

LED Streetlight Conversion

Report Purpose

To inform Council of FortisAlberta's proposal to upgrade all High Pressure Sodium (HPS) streetlights with energy efficient Light Emitting Diode (LED) streetlights.

Recommendation

THAT Council approve entering into LED Conversion option upgrade with FortisAlberta for all Rate 31 streetlights.

Council History

Strategic Plan Priority Areas

Economy: Increase of \$23.32 per year as a multiplier on annual invoice for the next 20 years.

Governance: Continue a cooperative partnership with business.

Social: LED lights create less light pollution and improve dark skies.

Culture: n/a

Environment: Reducing power consumption improves environmental impact.

Other Impacts

Policy: SER-009-012 Street Lighting

Legislative/Legal: The *Electric Utilities Act* requires Alberta Utilities Commission approval for tariff changes

Interdepartmental: Transportation and Agriculture Services; Planning and Development Services; Capital Planning and Construction; Facility Services; Recreation, Parks and Culture

Summary

FortisAlberta has partnered with six municipalities to pilot the conversion option of replacing existing High Pressure Sodium (HPS) streetlights with the more energy efficient Light Emitting Diode (LED) streetlights. The Town of Devon, City of St. Albert, City of Wetaskiwin, Town of Canmore, Town of Okotoks, and Crowsnest Pass have all signed an agreement for similar streetlight conversions.

A significant number of major manufacturers are now producing LED streetlights. The capital cost of replacing existing HPS streetlights is becoming more and more feasible. FortisAlberta is proposing a "maintenance multiplier", which means an increase of approximately 10% to the distribution charge to address costs associated with converting existing streetlight fixtures to LED fixtures. A signed proposal letter is required to be submitted to the Alberta Utilities Commission (AUC) for approval of the application of the multiplier. Without AUC approval, FortisAlberta would be required to reassess the feasibility of converting the County's streetlights to LED without an upfront contribution from the municipality. By agreeing to the upgrade through use of Alberta Utility Commission approved multiplier, cost per fixture would equate to approximately \$460 each; whereas, if upgraded without use of a multiplier, cost per fixture would be \$800 each.

While streetlight power consumption varies from month to month, the resulting multiplier, transmission, and energy costs are anticipated to result in an overall average bill savings of

approximately \$5 per year per fixture (see Enclosure 1). As the cost of energy increases, the potential savings achieved by LED streetlights will increase.

The proposal includes approximately 4,173 fixtures and does not include private, decorative, or County-owned fixtures. Full conversion is expected to take 5 – 6 weeks using local contractors.

In 2017, failed HPS streetlight fixtures will be replaced with equivalent LED fixtures. LED street lighting is a whiter, more focused light, has lower energy consumption, increases the life span of the fixture, and reduces maintenance costs. LED lights have been installed in the Buckingham subdivision, as well as at various intersections within the urban service area of Sherwood Park.

Communication Plan

All urban Sherwood Park residents will be impacted by the LED streetlight conversion. A collaborative communicating strategy with FortisAlberta will be implemented to inform the community of the reduced energy consumption and long-term cost savings. Print, website and radio media will be used to distribute messaging.

Enclosures

- 1 Streetlight Bill Impacts
- 2 Annual Streetlight Bill Comparison
- 3 Streetlight LED Conversion Option Letter