

AGENDA ITEM #: _____

DATE: September 14, 2020

CAR #: 2020-7017



CITY COUNCIL ACTION REPORT

SUBJECT: Light Emitting Diode (LED) Street Light Conversion

STAFF PRESENTER(S): Hugh Bigalk, City Traffic Engineer;
Doug Sandstrom, Finance Director

OTHER PRESENTER(S):

Summary:

Request City Council approve the expenditure in the amount of \$3,100,000 in FY2021 for the conversion of the City's 9,160 street light fixtures from High Pressure Sodium (HPS) to LED. In addition, approve related budget transfer(s) to set the total project budget at \$3.1 million using one-time General Funds and remove the \$3.4 million General Government Capital fund budget that assumed financing for the project.

Recommendation:

Approve an expenditure in the amount of \$3,100,000 for the conversion of the City's street light fixtures to LED and related budget transfer(s) to change the total project budget and funding to \$3,100,000 in one-time General Fund and remove the \$3,392,000 General Government Capital fund from the budget for the planned financing of the project.

Fiscal Impact: The FY2020 street light electricity billing was \$840,700 for 9,160 street light fixtures. The project will see a guaranteed reduction in street light electricity billing of \$311,600 in the first year after the conversion.

The FY2020 street light maintenance cost was \$111,300. The LED light fixtures will have a ten-year warranty from the manufacturer and a labor warranty for one year. The street light maintenance funding will be reduced by 80% the first year after the conversion and will remain at this significantly reduced level through the end of the light fixture warranty period.

The total cost of the project is estimated at \$3,100,000 including construction administration of \$100,000. Using these project costs and energy and maintenance savings, the anticipated payback period is 7.7 years.

This CIP project is budgeted in FY2021 as the LED Street Light Conversion - Project 42028 in the amount of \$3,392,000 in the General Government Capital Fund under the assumption it would be financed with electricity and maintenance savings as the source for the debt service payments. Due to substantially higher revenue collections in FY2020 than anticipated, the

recommendation is to use the conservatively estimated \$19.4 million increase in the General Fund beginning balance to pay for this one-time project. This avoids the direct cost of issuing the debt and approximately \$400,000 in interest cost.

The recommended budget transfers both reduce the total project budget to \$3,100,000 and change the funding source to one-time General Fund.

Background and Previous Actions

Council approved the purchase of the street light system from APS on October 4, 2010. At that time, the street light system in the City was approximately 8,150 HPS lights. On August 28, 2017 with Council approval of the City's Engineering Design Standards and Policies Manual, 2017 Edition, new street light installations were required to be LED.

On January 22, 2018, the Council approved a street light energy audit and an LED pilot project to be performed by Ameresco, Inc. in the amount of \$100,000. LED street lights were installed in the following areas of Goodyear:

- Litchfield Road from Van Buren Street to Interstate 10
- Selected local streets in the Estrella Community
- Selected local and collector streets in the Sedella Community

The audit was completed in April 2018, and costs/savings were presented to Council as a work session item on July 2, 2018. The project was added to the FY2020-2024 CIP as an FY2021 project.

Staff Analysis

Ameresco, Inc. is a company that provides energy services and currently holds a contract with the City of Tucson for street light evaluations and LED street light conversions. Many agencies in the Phoenix metro area have utilized this contract to illustrate the cost advantages of converting street light systems to LED and illustrating the reduced energy and maintenance expenses.

Ameresco, Inc. completed the audit of the City's existing street light system and has worked with City staff on identifying street light fixtures that are durable, provide adequate lighting, and maximize energy savings. The project cost of the installation of the selected fixtures and associated energy savings combined with the maintenance savings were used to calculate the payback period for the project.

The table below identifies the anticipated costs and payback for the conversion of all City street lights to LED fixtures. In addition, the project includes a ten-year warranty on materials and a one-year labor warranty, with an expected fifteen-year life of the LED light fixtures. Ameresco, Inc. also guarantees the first-year electric savings will not be less than \$311,600. Below is a summary of the costs and savings associated with this project.

LED Street Light Implementation Costs

Item	Costs
LED Lights and Installation:	\$3,000,000
Construction Administration:	\$100,000
Total Costs:	\$3,100,000

Annual LED Street Light Implementation Savings

Item	Savings
Energy Savings:	\$311,600
Maintenance Savings:	\$90,000
Total Savings:	\$401,600

Based on the costs and savings illustrated from the tables above, the simple payback is 7.7 years.

Though the FY2020 year is not fully closed, it is apparent that yearend savings from higher revenues will be substantially more than the amount assumed in developing the FY2021 budget. The following table provides information on FY2020 pre-audit actual revenue collections in the General Fund compared to the estimate.

FY2020 12-Month Actual General Fund Revenues Compared to Estimate (in millions)

Revenue	12-Month Actual*	Estimate	Increase/ (Decrease)
Construction Sales Tax	\$ 23.6	\$ 18.3	\$ 5.3
Non-Construction Sales Tax	56.1	51.3	4.8
State-Shared Taxes	22.8	21.6	1.2
Development User Fees	17.9	12.5	5.4
All Others	34.2	31.5	2.7
Total	\$ 154.6	\$ 135.2	\$ 19.4

*Pre-audit. Sales tax is based on sales tax reports others are revenues booked through August 17, 2020.

Though there are some higher than planned expenditures related to carryovers that will be offset by equal reductions in the FY2021 budget in the same projects, there are no indications that increases over the estimated General Fund expenses would offset these higher revenues. Fund balance increase is treated as a one-time revenue in the budget development process. If not used

for this purpose, funds such as these from a higher beginning balance would be treated as one-time revenues for funding FY2022 budget requests.

This is not a use of the Special General Fund Contingency. Also, because the most recent Construction Sales Tax estimates were greater than the pre-pandemic estimates, this does not tap the \$12.3 million appropriation contingency that provided capacity to spend up to the pre-pandemic revenue estimates.

Attachments

Investment Grade Audit by Ameresco, Inc.