



City of Tualatin

## CITY OF TUALATIN Staff Report

**TO:** Honorable Mayor and Members of the City Council  
**THROUGH:** Sherilyn Lombos, City Manager  
**FROM:** Nic Westendorf, Management Analyst II – Public Works  
Jeff Fuchs, Public Works Director  
**DATE:** December 9, 2019

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### **SUBJECT:**

Discuss ownership and maintenance options for street lights in the right of way.

### **RECOMMENDATION:**

Staff recommends converting existing Option B street lights to Option A or to the Hybrid Option.

### **EXECUTIVE SUMMARY:**

#### **Background**

On June 24<sup>th</sup>, 2019, staff presented to Council ownership options for street lights in Tualatin rights of way. Council requested additional information to help clarify the pros and cons of switching current Option B street lights to Option A.

This staff report provides a financial comparison based on a net present value analysis that estimates a lifetime cost in current year dollars. This staff report also provides pros and cons for each Option and addresses specific questions from the June 24<sup>th</sup> Council meeting.

PGE offers four ownership options for street lights in the public right of way. In each option, PGE would charge the City a monthly fee for power and for operations and maintenance.

**Option A** – PGE would own and maintain all streetlights and the poles.

**Option B** - The City would own streetlights and poles and PGE would maintain streetlights and the poles.

**Option C** – The City would own and maintain everything and the monthly charge would be for power only.

**Hybrid Option** – The City would own the poles; PGE would own the lights; PGE would maintain the system; and poles would be converted to PGE ownership when they reach the end of their useful life.

There are currently 2,907 streetlights in Tualatin. Of those, 2,595 are Option B, 302 are Option A, and 10 are Option C.

The City currently pays an annual charge of \$267,444 for the Option B poles, \$27,060 for the option A poles, and \$1,068 for the Option C poles.

The annual charge (billed monthly) includes electrical cost and costs to operate and maintain the street lights.

The City currently owns 630 laminated timber poles that have reached the end of their useful life.

Most of the existing lights in the City are high-pressure sodium vapor lights (HPSV), a technology that is no longer supported. The HPSV lights will be replaced with Light Emitting Diode (LED) lights as the HPSV lights fail or before, depending on the Option selected for street lights in Tualatin.

The table in Attachment A summarizes the costs and the pros and cons for each option.

### **Option A**

If the City were to convert the Option B streetlights to Option A, PGE would own and maintain all lights and poles in the right of way. PGE would also buy existing City owned poles that have remaining value (aluminum and fiberglass poles) for approximately \$1.6-million and they would replace 630 laminated timber poles that have reached the end of their useful life. The cost for replacing the laminated timber poles would be included in the monthly charge.

#### Summary of Option A Conversion

- PGE would pay the City approximately \$1.6 Million for city owned poles that have not reached their end of life yet.
- PGE would replace all existing high-pressure sodium vapor lights (HPSV) with more energy efficient Light Emitting Diode (LED) Lights at their expense and pass the cost along through our monthly bill.
- PGE would replace 630 laminated timber poles at their expense and pass the cost along through our monthly bill.
- The City would pay PGE \$44,726 each month to cover the cost of power and the cost to maintain and operate the street light system
- The lifetime cost of Option A would be approximately \$8.9 million assuming a twenty year life for new and upgrade streetlights and poles.
- Between Options A, B, and Hybrid, Option A has the highest lifetime cost (\$1.9 million more than the Hybrid Option over twenty years) and the highest monthly charge (\$536,640 annually).

#### **Pros and Cons of Option A**

Converting existing Option B streetlights and poles to Option A would save the City the upfront cost that would be needed to upgrade existing HPSV light to LED lights and the cost of replacing end-of-life laminated timber poles. This would mean the City wouldn't need to pay approximately \$2.8-million in upfront capital costs needed to upgrade the system. PGE would pay for the necessary upgrades and include the costs in the City's monthly charge over the life of the streetlights.

PGE would replace existing HPSV lights with LED lights in the first few years and they would upgrade the lights with new technology again in approximately ten years.

PGE would pay the City approximately \$1.6-million for existing aluminum and fiberglass poles that have remaining value. This payment could be used to pay the monthly charges for the first three years.

When lights and poles reach end of life in the future, PGE would pay to replace or upgrade them.

While converting to Option A would increase the overall street light cost, it would stabilize the cost of replacement through the monthly PGE bill rather than the City having to incur large capital outlays in years with a high number of pole or light failures. Recently, the City paid to replace 14 end of life lights and poles \$37,000, or 41% of our total budget for street light replacement, which was increased in 2018 from \$50,000 to \$90,000.

Option A would also reduce the amount of City staff time needed to manage a street light system.

### **Hybrid Option**

If the City were to convert the Option B streetlights to the Hybrid Option, PGE would own and maintain all lights and the City would own the poles in the right of way, until the poles reach the end of their useful life, and would then be converted to PGE ownership and replaced at PGE's expense.

During the first few years, PGE would replace 630 laminated timber poles that have reached the end of their useful life and convert those poles to PGE ownership (Option A). The cost for replacing the laminated timber poles would be included in monthly PGE charge.

#### Summary of Hybrid Option Conversion

- The City would retain ownership of existing city owned poles until those poles reach the end of their life, when they would be replaced by PGE and converted to PGE ownership (Option A).
- PGE would own all lights and they would replace all existing high-pressure sodium vapor lights (HPSV) with more energy efficient Light Emitting Diode (LED) Lights at their expense and pass the cost along through our monthly bill.
- PGE would replace 630 laminated timber poles at their expense, take over ownership of those poles, and pass the cost along to the City through our monthly bill.
- The City would pay PGE \$29,898 each month to cover the cost of power and the cost to maintain and operate the street light system
- The lifetime cost of Hybrid Option would be approximately \$6.9-million assuming a twenty year life for new and upgrade streetlights and poles.

### **Pros and Cons of Hybrid Option**

Converting existing Option B streetlights and poles to the Hybrid Option would save the City the upfront cost needed to upgrade existing HPSV lights to LED lights and the cost of replacing end-of-life laminated timber poles. This would mean the City would not need to pay approximately \$2.8-million in upfront capital costs needed to upgrade the system.

PGE would pay for the necessary upgrades and include the costs in the City's monthly charge over the life of the streetlights. The City does not have the capital to replace all end of life street lights in the current budget.

When lights reach end of life in the future, PGE would pay to replace or upgrade them.

When City-owned poles reach end of life, PGE would replace them and take over ownership of them, converting them to Option A at that time.

Converting to the hybrid option would cost more than staying with Option B, however, it would stabilize the cost of replacement through the monthly PGE bill rather than the City having to incur large capital outlays in years with a high number of pole or light failures.

The hybrid option would require more staff time to manage than Option A, but less than Option B.

## **Option B**

If the City were to continue with Option B streetlights, the City would continue to own the lights and poles and PGE would maintain the system and pass the costs along to the City in the monthly charge.

### Summary of Option B

- Option B is essentially what we have now, except we would need to replace existing HPSV street lights with new LED technology. The City would retain ownership of existing city owned lights and poles.
- The City would pay the upfront cost to replace 630 existing laminated wood poles and to replace existing HPSV lights with LED lights (approximately \$2.8 million) because the poles have reached the end of their useful life.
- Energy savings from converting high-pressure sodium vapor lights (HPSV) to more energy efficient Light Emitting Diode (LED) Lights would be reflected in the monthly bill.
- The City would pay PGE \$10,261 each month to cover the cost of power and the cost to maintain and operate the street light system. The cost is less than the other two options because the City would pay the capital replacements costs up front so those costs would not be included in the monthly charge.
- In approximately ten years, the City would likely need to upgrade LED lights to the newest technology. The Net Present Value analysis used to calculate lifetime costs assumes that all LED lights would be upgraded in ten years. In Option A and in the Hybrid Option, PGE would pay for the upgrade.
- The lifetime cost of Option B would be approximately \$7 million assuming a twenty-year life for new and upgraded streetlights and poles.

### **Pros and Cons of Option B**

Staying with Option B would require the City to pay approximately \$2.8 million in upfront capital costs needed to replace 630 end of life laminated timber poles and convert existing HPSV lights to LED lights.

When lights reach end of life in the future, the City would pay to replace or upgrade them.

When City-owned poles reach end of life, the City would replace them or they could be converted to Option A at that time.

While Option B would have the lowest monthly charge, the City would need to pay approximately \$2.8 million in upfront capital costs needed to bring the lights and poles up to current standards.

Option B would require the most staff time to manage. Under Option B, City staff would have to coordinate repairs and source and store parts.

The City has been able to keep up funding Option B to this point due to the young age of our street lights and the lack of appetite to upgrade technologies. As large quantities of street lights become outdated because HPSV lights are no longer supported and as poles reach end of life, the City will be responsible for replacing lights and poles.

### **Option C**

Converting to Option C would result in the City purchasing all PGE owned streetlights and being responsible for all maintenance and operation of the streetlights and the associated underground infrastructure (conduits, wiring, junction boxes, etc.). The City does not have the expertise, staff, or equipment necessary to maintain street lights. The City currently partners with PGE to provide these services. There is also a large risk in taking ownership of all the unknown underground utilities. For these reasons Option C was not considered and staff recommends against it.

### **COUNCIL QUESTIONS:**

#### ***What is impact on potential City lease fees for small cell facilities located on poles owned by PGE?***

Based on discussions with PGE, staff believes there will be no impact to the City's ability to collect lease fees for small cell facilities located on streetlight poles with the right of way. Based on discussions with PGE, it is likely that PGE would require the small cell providers to replace the existing light pole with a new light pole designed to support the small cell equipment. At that time, ownership of the pole could be reverted back to the City, allowing the City to charge whatever lease fee was in place for small cell facilities located on City owned poles.

In addition, the City would continue to collect attachment fees and other fees associated with small cell facilities located in the right of way regardless of pole ownership.

#### ***What are the impacts of selling city owned street lights?***

There are no negative impacts to the City's credit rating or borrowing capacity by selling the street lights. Street lights are a depreciating asset. Because we do not sell old street lights when upgrading or replacing with a new model, there is no value to the city when a streetlight or pole is replaced. It is also may be worth noting the City always has the option to purchase Option A streetlights back from PGE and revert back to Option B.

#### ***Do rates become less stable under Option A?***

Based on discussions with PGE, staff does not believe there is significant risk of increasing rates under Option A or under the hybrid option. PGE has the ability to increase rates under both Option A and B. Historically rate increases have been tied to energy costs, which would impact both ownership Options. The lifetime cost presented in this staff report was calculated based on an assumed 3% rate increase each year.

All rate increases must be approved by the Oregon Public Utility Commission (OPUC).

PGE has an 8% cost recovery built into Option A for management all those street lights making long term rates impacts stable and predictable.

***When would poles be replaced under Option A?***

The timeline for pole replacement under Option A would be dependent on PGEs ability to secure funding. The end of life wood poles would be converted first, likely within the first year, due to their failure risk. The remainder of the street lights would be converted in 2-3 years.

**OUTCOMES OF DECISION:**

Converting all streetlights in the right of way to Option A or the Hybrid Option would result in a modernized more stable streetlight system. In both Options, lights would be converted to LED within the first few years and end of life laminated timber poles would likely be replace in first year.

**ALTERNATIVES TO RECOMMENDATION:**

Council could choose to stay with the current ownership model (Option B), which would require a large upfront capital investment of \$2.8-million.

**FINANCIAL IMPLICATIONS:**

Exhibit A provides a summary of financial impact of Options A, B, and Hybrid.

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**ATTACHMENTS:**

- Exhibit A – Cost Comparison
- PowerPoint Presentation