



Project: LED Lighting

The Opportunity

Gardiner's municipal lighting was expensive and bad for the environment.

- The Town Hall's interior and exterior lighting fixtures and the Town's 27 decorative streetlamps were powered by a mixture of inefficient fluorescent and metal halide products which increased the Town's electricity costs. Modern LED fixtures are on average 25% more efficient than fluorescent fixtures and from 2-3 times more efficient than metal halide fixtures.^{1,2} In addition, LED lamps last from 6-10 years, significantly longer than both fluorescent and metal halide lamps and could reduce the Town's maintenance costs.
- The excess electricity use increased the Town's climate pollution. Burning fossil fuels releases greenhouse gases, which significantly contributes to climate change with effects such as global warming, extreme weather events and rising sea levels.
- The excess electricity use was also increasing local air pollution at the site of electricity generation. Burning fossil fuels leads to serious health issues, including respiratory diseases, cardiovascular problems, and cancer, primarily due to air pollution from fine particulate matter and other harmful emissions. It is estimated that fossil fuel pollution is responsible for nearly one in five deaths worldwide, significantly impacting vulnerable populations.³
- The parking lot lights at Town Hall and the decorative streetlights produced unattractive light and contributed to light pollution issues like sky glow, glare, and light trespass. By utilizing Dark Sky compliant lighting, we could achieve several benefits: improved safety by reducing glare, improved aesthetics, minimized impact on insects, animals and humans and improved visibility of the night sky.
- Fluorescent lamp technology is being phased out to reduce mercury pollution and improve energy efficiency and the cost of running metal halide lamps is prohibitive. For these reasons, the Town would have had to replace these fixtures in the future.

The Solution

The solution was to upgrade to efficient and environmentally friendly lighting.

Climate Smart Gardiner used grants that they had earned from the New York State Energy & Research Development Authority (NYSERDA) to transform the Town's lighting by replacing the inefficient fluorescent and metal halide lamps with modern LED lamps. The Town engaged local electrical company Conscious Energy to perform the work which was completed in July 2025.



Funding

The lighting project was funded by \$34,100 in grants from NYSERDA which the Climate Smart Gardiner Taskforce earned.

- Community Campaigns for Electric Vehicles (\$12,500).
- Community Campaigns for Clean Heating & Cooling (\$15,000).
- NYSERDA's Clean Energy Communities Program 2-Star Designation Grant (\$6,600). You can find a full list of the actions Climate Smart Gardiner took [here](#).

Benefits

This project created numerous and significant benefits.

- Greenhouse gas emissions were reduced by 1.1 metric tons annually for the Town Hall 1.2 metric tons for the decorative streetlights.⁴
- The Town reduced electricity costs by approx. \$1,800 annually for the Town Hall and reduced by \$1,950 for the decorative streetlights.⁵ The Town will also have reduced ongoing maintenance costs.
- As the Town would have had to eventually do this project, it avoided a \$34,100 cost.
- The ongoing savings and avoided costs help make the Town more affordable for residents.
- The Town Hall's exterior lighting & decorative streetlamps are Dark Sky lighting compliant.

Thanks

This project could not have been completed without the hard work, collaboration, and support of the local community:

- NYSERDA
- Supervisor Marybeth Majestic, the Gardiner Town Board, and Town staff
- The Hudson Valley Regional Council
- Conscious Energy
- Local resident & lighting specialist, James Brigagliano

- The Climate Smart Gardiner Taskforce



If you are interested in participating in a project like this, please consider joining the Climate Smart Gardiner Taskforce by sending an email to climatesmartgardinerny@gmail.com.



References & Explanations:

¹ [University of Michigan study](#)

² [WattLogic comparison](#)

³ [Environmental and Energy Study Institute Fact Sheet](#)

⁴ [2024 Gardiner Greenhouse Gas Emissions Inventory](#)

⁵ Based on actual 2022-2023 electricity consumption and an assumed cost of \$0.20 per kWh