

CLACKAMAS COUNTY BOARD OF COUNTY COMMISSIONERS

Study Session Worksheet

Presentation Date: January 22, 2013 **Approx Start Time:** 11:00 a.m. **Approx Length:** 30 min.

Presentation Title: Light Emitting Diode (LED) Street Lighting

Department: Department of Transportation and Development

Presenters: Dan Johnson and Wendi Coryell

Other Invitees: Portland General Electric (PGE) – Lori Swanson & Annette Mattson

WHAT ACTION ARE YOU REQUESTING FROM THE BOARD?

Portland General Electric (PGE) has recently taken the necessary steps to begin installing LED Street Lighting throughout the districts it serves. Prior to moving forward with the LED street lighting deployment schedule in Clackamas County, does the Board, acting as the Service District Board, have any questions they would like answered prior to installation?

EXECUTIVE SUMMARY:

Clackamas County Service District #5 (CCSD#5) – Street Lighting

CCSD #5 is the street lighting authority for unincorporated Clackamas County, the City of Happy Valley and the City of Damascus. See Attachment A. The district coordinates with PGE to design, maintain, and operate approximately 9,000 street lights within the district.

Light Emitting Diode (LED) Street Lighting

Over the last three years, PGE has been in discussions with the County regarding the conversion of existing qualified lighting from High Pressure Sodium (HPS), the current lighting form, to LED. While there are a number of benefits associated with this conversion, the primary purpose is energy savings. The following highlight specific elements for the Board's consideration:

- **Lighting Viable for Conversion:** Current LED conversion is limited to Cobra-Head fixtures in lower wattages. These types of fixtures comprise approximately 4,848 street lights or approximately 54% of the current lighting stock.
- **Estimated Cost Savings:** Currently PGE is estimating a 50-60% reduction in energy costs per streetlight converted to LED. Staff has provided a Fiscal Impact Form, see Attachment B, which is more conservative and assumes only a 30% reduction in energy costs.
- **Replacement Fixtures:** There are two styles of cobra head style fixtures to choose from to replace the current style. See Attachment C. After review of the viable design alternatives, staff is of the opinion that the LEOTEK alternative is most similar to existing lighting style currently used in the district.
- PGE would like to initiate conversion of qualified streetlights to LED throughout Clackamas County in the next three months with completion by 2015.

- Conversion Cost: There will be no cost to the district for conversion to LED.
- Sustainability: Unlike the current lighting fixtures, LED components are 100% recyclable.
- Option B Lighting: Though there are three street lighting service options provided by PGE, street lighting within CCSD#5 is provided under Options A & B. Ownership of the lighting is the primary difference under these two options. Option A lights are owned and maintained by PGE, while Option B lighting is owned by the district. The majority of lighting within CCSD#5 is Option A. Option B lighting is generally associated with large capital projects on major arterials, for example SE 172nd and Sunnyside Road. As a part of this LED conversion, PGE is proposing to purchase all District owned Option B lighting and converting these lights to Option A. While this adjustment would increase the annual operational costs, it would also result in a onetime acquisition payment from PGE and would release the district from future maintenance costs associated with the Option B lighting. See Fiscal Impact Form.

FINANCIAL IMPLICATIONS (current year and ongoing):

Staff has prepared the attached Financial Impact Form for the Boards consideration. In summary:

Capital Investment

• Conversion Costs to LED:	\$ 0
• PGE Acquisition of Option B Lighting:	<u>\$648,643</u>
• Net Capital Revenue:	\$648,643

Operation

• Estimated Energy Savings:	\$109,690
• Option B: Averted Average Maintenance Costs:	*2,000
• Increased Operation Costs: Option B to Option A:	<u>\$ (23,430)</u>
• Net Annual Estimated Operating Savings:	\$ 82,620

*This does not include end of life costs.

District staff will continue to coordinate with the Board to assess how these savings will be allocated to the district rate payers.

LEGAL/POLICY REQUIREMENTS:

N/A

PUBLIC/GOVERNMENTAL PARTICIPATION:

The district continues to coordinate closely with local citizenry focused on the provision of LED lighting alternatives. PGE and local news sources have provided a number of articles, and informational flyers/outreach regarding the possible provision of LED street lighting alternatives. The district has received a number of positive inquiries in response to this outreach.

City of Happy Valley: The district continues to coordinate with the City of Happy Valley and the provision of LED street lighting alternatives. Based on discussions to date, the City is very interested in pursuing conversion of current street lighting to LED.

City of Damascus: The City is actively assessing LED options, including the development of the Anderson Road Pilot Project. Anderson Road Pilot Project was designed and constructed by the City of Damascus to model a number of alternative road design components, including the provision of LED street lighting.

OPTIONS:

- 1) Direct District staff to continue to work with PGE for the installation of LED street lighting and include any recommendations by the District Board.
- 2) Direct District staff to provide additional information requested by the District Board.
- 3) Direct District staff to take no action to install LED street lighting at this time.

RECOMMENDATION:

It is respectfully recommended the District Board direct staff to continue to work with PGE for the installation of LED street lighting and include any recommendations by the District Board.

ATTACHMENTS:

- Attachment A: District Map
- Attachment B: Fiscal Impact Form
- Attachment C: LED Design Alternatives

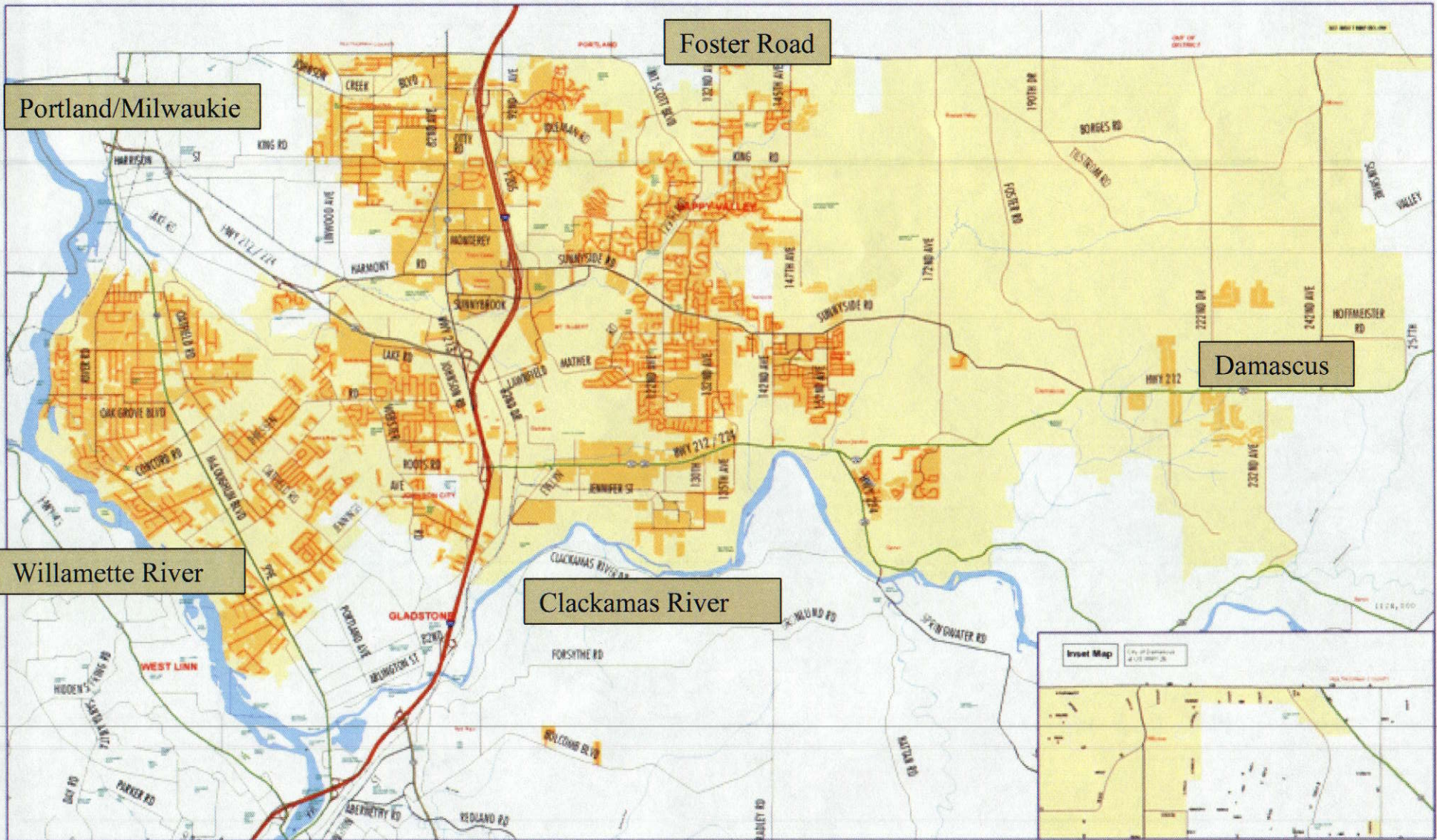
SUBMITTED BY:

Division Director/Head Approval _____ 

Department Director/Head Approval M. D. Carfield 1/16/13

County Administrator Approval _____

For information on this issue or copies of attachments,
please contact Wendi Coryell @ 503-742-4657.



Clackamas County Service District #5
STREET LIGHTING

- SD #5 Boundary
- Lighted Parcels
- Lighted Streets



1:26,000
1 inch equals 0.41 miles



Fiscal Impact Form

Attachment B

RESOURCES:

Is this item in your current work plan and budget?

- YES
- NO

Costs:							
Item	Hours	Start-up Capital	Other Start-up	Annual Operations	Annual Capital	TOTAL	
LED Conversion	0	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
Option B to Option A Transfer Operating Costs.		\$0.00	\$0.00	\$23,430.00	\$0.00	\$23,430.00	
Total Start-up Costs		0	0	0	0		
Ongoing Annual Costs		0	0	\$23,430.00	0		
Benefits/Savings:							
Item	Hours	Start-up Capital	Other Start-up	Annual Operations	Annual Capital	TOTAL	
LED Conversion Estimated Savings	0	\$0.00	\$0.00	\$109,689.60	\$0.00	\$109,689.60	
PGE Payment to District to Purchase Option B District Owned lights	0	\$648,643	\$0.00	\$0.00	\$0.00	\$648,643	
Total Start-up Benefit/Savings		\$648,643	0	\$109,689.60	0		
Ongoing Annual Benefit/Savings			0	\$82,620	0		

