



# LED Conversion Multiplier

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Frequently Asked Questions

## FREQUENTLY ASKED QUESTIONS

### Why does ATCO offer LED streetlights?

Light-emitting diode (LED) streetlighting is considered one of the most effective solutions to help municipalities reduce their energy consumption, emissions and maintenance costs. To keep pace with industry standards and meet market demand, we updated our standard streetlight offering in 2016 from high-pressure sodium (HPS) to LED. Leading up to 2016, HPS was more cost effective, but with wide LED adoption, costs decreased and are now comparable with HPS.

### What is an LED Conversion Multiplier?

ATCO's LED Conversion Multiplier provides an opportunity for municipalities to complete a full-scale conversion of streetlights to LED technology, without putting forward large capital costs. This means a city can make an immediate and extensive upgrade to LED streetlights, with the costs and savings incorporated into the municipality's bill once the retrofit has completed.

### Why has ATCO introduced the LED Conversion Multiplier?

LED lighting offers many benefits compared to traditional HPS, including reductions in energy consumption, carbon emissions, light pollution and the frequency of maintenance and associated costs. Municipalities are aware of the positive impact on their communities and are eager to undertake a full scale retrofit, but capital costs can be prohibitive. ATCO is committed to improving the lives of our customers and supports the delivery of lighting innovations to enhance our communities and environment. We introduced the LED Conversion Multiplier to address the financial barrier and realize the benefits from a conversion at scale.

### How is the LED Conversion Multiplier rate determined?

ATCO was granted approval by the Alberta Utilities Commission (AUC) to offer an LED conversion program for their municipal customers. We estimated the net cost (after maintenance savings) to change the fixture to LED at \$31.08 per year. This amount, divided by the forecast fixture revenue for the year, is 7.51 per cent. Once a municipality decides to undergo a conversion using the LED Conversion Multiplier, the contract and rate will be filed with the AUC prior to implementation.

### How long will the LED Conversion Multiplier be offered?

Our LED Conversion Multiplier will be offered until most of the invested streetlights in the communities we serve have completed conversion from HPS to LED. Currently we're estimating that this will take three to five years. At that point, we will apply to the Alberta Utilities Commission (AUC) to adjust our D61B invested streetlight rate, paid by all communities, to include any remaining capital costs and maintenance savings associated with the conversion projects, and remove the Multiplier.

## Will the LED Conversion Multiplier rate change?

The rate can potentially be influenced by factors like fluctuating conversion costs, the level of conversion adoption or annual base rate changes. ATCO will evaluate the rate at a minimum annually, to ensure the rate remains fair.

## Does the LED Conversion Multiplier apply to all streetlights?

The LED Conversion Multiplier only applies to invested streetlights. Non-invested streetlights, decorative fixtures and yard lights are excluded from using the LED Conversion Multiplier program.

## What is an invested streetlight?

Streetlights within our service area are classified into two rate categories: invested and non-invested.

- **Invested streetlights** - ATCO owns the streetlight asset and the municipality pays a fee ensuring the replacement or repair of damaged or deficient lights without expense to the municipality.
- **Non-invested streetlights** - ATCO owns the streetlight asset, but the municipality *does not* pay a fee and will incur costs related to the replacement or repair of damaged or deficient lights.

The LED Conversion Multiplier only applies to invested streetlights. If a city with non-invested streetlights wishes to utilize the LED Conversion Multiplier, a municipality must first recategorize their non-invested streetlights to invested status.

## How long will it take to complete a conversion project?

Every conversion project is unique with many variables impacting project timelines. Once an offer acceptance letter has been signed by the municipality and then reviewed, acknowledged and accepted by the AUC, an ATCO representative from the local office will evaluate the project scope and communicate timelines to the municipality.

## What are the benefits of LED?

- ***Improved visibility:*** LEDs provide better color rendering index and uniform, quality light which reduces glare for drivers, pedestrians and cyclists.
- ***Savings:*** The long, reliable life reduces a need for frequent maintenance and expenses. The efficient lighting can cut 40 – 60 per cent of energy consumption and reduce the carbon footprint.
- ***Dark Sky compliant:*** ATCO's LED meets the standard of the International Dark Sky Association (IDA), the global authority on light pollution.
- ***Future proof:*** LED streetlights are the first step towards Smart City applications - the use of technology in infrastructure to improve the operation and management of cities and the lives of citizens.

## What kind of streetlights are offered by ATCO?

ATCO's standard streetlight is LED with 3000K color temperature, the current recommendation of the International Dark Sky Association. At this level, the night sky is protected, glare is minimal and there's a reduced effect on humans and wildlife.

Within our standard streetlight offering, we have three wattage levels used to replace HPS:

- 38 watt LED fixture will replace a 100 watt HPS fixture
- 73 watt LED fixture will replace a 150 watt HPS fixture
- 106 watt LED fixture will replace a 250 watt HPS fixture

## What happens if a municipality does not scale-up to LED?

Municipalities not participating in full-scale conversions will continue with the existing replacement program where HPS lights are converted to LED at end of product life.