City of Tualatin

Ownership and Maintenance Options for Street Lights in the Right of Way

City Council – Work Session

December 9, 2019

Overview

Recap

Summary of Ownership Options

Address Concerns/questions from June Meeting

Discussion

City of Tualatin

Today

2,907 streetlights in Tualatin

2,595 are Option B

302 are Option A

10 are Option C

We pay $296,000 annually ← includes power, operations, and maintenance

What's the Issue?

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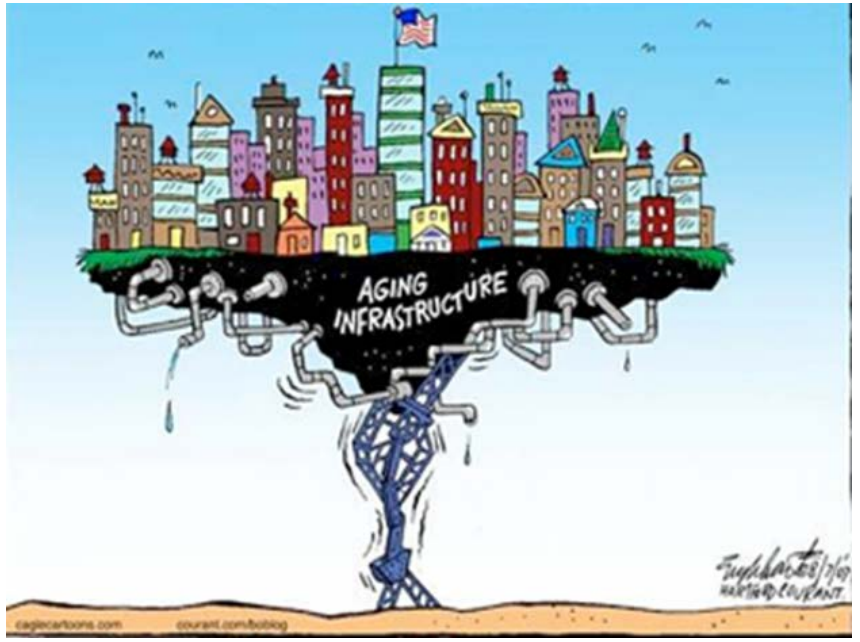
HPS (High Pressure Sodium Vapor) lights are no longer readily supported

Need to **upgrade all HPS street lights** to LED (light emitting diode)

We also need to **replace 630 laminated wood poles**

Cost to upgrade the poles - **$1.2 million**
Cost to upgrade the lights - **$1.6 million**

Need **$2.8 million** up front to maintain existing levels of service



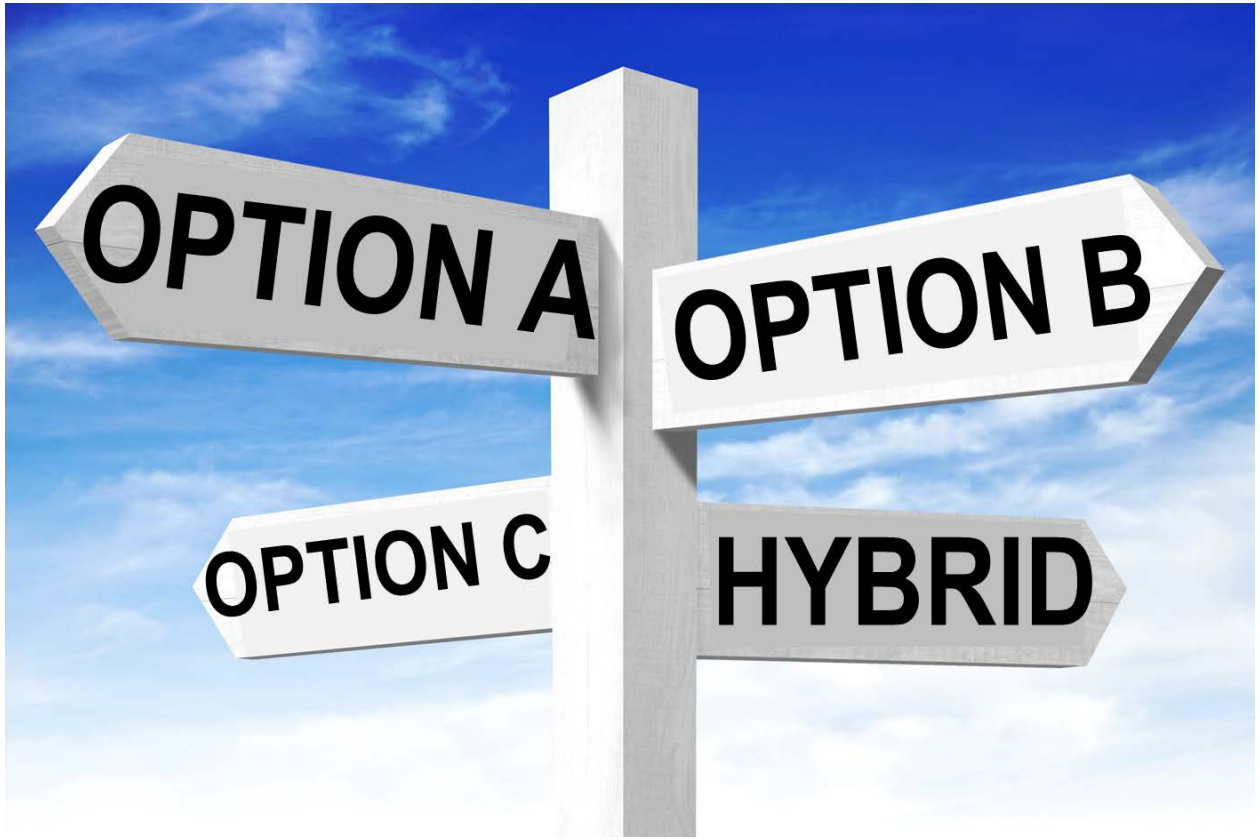
Available Options

Option A - PGE owns and maintains poles and lights

Option B - The City owns and PGE maintains poles and lights

Option C - City owns and maintains everything

Hybrid Option – City owns Poles and PGE owns lights



Approach

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We worked with PGE to determine upfront cost required for each option

We used a Net Present Value (NPV) Analysis to calculate the lifetime costs for each option

We identified pros and cons for each option

Net Present Value (NPV)

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Net Present Value (NPV) enables us to calculate the lifetime cost for each option in today's dollars - allows us to compare apples to apples

We defined lifetime for poles to be 20-years*
and lifetime for lights to be 10-years**

We assumed a 3% annual increase for payments to PGE

* Based on lifetime for streetlight poles used by Seattle and Portland

** Liftime for lights based on need to upgrade LED lights in 10-years to keep up with changing technology

Summary of Options

Option A

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 Light Emitting Diode (LED) Lights and pass the cost along in monthly bill

PGE would replace 630 laminated timber poles at their expense and pass the cost along in monthly bill

Monthly cost: $44,726 to cover the cost of power and the cost to maintain and operate the street light system

Lifetime cost of Option A : $8.9-million

Option B

Same ownership option we have now, except the City would need to replace HPSV lights with LED. The City would retain ownership

The City would pay the upfront cost to upgrade 630 laminated wood poles and replace HPSV lights with LED - $2.8-million

In approximately 10 years the City would likely need to upgrade LED lights to the newest technology

Monthly cost: $10,261 to cover the cost of power

Lifetime cost of Option A : $7-million

Hybrid Option

The City would retain ownership of existing city owned poles until those reach end of life, when they would be transferred to and replace by PGE

PGE would own all lights and replace HPSV with LED at their expense and pass the cost along in the monthly bill

PGE would replace 630 laminated timber poles at their expense, take ownership of those poles, and pass the cost along in the monthly bill

Monthly cost: $29,898 to cover the cost of power and the cost to maintain and operate the lighting system

Lifetime cost of Option A : $6-9-million

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Comparing Options

Option A

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PROS

- Upfront payment (approx. $1.6 million) from PGE for existing assets
- No payment to PGE for first three years
- No end of life costs for City
- No upfront capital costs for City
- Little to no staff time required
- No large capital investments required during lifetime of streetlights
- PGE would replace LED lights with new technology in future years

CONS

- More expensive lifetime cost
- Most expensive annual cost

Option B (Current Ownership Option)

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PROS

- Least expensive lifetime cost
- Least expensive annual cost
- City would realize power savings by switching to LED (included in annual cost)

CONS

- Large upfront capital cost to replace 630 poles and to convert HPS lights to LED (City pays $2.8 million)
- Large midlife capital cost to replace LED with new technology (City pays $1.6 million)
- Large future end of life cost for City (or convert to A at that time)
- Significant staff time required to manage program

Hybrid Option

PROS

- No end of life costs for City
- No upfront capital costs for City
- Less expensive lifetime cost compared to Option A

CONS

- Some staff time required to manage
- First year annual payment significantly more than current budget

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Comparing Cost

Cost Comparison

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Option	Description	Upfront Revenue	Initial Replacement Cost	10-yr. Replacement Cost	Monthly Payment to PGE	Annual Payment to PGE	Lifetime Cost (20-yrs.)
A	**PGE owns and maintains all lights and poles.**	$1,600,000	$ -	$ -	$(44,720)	$ (536,640)	**$ (8,816,308)**
B	**City owns all lights and poles and PGE maintains them.**	$ -	$ (2,800,000)	$ (1,600,000)	$(10,261)	$ (123,132)	**$ (6,836,976)**
Hybrid	**City continues to own poles that have not reached end of life and PGE owns the lights and maintains everything.**	$ -	$ -	$ -	$(29,898)	$ (358,776)	**$ (6,966,524)**

Questions from June 24, 2019 Meeting

Small Cell Revenue

What is impact on potential City lease fess for small cells on poles owned by PGE?

No impact on collecting lease fees

PGE assumes a new pole is required for small attachments

Poles can be transferred back to City before small cell attachment is constructed

City would continue to collect attachment fees

City could collect lease fees if pole is transferred back to City

Selling Assets

What are the impacts from selling lights and poles assets?

There is no negative impact to the City's credit rating or borrowing capacity by selling these assets.

Street lights are a depreciating asset – the value only decreases

We don't sell lights at end of life and no revenue is realized

We can always go back! PGE will sell assets back to the City at any time

Rate Stability

Do our rates become less stable under Option A?

PGE has ability to increase rates for Options A & B

Regulatory oversight - rate increases overseen by Oregon Public Utility Commission

Typical annual increases 3% for energy cost

Rates for life cycle cost typically don't increase

PGE has 8% cost recovery built into Option A making rates predictable

Pole and Light Replacement

When will poles and lights be replaced?

As soon as funding can be secured

Wood poles replaces first, within first year

Total completion about 2-3 years


Recommendation

Staff Recommendation

Staff recommends:

- Not staying with Option B
- We recommend converting streetlights to Option A or Hybrid Option

Discussion

Questions, comments, concerns?