

some cases, making it important for local governments to undertake a billing audit prior to any decision to upgrade to utility-owned LEDs.<sup>47</sup> (See chapter 3 for a discussion of billing audits.)

If converting to NYSEG's LEDs, local governments must agree in writing to compensate the utility for the stranded costs, and can either make a one-time payment or finance payments on their street lighting bill through energy savings over a maximum of five years. Utilizing on-bill financing will require that local governments pay interest.<sup>48</sup>

#### Conversion timeframe:

NYSEG will upgrade municipalities' lights, upon request, on a first-come, first-serve basis, with a maximum service territory-wide conversion of 20 percent of its inventory per year. Local governments must commit to converting at least 20 percent of their lights, or a minimum of 100 lights, whichever is greater, in one year. The company may agree to convert a community's entire inventory of lights within a year, but is not required to.

#### Conclusion:

NYSEG's LED options, as proposed would deliver savings to local governments—43 percent for a municipality with a typical portfolio—once they have paid off the stranded asset costs of the older lights. NYS Department of Public Service Staff estimates a payback period of less than a year, on average. Proposed limitations on annual LED upgrades per year mean that some municipalities could see their requests met sooner, while others will have to wait. A territory-wide conversion would take a minimum of five years if all municipalities requested upgrades.

#### Utility-Owned LED Street Lights in Perspective

A conversion to utility-owned LEDs will result in sizeable bill savings in all three Mid-Hudson service territories, once the stranded asset charges for replacing the existing lights are paid off. In the case of both O&R and Central Hudson, the fixture rates ("rent") for LEDs are lower than the rates for the lights they are replacing, and energy savings result in added cost savings. In NYSEG's case, the rates for LEDs are mostly lower, but even in cases where they are not, the energy savings more than compensate for the higher fixture costs. The obligation of municipalities to pay the stranded costs of the existing lights being replaced creates an upfront cost for municipalities, with paybacks of under a year in NYSEG territory, about three years in Central Hudson territory, and two to three years in O&R territory. Municipalities can pay these costs with their energy savings through utility on-bill financing. This would eliminate the need to budget additional resources to cover this upfront cost, but will require that local governments pay interest to the utility over the financing term. Local governments

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<sup>47</sup> As discussed in Chapter 3, refunds to local governments in NYSEG territories that have resulted from billing audits have been substantial.

<sup>48</sup> Lori Cole, Manager-Regulatory & Tariffs, Avangrid, Cover Letter, Compliance Filing, Tariff filing by New York State Electric & Gas Corporation to Revise Tariff Schedule, P.S.C. No. 121 to Offer Company-Owned LED Street Lighting Options for Customers Under Service Classification No. 3, Case 16-E-0710, November 21, 2017.

should check with their utility to see if any financial incentives for street light conversion are available through utility energy efficiency programs.

Because of the superior energy efficiency of LEDs, municipalities converting to utility LED options will see substantial energy savings compared to existing lights. As shown in Chapter 5, these savings can be 62 to 81 percent in O&R territory; up to 73 percent in Central Hudson territory;<sup>49</sup> and up to 70 percent in NYSEG territory, depending on which utility LED wattage options communities choose as part of their replacement plan. Savings will vary depending upon the utility wattages selected as replacements by municipalities. In O&R territory, for instance, local governments have three different LED wattage options to replace 150-watt HPS lights.

The utilities' choices of LED replacement wattages are generally within optimal ranges for energy savings, based on today's LED technology. Central Hudson's and NYSEG's portfolio of LED options would benefit from additional wattage options—in some cases, replacement wattages are higher than necessary. Overall, however, substantial energy savings will result from converting to LEDs because of the superior efficiency of this technology compared to existing lights types.

It is important to note that local governments will need to undertake an assessment of their existing lights and lighting needs in order to communicate to the utility which of the utility LED wattage options should be installed where. The PSC has directed utilities to coordinate with municipalities on the replacement plan. This involves a level of effort and engagement by local governments in utility upgrades that has not been required in past. Communities greatly benefit from a well-designed lighting plan that meets their various lighting needs, ensures lighting uniformity and proper lighting levels, and maximizes energy and cost savings. Utilities will not have the needed information to make LED replacement decisions for individual communities. Chapters 3 and 6 provide information on community energy audits, and additional guidance can be obtained from the Mid-Hudson Street Light Consortium and regional NYSEDA Clean Energy Communities Coordinators.

It is in the interest of municipalities to seek a conversion to LEDs as quickly as possible in order to maximize energy and savings. Central Hudson is only required to upgrade 20 percent of a municipality's lights per year under its tariff; and O&R and NYSEG have no obligation to complete a percentage of upgrades within a given year. Municipalities pursuing utility LEDs upgrades should seek agreement from the utility on a mutually beneficial installation schedule.

Finally, and importantly, utility LEDs options should be considered in comparison to the costs and benefits of a municipal ownership model in which the local government purchases its street light system and upgrades to LED fixtures of its choosing. An audit undertaken by the New York State Comptroller's Office, released in January 2008, examined the street light voucher data of five municipalities whose lights were owned by the utility, and concluded that these municipalities could collectively save \$13 million over the term of a 20-year bond to purchase their street light system—

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<sup>49</sup> The potential savings depends upon how quickly Central Hudson converts the lights to LEDs—the quicker the conversion, the greater the savings.

even before converting to LEDs.<sup>50</sup> The reason: the ‘rent’—or fixture charges—are the most significant portion of a utility street lighting bill. The cost of electricity delivery is relatively small by comparison.

The next chapter explores the costs and benefits of a municipal-ownership pathway to LED conversion, and identifies issues local governments should consider when deciding whether to remain with the utility or purchase their street light system. Chapter 5 then undertakes a cost analysis comparing utility-ownership and municipal ownership pathways in each of the three utility service territories in the Mid-Hudson region.

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<sup>50</sup> Office of the New York State Comptroller, January, 2008. The audit used data from the Town of Union’s purchase of its street light system as the basis for benchmarks that were applied to the five municipalities to compare the costs of purchasing and owning the street lights, compared to continuing with the status quo of renting them.