



# Buy Back Streetlights from Utility

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In order to save energy by retrofitting streetlights with LEDs, municipalities must first own the streetlights. M.G.L. Chapter 164 Section 34A allows municipalities to purchase streetlights from their utility. It was adopted as part of the 1997 Restructuring Act.

Municipalities that purchase streetlights in order to complete an LED retrofit can see savings up to 70-80% (See the [Retrofit Streetlights with LEDs](#) strategy for more information). However, 30-60% of streetlighting costs can be saved just by purchasing streetlights from utilities. This strategy describes the process for a municipality to buy back streetlights from its utility.

## Streetlight Tariffs

Streetlights (e.g., cobraheads) are not individually metered for energy consumption. Instead, they are billed based on a predetermined formula for energy consumption called a tariff for each type of fixture. The basic rate tariff is the S-1 rate, which applies to lights owned and maintained by the utility. The S-1 rate includes maintenance costs. When a municipality purchases its streetlights, it switches to a rate that does not include maintenance costs. This is where the savings associated with streetlight buyback are achieved. Tariffs will vary based on the utility.

- **For National Grid customers** – A municipality that purchases its lights under M.G.L. Chapter 164, Section 34A pays the S-5 rate, which is based on the cost of electricity delivery. National Grid has a [range of other rate tariffs](#) for streetlights, as well.
- **For NSTAR customers** – A municipality that purchases its lights pays the S-2 rate. Because the Massachusetts NSTAR territory was historically served by two separate electric companies (Commonwealth Electric and Boston Edison Company) before they were acquired by NSTAR, the rate tariffs for customers served by NSTAR can vary from town to town, as can the calculation for the purchase price of streetlights. More detailed information can be [found on the NSTAR website](#).

## Implementation Steps

The whole process of buying back streetlights can take between 90 days to 2 years, with an average of about 6 months. The law mandates 60 days to reach an agreement, and then the

Department of Public Utilities (DPU) has 60 days to make a ruling if a case reaches them (although sometimes cases take years). It is best to incur as little expense as possible before making a decision to move forward and then move quickly once that decision is made.

### **1. Ask utility for a preliminary cost estimate.**

Be clear that this is not a formal notification of intent to purchase, but simply a request for an estimate. Based on the law, once the municipality indicates that it wants to buy streetlights, it has 60 days to settle on a price. The purchase price is set on the date of notice, so the municipality will lose any depreciation that occurs if a long time is spent in deliberation after the utility is formally notified.

- **Calculating purchase price** – The purchase price for streetlights is calculated based on the system’s net book value, which is the unamortized (e.g., depreciated) value of the streetlights minus any salvage value the utility can obtain. The depreciated value of the streetlights is calculated at the time the municipality tells its utility it wants to purchase its streetlights. Any depreciation that occurs after the day of notification will not be included in the calculation of purchase price. Standard depreciation rates are set for utilities by the DPU. NSTAR recently ramped up its depreciation rate to 13%, meaning its streetlight assets are quickly losing value.
- **Response to utility’s purchase price** – Municipalities have the option of taking a case to the DPU if they don’t agree with the price proposed or if the utility takes more than 60 days to respond. However, these cases can sometimes take years to resolve, during which the opportunity costs of lost energy and maintenance cost savings accrue. These lost opportunity costs generally will be far greater than any savings that might be achieved by fighting over the purchase price.

### **2. Calculate the basic economics of the project and decide how to proceed.**

At this point, it may be helpful to hire a consultant or owner’s agent to facilitate the process. Based on the estimate provided, determine whether the municipality will buy all streetlights or just a subset. For example, a municipality might choose to purchase only the overhead lights, leaving any lights with underground wires for the utility to maintain. Or a municipality might choose to just purchase the lights in a certain neighborhood.

Build a contingency amount into the project to cover the cost of repairs. When pitching to internal decision makers, be modest about the amount of potential savings the project might realize—at the end of the day, it doesn’t hurt to have excess savings, but it’s better to sell the project on its most modest projections. If an LED retrofit is planned, make sure there is a commitment to using the maintenance cost savings to pay for the purchase of LEDs. It may be possible to bid out the entire project, from acquisition to installation of the LEDs, as a performance contract through Chapter 25A, pending guidance from DOER. (For more

information on performance contracting and Chapter 25A see the [Use a Performance Contract for Municipal Efficiency Projects](#) and [Procure Energy Services](#) strategies.)

### **3. Notify utility of decision to purchase.**

Once a municipality formally indicates to the utility that it wants to buy streetlights, this triggers a 60-day window in which the utility must submit a definite purchase price and inventory. The purchase price is set on the date of notice, so a long deliberation after the formal notification will cost the municipality depreciation.

### **4. Review purchase price and inventory provided by the utility.**

The price sheet will include price by fixture and pole type, wattages, and quantities, and it will differentiate between overhead and underground lights. To ensure accuracy, compare the utility inventory with an inventory completed by the municipality. There are two main types of audits:

- **Basic wattage check** – This is a walk-by audit to check if poles and fixtures exist, count, and confirm their wattage. In general, a 10% audit will be sufficient to determine whether there are any major issues with the inventory provided by the utility.
- **GIS survey** – The most accurate inventory is a submeter-level GIS survey. It is also the most labor-intensive and expensive.

If lights are discovered that were not included in the inventory, the utility can bill the municipality for unpaid back charges. On the other hand, if it is discovered that the utility is billing the municipality for lights that don't exist, it is entitled to ask for a refund. If the utility believes an error was made in the municipality's inventory, it can have a separate, comprehensive audit completed at the municipality's expense.

### **5. Decide how to finance the purchase.**

Options include:

- **Tax-exempt municipal lease financing** – This is the recommended method for paying for these projects up front, as it doesn't affect municipal bond rating or debt levy.
- **Performance contract under Chapter 25A** – With this method, guaranteed energy savings from a retrofit can be dedicated to debt service each year.
- **Bonds** – General obligation bonds and Qualified Energy Conservation Bonds (QECBs) are appropriate for projects with substantial up-front costs.
- **Operating expenses** – If other energy projects have already been set up in the municipality and are generating savings, a case can be made to appropriate those savings for further energy efficiency improvements.

- **Capital projects** – An LED streetlight retrofit can be undertaken as a separate capital project, with a line item in the municipality’s budget.
- **Utility incentives** – Incentives will vary based on the utility. NSTAR provides an incentive for LED streetlight retrofits of up to \$0.25 per kWh saved.
- **Grants** – Green Communities funds can potentially be used to cover the costs of acquisition, if acquisition costs are included as part of an overall funding request for LED streetlight retrofits. However, round 1 Green Communities funds can’t be used to pay for streetlight retrofits. A municipality will have to wait for its next round of competitive grant awards to apply for any funding related to streetlight retrofits. (For more information, see the [Receive Green Communities Designation](#) strategy.)

## 6. Competitively procure a maintenance contract.

Once a municipality purchases their streetlights, it is on the hook for maintenance. The majority of communities opt to competitively bid out maintenance services to an outside contractor, although a few have chosen to do the work in-house. According to [M.G.L. Chapter 141 Section 7](#), streetlight replacement does not require the supervision of a licensed contractor; only a bucket truck license is needed. The cost of maintenance typically runs \$1.00-\$1.20 per fixture per month.

### **In-House Maintenance – Newton, Maynard, and Lexington**

While most municipalities contract out for maintenance of municipally owned streetlights, multiple options are available for in-house maintenance. Newton contracted with the Wellesley Municipal Light Department for maintenance services for a time. Maynard used the savings they achieved from purchasing their streetlights to buy a bucket truck that could be used for maintaining the lights. Lexington replaces bulbs and photocells in-house, but brings in a contractor for anything that might expose staff to live wires.

- **Labor laws** – Always be clear on what types of labor need to be compensated at prevailing wage in a solicitation for a maintenance contract.
- **Storm repair** – Generally, maintenance contracts include a five-day turnaround clause for storm repair. In extreme cases when the pole is damaged as well as the fixture, the utility company will need to repair the pole before the contractor can repair the fixture.
- **Approximate failure rates** – Typically, failure rates systemwide for NSTAR are 18-19%. In coastal communities, anticipated failure rates can come closer to 25%. Coastal communities should always make sure any streetlights they install have demonstrated resiliency to humidity and salt.
- **Warranties** – If the municipality chooses an outside contractor, determine what level of risk is it is comfortable with. If the maintenance company holds 100% of the risk, the

municipality will pay a higher monthly cost. If the municipality assumes some of the risk, then there will be lower costs in years when fewer incidents occur.

### **Case Study – City of Somerville**

Somerville purchased 100% of their streetlights after a long (two-year) deliberation process. This meant that by the time they made the decision to purchase, the system had completely depreciated; however, they also lost out on cost and energy savings during this time.

- **Audit** - Staff completed a preliminary audit with support from consultant George Woodbury. They audited 10% of lights by doing a walkby to compare against NSTAR's records, making sure fixtures were where they were supposed to be and were the correct wattage.
- **Purchase price** – Somerville received a purchase price from NSTAR, but it had concerns about purchasing the system as-is, as there were a number of deferred repairs that NSTAR hadn't yet addressed. The 311 "report an outage" line in Somerville meant the city had good records on the condition of the system. For some time, the city tried to convince utility representatives to make repairs before it purchased the assets. However, NSTAR was reluctant to fix lights with expensive underground repairs when they were about to sell the system.
- **Maintenance** - In the end, Somerville decided to go forward with streetlight buybacks. They built in a contingency to the project such that they would be able to address the backlog of repairs on their own. They competitively bid out a maintenance contract, which RepublicITS won. They were able to negotiate an arrangement by which residents could still call the 311 line to report outages.

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## **References**

- "Municipal Street Lighting Service." Massachusetts General Laws, Chapter 164, Section 34A. <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXXII/Chapter164/Section34A>