of lighting fixtures or square footage | 2 |
| 30% of lighting fixtures or square footage | 3 |
| 50% of lighting fixtures or square footage | 4 |
| 70% of lighting fixtures or square footage | 5 |

F. What to submit

To obtain points based on the percentage of interior lighting fixtures, provide the following information:

- Total number of fixtures across the local government's entire building portfolio
- Percentage of fixtures that were installed within seven years prior to the application date and that exceeded ASHRAE 90.1 by three percent when installed
- Location: building(s) in which the lighting was installed
- Installation date: month and year when the lighting was installed
- Previous type: type of fixture that was replaced (for upgrades of existing lighting only)
- Efficiency: the type of lighting installed (from procurement records, for example) or other documentation demonstrating that the fixtures exceeded ASHRAE 90.1 by three percent when installed

If the specific number of fixtures is not available, applicants may obtain points based on square footage. To do this, provide the following information:

- Total building square footage across the local government's entire building portfolio
- Percentage of building square footage containing fixtures that were installed within seven years prior to the application date and that exceed ASHRAE 90.1 by three percent
- Location: building(s) in which the lighting was installed
- Installation date: month and year when the lighting was installed
- Efficiency: the type of lighting installed or other documentation demonstrating that the fixtures exceeded ASHRAE 90.1 by three percent when installed

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

- [ASHRAE Energy Standard for Buildings Except Low-Rise Residential Buildings, 90.1](#)

- [NYSERDA FlexTech Program](#)
- [NYPA Customer Energy Solutions](#)
- [Database of State Incentives for Renewables & Efficiency](#)
- [US EPA ENERGY STAR List of Energy-efficient Lighting Products](#)

H. Recertification requirements

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