



MEMORANDUM CITY OF TUALATIN

TO: Honorable Mayor and Members of the City Council

FROM: Sherilyn Lombos, City Manager

DATE: March 27, 2017

SUBJECT: Work Session for March 27, 2017

6:15 p.m. (30 min) – Light Emitting Diodes (LED) Street Light Conversion Project. In November 2016, staff presented information about the status of Tualatin’s street lights and discussed the options available for conversion to LED. Council directed staff to conduct an analysis on those options. Staff will present the analysis and requests Council direction on next steps.

6:45 p.m. (15 min) – Council Meeting Agenda Review, Communications & Roundtable. Council will review the agendas for the March 27th City Council meeting and brief the Council on issues of mutual interest.



STAFF REPORT

CITY OF TUALATIN

TO: Honorable Mayor and Members of the City Council

THROUGH: Sherilyn Lombos, City Manager

FROM: Kathy Kaatz, Program Coordinator
Jerry Postema

DATE: 03/27/2017

SUBJECT: **6:15 p.m. (30 min) – Light Emitting Diodes (LED) Street Light Conversion Project.** In November 2016, staff presented information about the status of Tualatin's street lights and discussed the options available for conversion to LED. Council directed staff to conduct an analysis on those options. Staff will present the analysis and requests Council direction on next steps.

ISSUE BEFORE THE COUNCIL:

Over 2,800 street lights exist in the City of Tualatin Rights-of-way. The City pays one monthly rate for 300 street lights that PGE owns and maintains and a different rate for the 2,500 street lights that the City of Tualatin owns and PGE maintains.

In order to convert the 2,500 City owned street lights from High Pressure Sodium (HPS) to Light Emitting Diode (LED), the City would have to choose either to maintain the lights without PGE's assistance, or sell the lights (and poles) to PGE.

City staff has been working with our consultant, DKS, who have conducted several analysis on street light conversions throughout the State of Oregon. A comprehensive analysis on Tualatin's existing street light conversion options, including both financial and non-financial considerations has been completed.

Policy considerations include:

- Stay the course, no immediate conversion of existing street lights to LED.
- Transfer ownership of street lights to PGE, PGE converts lights to LED.
- City retains ownership, acquires maintenance responsibility and converts to LED.

RECOMMENDATION:

After consideration of the three available options (stay the course, City ownership/maintenance, PGE ownership/maintenance), staff is recommending to stay the course with our existing City owned, PGE maintained lights and wait to see what changes are offered in both luminaries and rate structure.

While there is a financial benefit to the City acquiring maintenance responsibility for City owned lights and performing the conversion on our own, this option requires significant staff time/resources, responsibility of associated components (such as circuitry) that contain unknown location and condition concerns. Per conversations with PGE we understand they are working internally to provide a greater variety of LED options and are analyzing considerations for alternative fee schedules for LED lighting options for the future.

EXECUTIVE SUMMARY:

In 2013, PGE approached the City to convert a majority of the 300 PGE owned and maintained lights to LED and provided an option to purchase all the City owned lights and convert about 35% of the 2,500 lights from HPS to LED and charge a higher monthly rate. A study needed to be done to evaluate the costs and other implications associated with selling the lights to PGE before making a decision.

Subsequently, PGE converted a majority of the 300 PGE owned lights to LED and changed the fee schedule charged to the City for those lights. The City pays a higher monthly rate for PGE owned and maintained street lights within the Tualatin. If the City chooses to convert the City owned, PGE maintained street lights to LED the lights would have to be maintained by the City at its sole expense and all lights would have to be converted to LED over a 3 - 5 year period.

On November 4, 2016, an overview of the existing City of Tualatin street lights and the LED options for conversions of those lights was provided to Council. Staff gathered information from the meeting to review with the consultant, DKS, and would provide further options, considerations and cost analysis at a future Work Session.

Attachments: [PowerPoint](#)



Tualatin LED Conversion

Tualatin City Council

Work Session

March 27, 2017



City of Tualatin



Why We're planning Now

- Street lighting industry is moving to Light Emitting Diode (LED)
- High Pressure Sodium (HPS) slowly being phased out
- Costs for LED fixtures have decreased
- Cooperative purchasing opportunities exist
- Surrounding communities have either changed to LED or are monitoring the opportunities



Tualatin's Street Lights

- Approximately 2,800 street lights, most of which are High Pressure Sodium
 - About 2,500 are owned by the City and maintained by Portland General Electric (PGE)
- PGE converted over 200 of the 300 PGE owned street lights from HPS to LED
- The City replaced HPS with LED Fixtures in City owned parking lots at the Library, City Offices, Core Area Parking Lots and Sports Court at Tualatin Community Park



PGE Conversion

- PGE will convert a majority of our City owned, PGE maintained HPS street lights, on the condition that ownership transfers to PGE



Cobra Head Light



Town and Country
(Carriage)

LED Street Lighting

Environmental Benefits

- Reduced greenhouse gas emissions
- No bulb disposal
- Reduced hazardous materials
- Reduced light pollution
- Reduced “waste” light

Council Directives (11/14/2016)

- Cost Savings
- Quick Return on Investment
- Control



Los Angeles before and after LED conversion

Tualatin's Alternatives

Alternative Considerations				
Stay the Course	No LED Conversion	PGE continues to maintain	City will continue to own	
Transfer Street Lights to PGE	PGE will convert some to LED	PGE continues to maintain	PGE will own	City will rent the light from PGE
Take Over Maintenance	City is free to convert to LED	City must maintain	City will continue to own	Conversion must happen within 3 to 5 years



Financial Considerations

Option	Initial Financing and Conversion	Conversion Incentives	Ongoing Costs	Staff Time/Resources
Stay the Course	None	No incentives	No change	No change
Transfer Street Lights to PGE	PGE finances and implements LED conversions	City receives only PGE Energy Trust incentive	Higher cost	Similar time/resources
Take Over Maintenance	City finances and implements LED conversion	City pursues incentives (recycling, Energy Trust, tax credits)	Lower cost	More time/resources



Overall Results

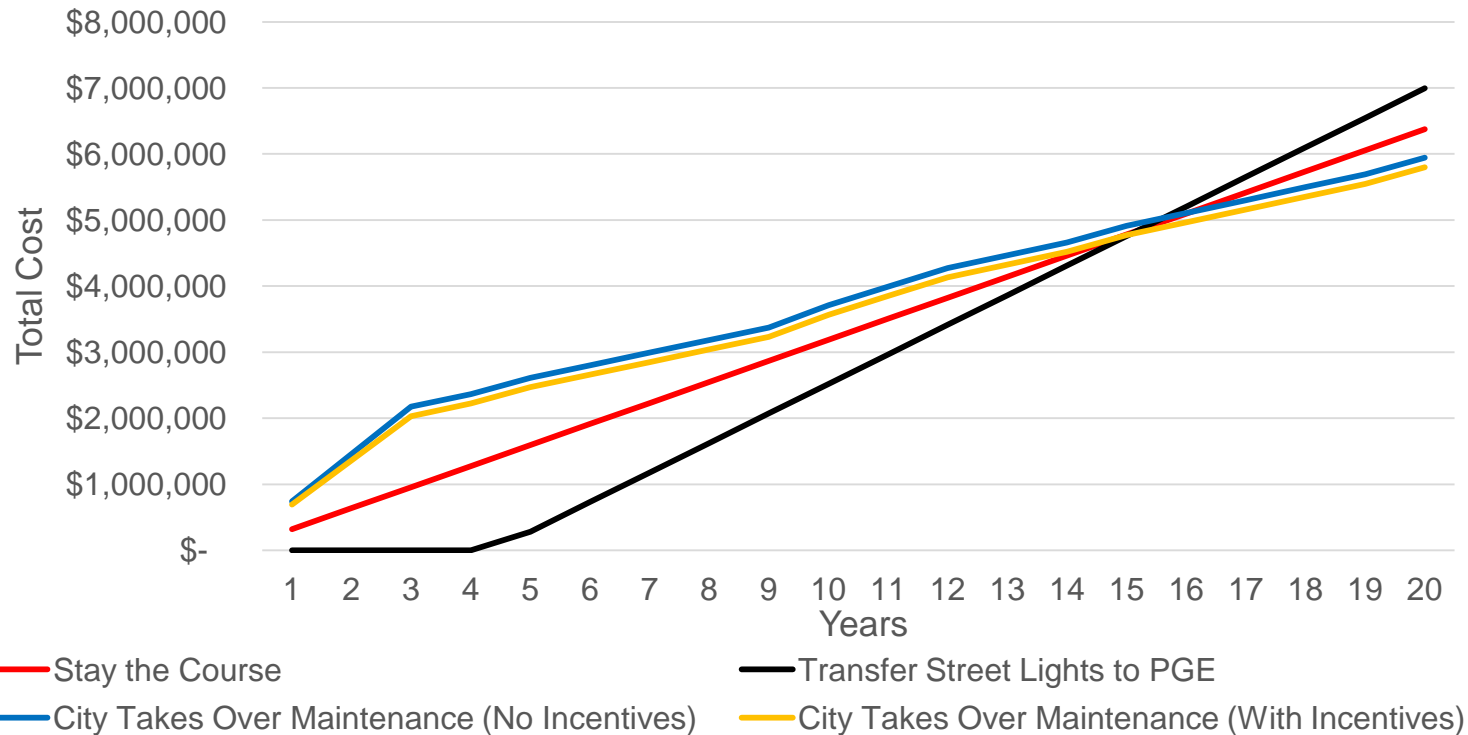
Option	20- Year		
	Average Annual Cost	Average Annual Cost Difference	Cost Difference
Stay the Course	\$319,000	-	-
Transfer Street Lights to PGE	\$349,000	+\$31,000	+\$620,000
City Takes Over Maintenance (<i>No Incentives</i>)	\$297,000	-\$22,000	-\$430,000
City Takes Over Maintenance (<i>With Incentives</i>)*	\$290,000	-\$29,000	-\$570,000

* Option assumes incentives, which are not guaranteed to be available in the future



Overall Results Continued

Cumulative Street Lighting Cost



Other Considerations

Option	Energy Savings	Risk	City's Control Over Lights	Lighting Options Available
Stay the Course	No energy savings	Minimal risk	Some control	No LED (unless meter added)
Transfer Street Lights to PGE	LED energy savings	PGE assumes risk	Minimal	Currently offers cool color LED only, limited styles/options, more available in future
Take Over Maintenance	LED energy savings	Highest risk	Full control	Cool or warm color LED's in a variety of styles/options as well as options for associated technologies (dimming, controls, communications)



Staff Recommendation

- Stay the Course and revisit in two years
 - Lack of significant cost savings
 - Long Return on Investment
 - Decrease Uncertainty
 - No initial capital investment required
- Other Considerations
 - PGE likely to offer more technologies, luminaire options in future
 - LED and Control technology is continuing to evolve
 - Prices for LED luminaires continue to decrease

Discussion

