

TOWN OF WOODSTOCK

CLIMATE SMART TASK FORCE

Erin Moran, Coordinator
Kenneth Panza, Secretary

Application for 7 Points

PE3 Action: LED Street Lights

5 Points

6 Points

7 Points

8 Points

10 Points

Background

In 2013, the Woodstock Town Board contracted with C.T. Male Associates to complete a street light inventory and provide a proposal for replacing the lights with LEDs. After full consideration and several changes in Central Hudson's LED tariffs, the town board in 2015 decided to sign an agreement with Central Hudson to replace failing mercury vapor and sodium vapor luminaries with LEDs. Although the town board did not accept C.T. Male's recommendation to install LEDs, the prior work provides a baseline, municipal streetlight inventory.

On March 16, 2015 Central Hudson announced, "Central Hudson [is] committed to a goal of replacing the existing fixtures with LEDs for requesting municipalities within five years, with a minimum of 10 percent in any one calendar year for each municipality making a request." In September 2015, the Woodstock Town Board authorized the supervisor to sign an agreement with Central Hudson to replace existing streetlights with LEDs with an expectation that within five years all the town's streetlights would be converted to LEDs.

By September 2018, three after signing the initial agreement, most of the town's streetlights should have been converted to LEDs. This did not happen. Upon investigation, it was discovered that on March 10, 2017, the PSC issued an Order (CASE 16-E-0616) that essentially annulled the above agreement and eliminated its advantages for the town.

Woodstock petitioned the PSC to reinstate the 2015 regulations that would allow Central Hudson to replace failing streetlight fixtures with LEDs over a five year period at no cost to the town. The rapid conversion of the state's streetlights is an important component of energy efficiency, but a requirement that municipalities must first purchase and retire the undepreciated value of existing fixtures is a substantial burden for achieving the efficiencies offered by LEDs.

The filings in PSC CASE 18-M-0084 are attached.

Mid-Hudson Street Light Consortium

The Mid-Hudson Streetlight Consortium was a two-year project funded by the NYSERDA's Cleaner, Greener Communities program to assist towns in evaluating the costs and benefits of converting existing streetlights to LED. The Mid-Hudson Street Light Consortium invited Greg Mumby, Community Planner at Climate Action Associates and NYSERDA contractor, to present at the August 22, 2018 meeting of the Woodstock Town Board. Mr. Mumby presented three models of municipal ownership to the board.

- 1) The town would purchase and retire Central Hudson’s existing streetlights, and issue an RFP with the intent of purchasing LED fixtures and installing them. Under this model, the town would own the streetlights and be responsible for maintenance.
- 2) A second model requires the town to purchase the existing fixtures from Central Hudson, but would purchase the new LED fixtures from Central Hudson. In this model, Central Hudson retains ownership responsibility for maintenance, but the town obtains the benefits of LED lighting.
- 3) With the Current Model, Central Hudson would continue to own the existing streetlights, but as existing lights failed, they would be replaced with LEDs.

As a result of the August 22, 2018 meeting with Mr. Mumby, the town board contracted with the New York Power Authority (NYPA) to review the town’s inventory of installed streetlights and to make a recommendation about the best alternative option for the town. NYPA submitted its recommendations, and the town board expressed a preference for contracting with Central Hudson to replace the existing fixtures with LEDs.

Existing Streetlight Maintenance

Since 2015, Central Hudson has been replacing failing streetlights with LED fixtures, and the town’s percent of LED streetlights now exceeds 25%.

Town of Woodstock
LED Streetlights
February 2020

Mercury & Sodium Vapor	7000 Mercury Vapor	6
	5800 Sodium Vapor	48
	16000 Sodium Vapor	41
	27000 Sodium Vapor	2
	Sum of Mercury & Sodium Vapor Fixtures	97
LED Fixtures	2900 LED	14
	3600 LED	9
	6800 LED	2
	7200 LED	7
	Sum of LED Fixtures	32
Utility Owned Fixtures		129
Percent LED		25%
lbs CO2/MWh		
CO2 Emmisions (Metric Tons)		

Central Hudson February 2020 bills for the town’s three lighting districts are attached.

Town of Woodstock LED Streetlights									
		2013		2017		2018		2019	
		Quantity	kWh	Quantity	kWh	Quantity	kWh	Quantity	kWh
Mercury & Sodium Vapor	7000 Mercury Vapor	13	10,816	7	6,622	6	5,079	6	4,992
	5800 Sodium Vapor	64	22,016	56	20,128	50	17,699	49	16,951
	16000 Sodium Vapor	48	34,560	43	32,101	42	30,852	41	29,815
	27000 Sodium Vapor	1	2,528	2	2,528	2	2,528	2	2,528
	Sum of Mercury & Sodium Vapor Fixtures	126	69,920	108	61,379	100	56,158	98	54,286
LED Fixtures	2900 LED			4	218	11	961	12	1,195
	3600 LED			10	1,390	10	1,550	10	1,550
	6800 LED					1	55	2	725
	7200 LED			7	1,360	7	2,296	7	2,003
	Sum of LED Fixtures	0	0	21	2,968	29	4,862	31	5,473
Utility Owned Fixtures		126	69,920	129	64,347	129	61,020	129	59,759
Percent LED		0		16%		22%		24%	
lbs CO2/MWh		498		366		285		295	
CO2 Emmisions (Metric Tons)		16		11		8		8	

Beginning in 2013 when there were no LED streetlights, Woodstock’s streetlights have been converted to LED as they failed. At year-end 2019, the kWh consumed by the streetlights was 59,759, about a 10,000 kWh reduction since 2013. Carbon dioxide emissions attributed to streetlights have dropped from 16 metric tons to 8 metric tons, a 50% reduction. Some of this reduction is due to increased LED efficiency, and some of the reduction is due to lower CO2 content in the electricity supply.