

# Report to Council



**Date:** February 10, 2020  
**To:** Council  
**From:** City Manager  
**Subject:** Conversion of the remaining decorative and post-top streetlights to LED  
**Department:** Public Works

---

## **Recommendation:**

That Council receives, for information, the Report from the Traffic Signals and Systems Department dated Feb 10, 2020 with respect to the completion of the conversion of decorative streetlights to LED;

AND THAT the 2020 Financial Plan be amended to include funding for the four-year project in the amount of \$1,157,470 from the energy reserve;

AND FURTHER THAT energy savings from this upgrade project be used to re-pay the initial funding and be re-invested back into the City's energy reserve to help fund future energy upgrades.

## **Purpose:**

To provide Council information on the next phase of the LED streetlight conversion project.

## **Background:**

In 2018, the City retrofitted over 10,000 Cobra style streetlights to LED fixtures. This resulted in savings of over \$900,000 annually on electricity billing and maintenance costs, due to the longer (15-20 year) average life span of LED technology.

This left 2,945 decorative and post-top streetlights operating with lower efficiency HPS bulbs. At the time, there was no economically attractive solution for retrofitting these types of streetlights that would attain a reasonable payback period.

## **Discussion:**

Since 2018, LED technology has improved, with research and field testing showing economically viable solutions for the retrofit of decorative and post-top fixture to LED technology.

It is proposed to complete the project in four phases over four years for the following reasons:

- It will allow the existing streetlight contractor to carry out the additional work in each phase in addition to the on-going yearly maintenance already being undertaken.
- The first two years will see the post-top fixtures retrofitted to the same known fixtures successfully used in the previous streetlight project. LED technology is continually improving and in the first two years technology may emerge that will provide an even more attractive solution for the decorative fixture retrofit, slated for phases 3 and 4.

The intent is to utilize funding from the energy reserve. With all savings realized by the project going back to reserve to fund future energy reduction programs.

The estimated costs for years 1-4 are, \$316,192, \$316,192, \$292,560 and \$232,525 respectively.

The energy savings upon full completion of the conversion to LED, is conservatively estimated at \$171,000 annually, which due to rising energy costs will increase year over year, with project costs expected to be recuperated within 7.8 years. The expected payback is longer, in part due to the phased four-year approach.

#### **Conclusion:**

Upon completion, all streetlights in the City of Kelowna by 2024 would feature LED technology, supporting Council's priority to decrease greenhouse gas emissions and provide a combined saving of over \$1,000,000 per year in electricity costs.

#### **Internal Circulation:**

Finance  
Communications  
Building Services

#### **Considerations applicable to this report:**

This is a request for funding from the energy reserve to be paid back from the reduction in electricity consumption.

***External Agency/Public Comments:***  
***Communications Comments:***

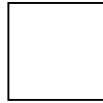
#### **Considerations not applicable to this report:**

***Legal/Statutory Authority:***  
***Legal/Statutory Procedural Requirements:***  
***Existing Policy:***  
***External Agency/Public Comments:***  
***Communications Comments:***

Submitted by:

Brian Cairney. Traffic Signals and Systems Supervisor

Approved for inclusion:



Joe Creron, Deputy City Manager

cc: