

REQUEST FOR COUNCIL ACTION

SUBJECT: LED Streetlight replacement

SUMMARY: Provide an update on the acquisition of LED streetlights and receive direction on for their installation.

**FISCAL
IMPACT:** Varies upon Council direction.

STAFF RECOMMENDATION:

Staff recommends approval of Option 3 with City Staff performing the installation and contract replacement of fixtures that are near overhead power.

MOTION RECOMMENDED:

"I move to direct staff to install the new LED streetlight fixtures in accordance with Option ____."

Roll Call vote is not required

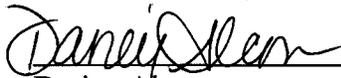
Prepared by:


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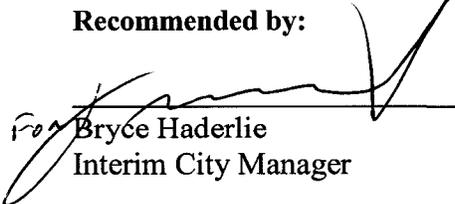
Reviewed by:


Wendell T. Rigby, P.E.
Director of Public Works

Reviewed as to Legal Sufficiency:


Darien Alcorn
Acting City Attorney

Recommended by:


Bryce Haderlie
Interim City Manager

Streetlight Replacement – FAQ

City staff has been involved in producing a Request for Proposal (RFP) and then bidding for streetlight replacement fixtures from High Pressure Sodium and Metal Halide to LED. We are currently receiving a number of sample products for installation and evaluation and continue to move closer to final selection of lighting fixture products.

As the process has moved forward, City staff has worked closely with Rocky Mountain Power and professional consultants to ensure that the City receives a high quality and durable product for city residents. Through this process a number of answers to City Council questions have emerged. This report is meant to serve to answer several questions and to seek direction from City Council regarding the installation of the new lighting fixtures.

How much will the Rocky Mountain Power rebate be?

This question has been the big question that has loomed over the entire project and as suppliers submit product and Rocky Mountain Power reviews those products, we are getting more and more information regarding the amount of the rebate. The final rebate amount will ultimately be determined by the final product selected and its post-installation performance. Current estimates on the amount of the rebate from all fixtures being replaced is an amount up to \$230,000 for all fixtures.

This represents one of the largest rebates that Rocky Mountain Power has ever done. They are asking to be able to highlight the West Jordan project in several different ways from a ceremonial presentation of the rebate to highlighting the City of West Jordan's efforts in regional and national publications. The project is also beginning to receiving attention from the U.S. Department of Energy for the breadth and aggressive nature of the project.

How much money will be saved by switching to LED fixtures?

This question also depends on the type of fixture being replaced. Not all lighting fixtures are the same and have different wattage requirements. Current estimates from Rocky Mountain Power on cost savings from electricity usage is about \$75,000 to \$100,000 per year.

What kind of lighting fixtures are we replacing?

The City has four different types of lighting fixtures in the Streetlight program. They Cobra Head style fixture primarily along the arterials and collectors, the Town and Country style primarily found in residential neighborhoods, and Shoebox and Acorn styles that have been installed in various locations. The RFP was written in a way that allows for the City to select one or more providers to provide one or more type of fixture replacement according to the application. This allows the City to select Town and Country style from one provider and Cobra Head style from another provider if that is what's best for the City. This flexibility allows for the best products to be installed for the City, rather than an all or nothing scenario that may be strong on one fixture and not an appropriate application for another fixture.

How much will they cost?

With the ability to select one type of fixture from one provider and another style from a different provider, the City is in better shape to get the best product in each application. It also makes it difficult

to estimate how much those fixtures will cost until after the evaluation period. Currently, costs for total replacement range between \$1.6M and \$2.6M depending on the combination of fixtures selected.

How fast can they be changed out?

Height and condition of the existing fixtures play a role into the speed of removal for the existing fixture and installation of a new fixture. In checking with various municipalities and contractors that have performed fixture replacement the average speed is about three to four fixtures per hour (or 15-20 minutes per fixture). This includes mobilization and demobilization at each fixture and travel between fixtures.

Situations have been reported where a consistent type of low height fixtures have been done extremely quickly. An installation contractor in the Valley was recorded changing out about 50 fixtures during one day, but with some fixtures that may have rusted screws or may have other unique problems, the same contractor has been known to spend over an hour on replacing a single fixture. A three to four fixture per hour replacement is a good estimate for an experienced electrician.

Streetlight Replacement – Contract or Staff

As final evaluation and selection of the fixtures draw close, attention is drawn to how the City Council would like to have the fixtures installed. There have been various discussions about whether to contract the work out to a private company that would work under contract to do the replacement or to do the work with in-house staff.

The following three options are provided to help guide the discussion and ultimately help staff by providing direction on how to proceed with streetlight installation.

To this point in time, no staff time has been dedicated towards implementing any particular option.

Option 1: Contracted work to perform installation

An RFP would need to be created and then go out for bid for a qualified electrical contractor to perform the replacement of the streetlight fixtures. There are a number of companies in the area that are qualified to perform the work.

A rough estimate was created based upon feedback from various municipalities, professional organizations, and contractors.

An average it could be estimated that it would cost about \$50 per light fixture to take an existing streetlight fixture and replace it with a new fixture that is provided by the City. The \$50 average includes labor, incidental materials, and vehicle expenses.

With about 5000 fixtures scheduled for replacement in the City, it is reasonable to estimate that a replacement contract would cost approximately \$250,000.

Depending on the contract, the replacement could be done in as little as 6-months or as much as 18-months depending on the request. For a single crew that replaces fixtures at an average rate of three to four fixtures per hour, full replacement could be done in an eight or nine-month schedule.

In addition to the light fixture replacement, it is common for the contractor to provide additional services such as surveying in light poles and entering in GIS data regarding each light as part of the contract. Additionally, one benefit of contracted work is that they can work entirely during the night to minimize impacts to traffic.

Option 2: City Staff to perform installation

The greatest benefit to utilizing city staff to perform the work would be the cost savings. Currently, the City's electrical group consists of a Master Electrician, a Journeyman Electrician (currently classified as an Apprentice) and then a Street's Maintenance I and a Seasonal Laborer. With a bit of reorganization, the City Staff can be properly setup to perform all of the light fixture replacements.

City staff also has the ability to perform any sort of GIS information gathering. With the replacement done by staff, the experience would be there in case warranty replacements, modifications, or maintenance were ever required.

With the other responsibilities of the city staff, it is anticipated that the streetlight replacement done would be mingled with other responsibilities and could take 18-24 months to complete.

Again, there would also be the need to reclassify the three current electrical staff members, in accordance with their license requirements, obtain a contractor's license, and to hire a fourth electrician to have two fully functioning electrical teams. If the City gets a contractor's license it allows for the City to create and sponsor an apprenticeship program with a number of benefits for both the City and the electricians.

Option 3: City Staff to perform installation and contract replacement of fixtures near overhead power

The major disadvantage to having staff do all of the work is the limited number of overhead high power electrical lines that run through the City. It requires special training and carries a certain amount of risk involved with replacing streetlight fixtures if they are close to those overhead power lines.

Staff would recommend a mixed approach, rather than the all-or-nothing approaches detailed in Options 1 and 2. With this option, city staff would perform all replacements except for those near overhead power lines. While a detailed list of which streets this includes has not been finalized, it is estimated that city staff would still replace approximately 90% of all of the lights (most of the lights near power lines are on Rocky Mountain Power poles and are not included in the project). This option greatly reduces risk to the City by allowing a contractor that is already properly trained to handle the replacement of those that may be in more dangerous situations.

With this option, there would still be a need for staff changes to be able to meet the demand for their services. There is currently a backlog of demand for electrical services in the City. Once the streetlight replacement is done, there will still be the work available to justify two electrical work teams.

Staff recommends Option 3 due to the cost savings over Option 1 and the reduced risk over Option 2.