



**REALTERM**  
ENERGY



Case Study:  
Town of Norton, Massachusetts  
LED Streetlight Upgrade

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*Increased Safety & Decreased Carbon Footprint*

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# LED Streetlight Upgrade

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The Town of Norton is located in Bristol County, Massachusetts and is home to approximately 19,000 residents.

## OVERVIEW

- RealTerm Energy was selected for a full turnkey LED conversion
- 687 fixtures were installed
- 67% reduction in energy consumption (kWh)
- 74% savings in operating costs, approximately \$97,348/year
- Approximately 113 metric tons of greenhouse gas eliminated, equivalent to 24.5 cars removed from the road.

## BENEFITS OF AN LED UPGRADE

- 60 to 80% savings in energy consumption
- Up to 80% maintenance reduction
- Improved visual acuity
- Reduced light pollution
- Reduced greenhouse gas emissions

## OPPORTUNITY

In 2019, the Town of Norton wanted to significantly reduce its energy consumption, maintenance costs, and the environmental impact associated with its network of streetlights. The Town realized that once the LED streetlights were installed, they could not only achieve substantial energy and cost savings but also improve its overall lighting quality and roadway safety for both vehicle and pedestrian traffic.

The new LED fixtures will cut Norton's streetlight energy consumption by approximately 67%, as LEDs require significantly less electricity than the high-pressure sodium lights that were previously in place. The upgrade will also decrease annual streetlight costs including maintenance by 74 % due to LED's solid-state technology which last up to five times longer than the Town's existing streetlights. The new LED lights also include a 10-year warranty.

By converting its 687 streetlights to LED, the Town will reduce its greenhouse gas emissions by approximately 113 metric tons every year which is equivalent to eliminating greenhouse gas emissions from 24.5 passenger vehicles driven for one year - thus reducing Norton's carbon footprint



## SOLUTION




The design team performed photometric analyses for 564 cobra head fixtures as well as 123 decorative fixtures. The design plans utilized a 3000K color temperature throughout the Town, as it offers pedestrian comfort without compromising the safety and visual acuity required in higher classified roads and areas of high pedestrian activity. 3000K is a solid choice for residential and commercial area illumination, and for towns that want to ensure Dark-Sky compliancy. Additionally, it was determined that Acuity luminaires yielded the best balance of energy savings, cost efficiency and long-term performance. Preference was given to fixtures that would maximize available incentives to the Town. It was calculated that after the upgrade, the Town's annual electrical consumption would decrease by 67% and Norton would see a decrease of 74% in their annual electricity costs.

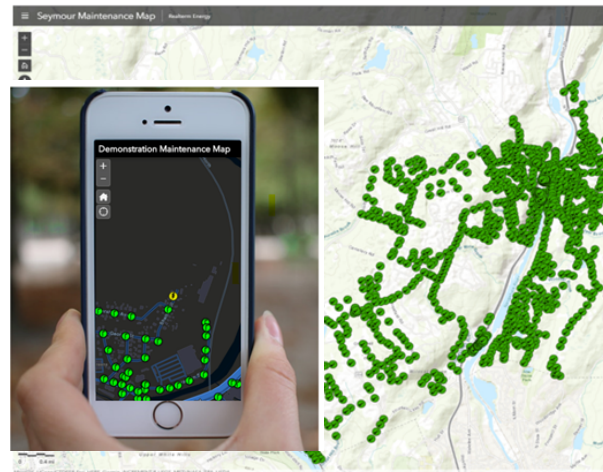
## MAINTENANCE SERVICES

RealTerm Energy is currently providing long-term maintenance services to the Town ensuring that these new assets continue to deliver the highest value for the municipality and protect the lighting investment.

RealTerm Energy's maintenance program is designed to reduce the burden on municipalities by streamlining outage reporting, contractor dispatching, and inventory management. This program reduces average streetlight outage time and required municipal staff time which benefits citizens, employees, and the Towns.

## NORTON'S DESIGN LEGEND

Point	Wattage	Fixture Type
	23	Lantern
	23	Cobrahead
	28	Cobrahead







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## The Energy to do Great Things

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*I have nothing but positive things to say in regards to our experience with RealTerm Energy. Their team is efficient, organized and they are truly experts at what they do. They were always reachable and ensured that we understood what was going on during every step of the project. We sincerely appreciate the project management services RTE has provided, their mapping software and dashboard created were very impressive and easy to use.*

Michael Yunits  
Town Manager, Norton MA



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