

**CITY OF GOODYEAR
COUNCIL ACTION REPORT**

SUBJECT: Light Emitting Diode (LED) Street Light Conversion	STAFF PRESENTER: Luke Albert, City Traffic Engineer; Doug Sandstrom, Finance Director
	CASE NUMBER: None
	OTHER PRESENTER: None

PROPOSED ACTION:

Council will receive a presentation on the costs, savings, and payback for LED street light conversion project. In addition, funding options will be discussed.

BACKGROUND AND PREVIOUS ACTIONS:

The city owns approximately 9,000 high pressure sodium (HPS) street lights. During FY2017, the city spent a total of \$996,200 on energy and maintenance of HPS street lights, which is the typical annual cost. Many Cities are completing system-wide conversions from HPS street lights to LED street lights due to the high energy and maintenance costs for HPS street lights and the significant savings in both energy and maintenance costs for LED street lights.

In September 2017, APS informed customers that the APS street light rebate program will end by November 1, 2018. The city has an opportunity to receive a rebate of approximately \$200,000 for a city-wide conversion of existing HPS street lights to LED street lights. In order to receive the benefits of the rebate, the LED street light conversion must be completed by November 1, 2018. This is an extremely tight timeline.

On January 22, 2018, City Council approved \$100,000 for a street light audit project. This audit was completed in April 2018, pilot project fixtures were installed in May 2018, and final implementation project costs and savings were identified in June 2018.

STAFF ANALYSIS:

Ameresco, Inc. is a company that provides energy services, and currently holds contracts with the cities of Phoenix and Tucson for street light evaluations and LED street light conversions. Many agencies in the Phoenix metro area have implemented energy saving measures utilizing Ameresco, Inc. due to the opportunity to fund the costs of the conversion to LED street lights through guaranteed energy savings and reduced or eliminated maintenance costs. The price of LED street light fixtures has decreased since the technology was first developed, and now the price is at a point where there is a financial benefit to executing a system wide conversion.

Ameresco, Inc. completed an audit of the City's existing street light system and has collaborated with the City on identifying street light fixtures that provide adequate lighting and maximize energy savings. In addition, the City provided maintenance costs to Ameresco, Inc. for analysis and inclusion in the final savings projections. The project cost of the installation of the selected fixtures and associated energy savings combined with the maintenance savings were utilized to calculate the payback period for the project.

It has been determined that poles will not be included in this project because pole replacement of older street light poles will be incorporated into the City's asset management program. In addition, staff will explore the possibility of replacing street light poles in older neighborhoods with City standard street light poles as a Community Development Block Grant (CDBG) project.

The costs and payback for the street light audit and conversion of all city street lights to LED fixtures will be discussed in depth during the work session. The proposed project includes a 10-year warranty on labor and materials, and the expected life of the selected street light fixtures are 10 to 15 years. The cost of completing this work with the savings from energy and maintenance results in a payback of approximately 6.7 years.

FISCAL ANALYSIS:

Estimated project costs of \$2,770,700 are not included in the currently adopted budgeted nor anticipated in the CIP. Funding options to be discussed as part of the work session are:

- 1) Finance as Tax-Exempt Lease purchase (now)
- 2) Utilize CIP Project reserves (now)
- 3) Determine funding through CIP Process

In order for the City to be eligible for the rebate from APS all work must be complete by November 1, 2018. In order to meet this tight timeline, the project must commence in July with all fixtures ordered as soon as possible.

An additional benefit of this conversion is the realization of soft costs associated with staff's time in inspecting fixtures, responding to resident concerns, and coordinating with the contractor (estimated at 5 to 10 hours per month).

RECOMMENDATION:

Staff recommends that council consider the project and all options presented to them.

ATTACHMENTS:

- Presentation