

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

Comments of the Mid-Hudson Streetlight Consortium and the Town of Rosendale in the Matter of the Central Hudson Gas & Electric Company's Modification of LED Lighting Options under Service Classification No. 8 - Public Street and Highway Lighting, P.S.C. No. 15.

Case 16-E-0616

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1. Introductory Statement

The Mid-Hudson Streetlight Consortium ("MHSC") and the Town of Rosendale ("Town") welcome the initiative of Central Hudson Gas & Electric ("the Company") to develop new LED options for its municipal customers. With one exception, the proposed wattages and the Kelvin levels will better meet the needs of communities than do the current options. The MHSC and the Town offer comments on four issues related to the proposed tariff amendments: 1) fixture specifications; 2) fixture rates; 3) stranded asset charges; and 4) the Company's LED replacement plan.

2. Fixture Specifications

The utility's experience with its first LED offerings was mixed, with a number of municipalities and residents complaining about brightness and the harshness of the light. The Town of Rosendale has found the LEDs installed on its Main Street and on residential streets to be excessively bright. The Town has also found the light color to be cooler than preferred for its downtown business district. According to the Company's filing, 10% of municipalities in the territory refused to allow the utility to install the new LEDs in the course of routine maintenance, even though the LEDs cost less than the lights they were replacing. Based on this

experience, Central Hudson has proposed new LED options that would become the standard replacement fixtures once the remaining inventory of LEDs is installed. The new lights would have both a lower wattage and lower correlated color temperature (CCT), emitting a “warmer” light color. Our understanding is that the Company has a significant inventory of the current LED options. Municipalities should be able to choose from among all available LED options, including the new options, and not just from those available in the existing inventory.

The proposed fixture wattage ranges, with one exception, represent a major improvement over the Company’s first round of LED options, and will result in improved energy and cost savings for municipalities. The charts below compare the Company’s current and proposed replacements (using the midpoint of the ranges) with optimal wattages. The optimal wattage ranges assume a fixture efficacy of at least 100 lumens per watt, which is now much more common in today’s market.

Table 1: Current Central Hudson LED Replacements Compared to Optimal Wattage Range

Existing fixtures	Optimal LED replacement (range)	Utility LED replacement	LED potential oversizing	Lost annual energy savings potential per light (kWh)	Lost annual financial savings potential
70w HPS	20-28w	39w	39-95%	44-76	\$2.67-4.61
100w MV	15-28w	39w	39-160%	44-96	\$2.67-5.82
175w MV	20-28w	39w	39-95%	44-76	\$2.67-4.61
150w HPS	48-54w	82w	52-71%	112-136	\$6.79-8.25
250w MV	25-54w	8w2	52-228%	112-228	\$6.79-13-83
250w HPS	85-100w	93w	-7-9%	-28-32	-\$1.70-1.94
400w MV	35-80w	93w	16-166%	52-232	\$3.15-14.07
400w HPS	85-120w	153w	28-80%	132-272	\$8.01-16.50
1000w HPS	85-120w	153w	28-80%	132-272	\$8.01-16.50
1000w MV	85-120w	153w	28-80%	132-272	\$8.01-16.50

Table 2: Proposed Central Hudson LED Replacements Compared to Optimal Wattage Range

Existing fixtures	Optimal LED replacement (range)	Utility LED replacement	LED potential oversizing	Lost annual energy savings potential per light (kWh)	Lost annual financial savings potential per light
70w HPS	20-28w	25w	-11-25%	-\$12-20	-\$-.73-1.21
100w MV	15-28w	25w	-11-67%	-12-40	\$.73-2.43
175w MV	20-28w	25w	11-25%	-12-20	-\$-.73-1.21
150w HPS	48-54w	65w	20-35%	44-206	\$2.67-12.50
250w MV	25-54w	65w	20-160%	44-160	\$2.67-9.71
250w HPS	85-100w	95w	-5-12%	-20-40-	-\$-1.21-2.43
400w MV	35-80w	95w	19-171%	60-240	\$3.64-14.56
400w HPS	85-120w	150w	25-76%	120-260	\$7.28-15.77
1000w HPS	85-120w	150w	25-76%	120-260	\$7.28-15.77
1000w MV	85-120w	150w	25-76%	120-260	\$7.28-15.77

Of Central Hudson’s four proposed wattages, only the replacement for the 150-watt HPS is above the optimal range. This is the second most common fixture in the service territory, accounting for about 18% of fixtures. We recommend that this proposed fixture wattage be lowered.

The reduction in color correlated temperature (“CCT”) from 4,000 Kelvin to 3,000 Kelvin for the proposed LED options will be a welcome change for municipalities that preferred warmer lighting, and most manufacturers now offer lights at this Kelvin level. This level is also consistent with International Dark Sky Association standards.

3. Fixture Rates

The MHSC and Town of Rosendale applaud the Company’s proposal to establish LED rates that are lower than the rates for the fixtures they are replacing in nearly all cases. We also note that there is no reason why other utilities should not be able to achieve similarly lower rates for their LED options.

4. Stranded Asset Charges

The MHSC and the Town of Rosendale welcome the Company’s proposal to drop the requirement that municipalities pay for the stranded costs of the existing lights to be replaced when an accelerated LED upgrade is requested. The Company is currently replacing existing

lights with LEDs in the course of routine maintenance, and a Company representative has told the MHSC that it expects a territory-wide conversion within eight years. The additional costs of an accelerated upgrade would not be economical to municipalities if they had to pay the stranded costs. Under the Company’s current tariff, an LED conversion could take up to seven years to complete, since the Company is only required to upgrade a minimum of 15% of the lights at a customer’s request. If the Company agreed to convert a municipality’s lights over two years, the municipality would not see savings until Years 6 and 7; if the conversion took longer, the net costs would be greater than simply waiting for Central Hudson to complete a service territory-wide conversion through its routine maintenance schedule.

The economics are not improved by the tariff provision added by the Public Service Commission (“the Commission”) in its 2015 Order allowing municipalities to pay the stranded asset costs in installments. If a municipality upgraded its lights in one year (something the Company may or may not agree to) and paid the costs out of its energy savings over five years, the municipality would not see savings until the beginning of Year 4.

Central Hudson pathways	NPV costs (\$)	NPV savings relative to existing lights (\$)	Energy consumption (KWh)	Energy savings relative to existing lights (KWh)	Carbon dioxide emissions (tons)	Emissions reductions relative to existing lights (tons)
No conversion - utility-owned non-LEDs	\$300,374		930,360		452	
Utility-owned LEDs - BAU conversion	\$255,280	\$45,094	409,512	520,848	199	253
Utility-owned LEDs - 1-year conversion	\$239,190	\$61,183	249,000	681,360	121	331
Utility-owned LEDs - 1-year conversion w stranded costs paid first year	\$250,890	\$49,483	249,000	681,360	121	331
Utility-owned LEDs - 1-year conversion w stranded costs paid out of savings	\$251,359	\$49,014	249,000	681,360	121	331
Muni-owned LEDs - bond or self-financed (low)	\$96,386	\$203,988	217,800	712,560	106	346
Muni-owned LEDs - bond or self-financed (high)	\$110,765	\$189,609	217,800	712,560	106	346

New York State has set strong targets of reducing carbon emissions by 40% by 2030 and 80% by 2050 below 1990 levels in order to address the climate crisis. We urge the Commission to prioritize energy efficiency in line with State climate and energy goals, and reduce the barriers to an accelerated conversion to LED street lights. To this end, elimination of stranded asset charges would make a major difference. The wider societal benefits of reduced fossil fuel consumption outweigh the insignificant additional costs to ratepayers.

5. Replacement Plan

The MHSC and the Town of Rosendale support, with modification, Central Hudson’s current practice of replacing with LEDs any burnt-out or broken street lights reported by the public at no additional charge to municipalities. This practice is much more consistent with State energy goals than is a continued reliance on significantly less efficient lighting technologies. However, the Company should 1) ensure that it has the permission of the municipality to implement this upgrade, and 2) has given municipalities the opportunity to provide a lighting design plan that specifies the available utility wattages to be installed.

Currently, Central Hudson follows a one-for-one replacement plan when upgrading to LEDs in the course of routine maintenance, which can replicate and exacerbate any pre-existing lighting deficiencies, including non-uniformity in lighting and over-lighting at particular locations-- problems that have been commonly identified by municipally-led street lighting assessments in New York and elsewhere. The Town of Rosendale identified instances of both non-uniformity and over-lighting in its Town lighting assessment, and was concerned that the LED wattages offered by Central Hudson were generally too high. Because of this concern, the Town did not sign the Blanket Authority Order it received from the Central Hudson granting the Company permission to upgrade to LEDs. Nonetheless, the Company began installing the LEDs in the Town without the Town Board's permission in 2016. The Town Board then passed a resolution, which was sent to the Company, requesting that the Company refrain from installing high wattage LEDs except at certain locations. This resolution has been ignored. Once the new LED options are approved, the Town would like the opportunity to provide a lighting design plan specifying which wattages are to be used when replacing lights in the course of routine maintenance.

The MHSC and the Town are also concerned that the time frame that the tariff allows for a full LED conversion is unnecessarily slow, sacrificing energy and cost savings. The City of Yonkers replaced its 11,000 lights—nearly half the number of lights in the entire Central Hudson service territory—in one year; Under Central Hudson's tariff, the Company can stretch out a municipality's street light conversion over a seven-year time frame. We would recommend that the rate of conversion be accelerated, and that it take into account the size of a municipality's lighting inventory.

6. Conclusion

The MHSC and the Town of Rosendale welcome this initiative by Central Hudson to improve its LED options in response to customers' concerns, and to offer more efficient wattages in most cases. We urge the Commission to consider our recommendations with regard to wattage choices, stranded asset costs, and replacement plans, which we believe will contribute to a more successful LED street light conversion.

Sincerely,

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And

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On Behalf of the Mid-Hudson Streetlight Consortium

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