



LED STREET LIGHTS FOR TOWN Drumheller

What is the LED Conversion Multiplier and how does it apply to you?

LED CONVERSION MULTIPLIER

- Alberta Utilities Commission (AUC) approved a multiplier rate for the conversion of HPS to LED
- D61B invested streetlights
- LED Conversion Multiplier (LCM) applied in place of a capital contribution
- Contract will be filed with the AUC prior to construction
- Current LCM rate – 9.4%



LED CONVERSION MAINTENANCE MULTIPLIER

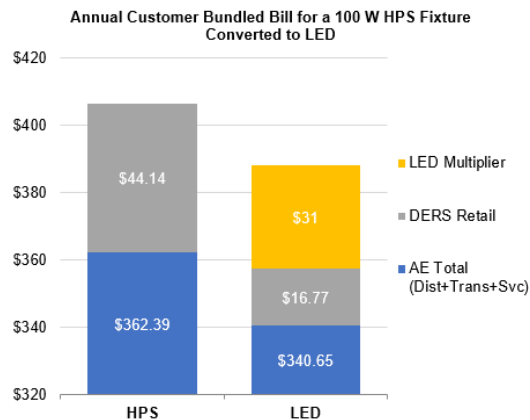
LED Conversion bill adjustment	=	LED Conversion Cost – LED Maintenance Cost Savings	
		Rate D61B Distribution Charge	
Where:			
D61B Fixture Charges	=	\$0.8968/fixture/day * 365 days * 1 fixture	
	=	\$327.33	
LED Capital Conversion Cost	=	Annualized conversion costs for all fixtures qualifying for LED conversion	
	=	# of qualifying fixtures	
	=	~\$1,028,000 / yr	
	=	20,379 Fixtures	\$50.43 per fixture per year
LED Maintenance Savings	=	Annualized cost savings for all fixtures qualifying for LED conversion	
	=	# of qualifying fixtures	
	=	~\$398,000 / yr	
	=	20,379 Fixtures	\$19.51 per fixture per year
Therefore:			
LED Conversion Multiplier	=	$\frac{\$50.43 - \$19.51}{\$327.33}$	= 9.4%
* Numbers above might vary due to rounding			

ATCO's calculation is based on the eligible 20,379 HPS D61B fixtures to be converted to LED technology.

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MULTIPLIER CHANGE IN BILLING



- 🗂 HPS annual total is **\$406.53**
- 🗂 LED annual total (with Multiplier) is **\$388.42**
- 🗂 Annual difference is **-\$18.11**

Based on 100W HPS and 38W LED Invested Street Light Rate. Wire charges based on current Distribution Rates (effective January 1, 2021) plus current approved Rider B, Rider G and Rider S (effective August 2021). Retailer charges are based on retailer energy rate of 10.078 c/kWh (DERS RRO effective September 2021)

*This year depiction is assuming the retailer energy rate stays at the above rate for a year. *All values used in the graphs have been rounded.

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STREETLIGHT INVENTORY IN DRUMHELLER AVAILABLE FOR CONVERSION

HPS WATTAGE	LED WATTAGE	INVESTED STREET LIGHTS
100	38	717
150	73	185
250	106	113

Estimated impact to billing for conversion of *invested* streetlights

Summary

HPS W	LED W	HPS \$	LED \$	Difference per Light \$	# of Lights	Totals savings \$
100	38	\$ 406.53	\$ 388.20	\$ (18.33)	717	\$13,142.61
150	73	\$ 446.14	\$ 415.92	\$ (30.22)	185	\$5,590.70
250	106	\$ 525.34	\$ 442.06	\$ (83.28)	113	\$9,410.64
				\$		
Total Difference						\$28,143.95

- This estimated annual bill impact is based on RRO

PROGRAM AVAILABILITY

- Approximately 20,000 invested street lights
- Majority must be converted to LED
- AUC approval is required to remove multiplier
- After multiplier is removed, invested street light rate will be adjusted to reflect any remaining capital costs and maintenance savings

QUESTIONS



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Thank you

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Invested vs. Non-Invested Streetlights

What do the streetlights look like within your community?

Streetlights

- Streetlights within your community primarily are:
 - Built within the scope of a development and turned over to the community to pay monthly distribution charges.
 - Owned by ATCO
 - Street light options are outlined in the Franchise Agreement between your community and ATCO.
 - Non-Invested Street light Rate (61E)
 - Invested Street light Rate (61B)
 - All rates are listed at www.atco.com



Non-Invested Street Light Rate (61E)

- For lighting fixtures installed, owned and maintained by ATCO
- The customer is responsible for the full installation cost
- The customer is responsible for the full cost of replacement
- Includes maintenance only
- The community does not receive any Company Investment



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Invested Street Light Rate (61B)

- For lighting fixtures installed, owned and maintained by ATCO
- The customer is responsible for the full installation cost
- ATCO is responsible for the full cost of replacement and maintenance.
- A Multiplier may be applied to the fixture charge for customers requesting lighting fixtures which incur higher than average lighting costs.
- The community receives Company investment, as per the AUC approved investment rate.



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Street Light Rate Option Comparisons

Rate Option	Ownership & Maintenance	Installation Cost	Replacement Cost	Monthly Wires Cost
Invested 61B	ATCO Electric	ATCO Electric (up to a max. \$2,654 per light)	ATCO Electric	\$31.24
Non-invested 61E	ATCO Electric	Customer	Customer	\$18.26

Based on a 100 Watt HPS. Wires charges based on current approved 2021 base rates plus approved Rider B, Rider G and Rider S (Effective Sept 01, 2021). Rider A is not included in the monthly wires cost.

Current Monthly Rates Per Light

Wattage	Invested Option 61B	Non-Invested Option 61E
100W HPS	\$31.24	\$18.26
150W HPS	\$32.74	\$19.76
250W HPS	\$35.72	\$22.74
400W HPS	\$40.22	\$27.24
43W LED	\$29.53	\$16.55
88W LED	\$30.87	\$17.89
161W LED	\$33.06	\$20.09
Totals		

Convert Non-Invested to Invested

- Analysis of converting Non-Invested Lights to Invested

#/Wattage of Non-Invested	Monthly Charges per light as Invested	Difference in monthly charges (Non-Invested to Invested)	Available Investment per Light \$884.67
# 547/ 100W HPS	*\$ 31.24	*\$12.98	\$ 483,914.49
# 115/ 150W HPS	*\$ 32.74	*\$12.98	\$ 101,737.05
# 89/ 250W HPS	*\$ 35.72	*\$12.98	\$ 78,735.63
# 7/ 400W HPS	*\$ 40.22	*\$12.98	\$ 6,192.69
# 1/ 43W LED	*\$ 29.53	*\$12.98	\$ 884.67
# 1/ 88W LED	*\$ 30.87	*\$12.98	\$ 884.67
# 3/ 161W LED	*\$ 33.06	*\$12.98	\$ 2,654.01
Total Lights 763	Total Invested \$24,473.58	Difference \$9,903.74	Investment \$675,003.21

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Review

- Drumheller has 763 Non-Invested 61E streetlights
 - Approx. \$ 24,473.00 /month in distribution charges
 - Approx. \$ 4,578,000.00 in future replacement costs
- Future state of all Invested 61B streetlights
 - Approx. \$ 34,377.00 /month in distribution charges
 - An investment provided to you of \$ 675,003.00
 - No future capital replacement cost
 - Available Multiplier rate option to convert HPS lights to LED technology

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Thank you