Streetlight Buyback Roundtable
September 20, 2012

In attendance: Representatives from the communities of Gloucester, Lincoln, Marlborough, Malden, Maynard, Medfield, Quincy, Salem, Somerville, Wayland, Winthrop, the Department of Energy Resources, the Dept. of Conservation and Recreation, the Office of Community Development.
Presenting: George Woodbury, RepublicITS

Background

Enabling Legislation. MGL C. 164 s.34A is the enabling legislation that allows cities and towns to purchase their streetlights from their utility. It was adopted as part of the 1997 Restructuring Act.

- **This MGL does not currently include state agencies;** if amended, it might result in great energy and cost savings for many state agencies.

Streetlight Tariffs. Utilities charge municipalities for their street lights based on rate tariffs, or billing rates, for each type of fixture. These vary based on who owns the lights. 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 their streetlights, they switch to a rate that does not include maintenance costs. This is where the savings associated with streetlight buyback are achieved.

- **For National Grid customers:** A municipality that purchases its lights under MGL C.164s.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 street lights 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.**

Purchase of Lights. A municipality seeking to acquire its streetlights can choose between purchasing all or some of the lights. For example, a municipality might choose to purchase only the overhead lights, leaving any lights with underground wires to the utility to maintain. Or, a municipality might choose to just purchase the lights in a certain neighborhood.

Calculating Purchase Price. The purchase price for streetlights 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.** This triggers a 60 day window in which the utility must respond with a purchase price. 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 Department of Public Utilities (DPU).** NSTAR recently ramped up their depreciation rate to 13%, meaning their streetlight assets are quickly losing value.
- **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, in which time the opportunity costs of lost energy and maintenance cost savings accrue. These lost opportunity costs generally will be far greater than what might be achieved by fighting over the purchase price.

Maintenance

Once a municipality purchases their streetlights, they are on the hook for maintenance. The vast majority of communities opt to competitively bid out maintenance services to an outside contractor. A few have chosen to do it in-house, for example:

- **Newton** contracted with the Wellesley Municipal Light Department for maintenance services for a while.
- **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.
- **MGL C.141s.7** exempts the replacement of street lights from requiring supervision by licensed electricians; only a bucket truck license is needed to replace them.
- The cost of maintenance typically runs $1.00-$1.20 per fixture per month.
- **It's important to decide what level of risk the municipality is willing to take on.** If the maintenance company holds 100% of the risk, the municipal 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.
- **Storm repair:** In general, maintenance contracts include a 5 day turnaround clause with penalties for repairs when damage is reported. In extreme cases when the pole is damaged as well as the fixture, the utility company will still need to repair the pole before the maintenance contractor can come and 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.

Savings

Typically 30-60% of streetlighting costs can be saved just by purchasing streetlights. These savings approach 70-80% if the acquisition is accompanied by an LED streetlight retrofit.

- **Note:** For many communities, a streetlight LED conversion project can comprise up to 12% energy reductions overall (out of a 20% reduction target for Green Communities). While you're at it, convert your traffic signals to LEDs as well!

Financing

- **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.
- **Tax-exempt municipal lease financing** is the recommended method for paying for these projects upfront, as it doesn't affect your municipal bond rating or debt levy. However, some communities also choose to issue bonds for these projects.
- If you choose to implement streetlight retrofits through **a performance contract under Ch.25A**, guaranteed annual energy savings can be put towards the debt service each year.
- **NSTAR currently offers a 25c/kWh incentive** for LED streetlight retrofits.

Somerville Case Study

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

Part One: Somerville staff completed a preliminary audit with support from consultant George Woodbury. They audited 10% of lights by doing a walkby to compare to NSTAR's records, making sure fixtures were where they were supposed to be, and were the correct wattage.

Part Two: Got purchase price from NSTAR. The City 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 pretty good records on the condition of the system. For a period of time, the City fought with utility reps to try to convince them to make repairs before the City purchased the assets. However, NSTAR was reluctant to fix lights with expensive underground repairs when they were about to sell the system.

Part Three: In the end, Somerville decided to go forward with streetlight buybacks anyway. 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, which has been helpful for the City.

Buying Back Streetlights: Step-by-Step

1. **Ask NSTAR/National Grid for a preliminary cost estimate.** Tip: Be clear that you are not formally notifying them of your intent to purchase, but simply asking for an

estimate. Once you indicate to them that you want to buy your streetlights, you have 60 days to settle on a price (based on the way the law is written). The purchase price is set on the date of notice, so you will lose any depreciation that occurs if you end up spending a long time deliberating after you formally notify them.

2. **Based on the estimate provided, calculate the basic economics of the project and decide how to proceed.** Determine whether your community will buy all street lights or just a subset. At this point, your community may find it helpful to hire a consultant or owner's agent to facilitate the process.
    - Tip: Build a contingency amount into your project from the outside to cover the cost of repairs, etc. Be modest about the amount of potential savings the project might realize when pitching to internal decision makers—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 you are considering an LED retrofit: Make sure there is a commitment to using the maintenance cost savings to pay for the purchase of LEDs. One option is to bid out the entire project, from acquisition to installation of the LEDs, as a performance contract through Chapter 25A.
3. **Once the decision to purchase has been made, formally notify the utility.** This triggers a 60 day window in which they must submit a definite purchase price and inventory.
4. **Review the purchase price information and inventory that the utility provides.** The price sheet will include price by fixture and poles type, wattages, and quantities. It will differentiate between overhead and underground lights.
5. **You may want to compare the utility inventory with an inventory that you complete yourself to ensure accuracy.** There are two main types of audits:
    a. Basic Wattage Check. This is a walk-by audit in which you check that 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.
    b. GIS Survey. The most accurate inventory is a submeter-level GIS survey. IT is also the most labor-intensive and expensive.
6. **Note:** if you discover any lights that were NOT included in the inventory, the utility can bill you for unpaid back charges. On the other hand, if you discover the utility is billing you for lights that don't exist, you are entitled to ask for a refund. If the utility believes you have made an error, they can have a separate, comprehensive audit completed at your expense.
7. **Decide how to finance** the streetlight purchase – consider municipal lease financing vs. issuing bonds, available operating funds or grant funds.
8. **Competitively procure a maintenance contract.** Determine what level of risk the municipality is comfortable assuming. Tip: Always be clear on what types of labor need to be compensated at prevailing wage in a solicitation for a maintenance contract.
9. **The whole process can take between 90 days to 2 years, with an average of about 6 months.** The law technically mandates 60 days to reach an agreement, and then DPU has 60 days to make a ruling if a case goes to them (although sometimes these 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.