

June 20, 2016

Public Utility Commission of Oregon Attn: Filing Center 201 High Street, S.E. P.O. Box 1088 Salem, OR 97308-1088

RE: Advice No. 16-09, Streetlight Housekeeping and New LED Option

Portland General Electric (PGE) submits this filing pursuant to Oregon Revised Statutes 757.205 and 757.210, and Oregon Administrative Rules 860-022-0025, for filing proposed tariff sheets associated with Tariff P.U.C. No. 18, with a requested effective date of <u>July 20, 2016</u>:

Ninth Revision of Sheet No. 15-4 Sixth Revision of Sheet No. 15-5 Fourth Revision of Sheet No. 15-6 Ninth Revision of Sheet No. 91-9 Eighth Revision of Sheet No. 91-10 Eighth Revision of Sheet No. 91-11 Eighth Revision of Sheet No. 91-12 Eighth Revision of Sheet No. 91-15 Fourth Revision of Sheet No. 95-8 Fourth Revision of Sheet No. 491-9 Fourth Revision of Sheet No. 491-10 Fourth Revision of Sheet No. 491-11 Fourth Revision of Sheet No. 491-14 Fifth Revision of Sheet No. 495-8 Eighth Revision of Sheet No. 515-3 Sixth Revision of Sheet No. 515-4 Tenth Revision of Sheet No. 591-8 Ninth Revision of Sheet No. 591-9 Ninth Revision of Sheet No. 591-10 Ninth Revision of Sheet No. 591-13 Sixth Revision of Sheet No. 595-6

This filing makes a number of housekeeping changes to PGE's street and area lighting rate schedules for the purpose of correcting pole descriptions and equipment availability. These changes are reflected on Schedule 15 and Schedule 91. Schedule 491, Schedule 515, and Schedule 591 are the Direct Access equivalents.

Additionally, this filing proposes to add a decorative Light-Emitting Diode (LED) fixture

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option to Schedule 15 and Schedule 95, as well as the Direct Access equivalents.

To satisfy requirements under OAR 860-022-0025(2), PGE provides the following information:

This filing proposes changes to existing schedules for the purpose of correcting references and minor updates. Because it is unknown how many customers will choose the new LED option, any resulting revenue change is also unknown.

OAR 860-022-0030(1) does not apply as this filing does not propose to increase prices. The proposed rates are for a new LED option that is not currently available in the tariff.

Should you have any questions or comments regarding this filing, please contact Colin Wright at (503) 464-8011.

Please direct all formal correspondence and requests to the following email address pge.opuc.filings@pgn.com

Sincerely,

Karla Wenzel

Manager, Pricing and Tariffs

Kada Messel

Enclosures

MONTHLY RATE (Continued) Rates for LED Area Lighting

Type of Light	<u>Watts</u>	Lumens	Monthly kWh	Monthly Rate <u>Per Luminaire</u> ⁽¹⁾	
Acorn	00	F 400	0.4	D 4400	
LED	60	5,488	21	\$ 14.02	
114B00 EB	70 70	4,332	24	16.13	/5.5 5
HADCO LED	70	5,120	24	19.01	(N)
Cobrahead Equivalent	07	0.500	40	. 0.1	
LED	37	2,530	13	4.61	
	50	3,162	17	5.03	
	52	3,757	18	5.47	
	67	5,050	23	6.24	
	106	7,444	36	8.30	
	134	14,200	46	11.86	
	156	16,300	53	13.57	
	176	18,300	60	14.75	
	201	21,400	69	16.17	
Westbrooke LED (Non-Flare)	36	3,369	12	15.26	
	53	5,079	18	17.86	
	69	6,661	24	17.91	
	85	8,153	29	18.66	
	136	12,687	46	23.47	
	206	18,159	70	25.96	
Westbrooke LED (Flare)	36	3,369	12	17.10	
` ,	53	5,079	18	19.96	
	69	6,661	24	20.60	
	85	8,153	29	20.08	
	136	12,687	46	24.55	
	206	18,159	70	27.11	
CREE XSP LED	25	2,529	9	3.45	
	42	3,819	14	4.07	
	48	4,373	16	4.72	
	56	5,863	19	5.51	
	91	8,747	31	6.79	
Post-Top, American Revolution					
LED	45	3,395	15	7.40	
	72	4,409	25	8.47	

Advice No. 16-09 Issued June 20, 2016 James F. Lobdell, Senior Vice President

Effective for service on and after July 20, 2016

MONTHLY RATE (Continued) <u>Type of Pole</u> <u>Rates for Area Light Poles</u> ⁽¹⁾	Pole Length (feet)	Monthly Rate Per Pole	
Wood, Standard	35 or less 40 to 55	\$ 5.44 7.11	
Wood, Painted for Underground	35 or less	5.44 ⁽²⁾	
Wood, Curved Laminated	30 or less	6.74 ⁽²⁾	
Aluminum, Regular	16 25 30 35	6.49 10.77 11.63 13.91	
Aluminum, Fluted Ornamental	14	9.50	
Aluminum Davit	25 30 35 40	10.74 10.69 11.69 15.86	
Aluminum Double Davit	30	15.78	
Aluminum, Fluted Ornamental	16	9.70	(C)
Aluminum, HADCO, Smooth Techtra Ornamental	18	18.68	(C)
Aluminum, HADCO, Fluted Westbrooke	18	18.73	
Aluminum, HADCO, Smooth Westbrooke	18	19.85	(C)
Concrete Ameron Post-Top	25	18.64	

⁽¹⁾ See Schedule 100 for applicable adjustments.

⁽²⁾ No new service.

MONTHLY RATE (Continued) <u>Type of Pole</u> <u>Rates for Area Light Poles</u> ⁽¹⁾	Pole Length (feet)	Monthly Rate Per Pole	
Fiberglass Fluted Ornamental; Black	14	\$ 11.48	
Fiberglass, Regular			
Black	20	4.78	
Gray or Bronze	30	8.12	
Black, Gray, or Bronze	35	6.99	(C)
Fiberglass, Anchor Base, Gray or Black	35	12.76	(C)
Fiberglass, Direct Bury with Shroud	18	7.70	

INSTALLATION CHARGE

See Schedule 300 regarding the installation of conduit on wood poles.

ADJUSTMENTS

Service under this schedule is subject to adjustments approved by the Commission. Adjustments include those summarized in Schedule 100.

⁽¹⁾ No pole charge for luminaires placed on existing Company-owned distribution poles.

RATES FOR STANDARD LIGHTING

High-Pressure Sodium (HPS) Only - Service Rates

		Nominal	Monthly	Monthly	/ Rates
Type of Light	<u>Watts</u>	<u>Lumens</u>	<u>kWh</u>	Option A	Option B
Cobrahead Power Doors **	70	6,300	30	*	\$ 1.32
	100	9,500	43	*	1.31
	150	16,000	62	*	1.32
	200	22,000	79	*	1.36
	250	29,000	102	*	1.33
	400	50,000	163	*	1.37
Cobrahead	70	6,300	30	\$ 4.63	1.55
	100	9,500	43	4.61	1.54
	150	16,000	62	4.71	1.56
	200	22,000	79	5.32	1.60
	250	29,000	102	5.26	1.59
	400	50,000	163	5.43	1.61
Flood	250	29,000	102	5.69	1.65
	400	50,000	163	5.68	1.64
Early American Post-Top	100	9,500	43	5.01	1.59
Shoebox (bronze color, flat	70	6,300	30	6.05	1.75
lens, or drop lens, multi-volt)	100	9,500	43	5.75	1.70
	150	16,000	62	5.95	1.73

^{*} Not offered.

RATES FOR STANDARD POLES

	Monthly Rates					
Type of Pole	Pole Length (feet)	Option A	Option B			
Fiberglass, Black, Bronze, or Gray	20	\$ 4.78	\$ 0.15	(C)		
Fiberglass, Black or Bronze	30	7.53	0.23	(C)		
Fiberglass, Gray	30	8.12	0.25			
Fiberglass, Smooth, Black or Bronze	18	4.77	0.15	(C) (M)		
Fiberglass, Regular						
Black, Bronze, or Gray	18	4.26	0.13	(C) (M)		
	35	6.99	0.21	(M)		

^{**} Service is only available to Customers with total power door luminaires in excess of 2,500.

RATES FOR STANDARD POLES (Continued)

	,	Monthly Rates				
Type of Pole	Pole Length (feet)	Option A	Option B			
Wood, Standard	30 to 35	\$ 5.44	\$ 0.17	(T) (M)		
Wood, Standard	40 to 55	7.11	0.22	(M)		

RATES FOR CUSTOM LIGHTING

Type of Light	<u>Watts</u>	Nominal <u>Lumens</u>	Monthly <u>kWh</u>	Monthly Option A	/ Rates Option B
Special Acorn-Types					
HPS	100	9,500	43	\$ 8.47	\$ 2.03
HADCO Victorian, HPS	150	16,000	62	8.50	2.04
	200	22,000	79	9.25	2.15
	250	29,000	102	9.25	2.15
HADCO Capitol Acorn, HPS	100	9,500	43	11.72	2.47
	150	16,000	62	11.04	2.39
	200	22,000	79	12.53	2.59
	250	29,000	102	11.04	2.39
Special Architectural Types					
HADCO Independence, HPS	100	9,500	43	9.26	2.12
	150	16,000	62	8.28	1.99
HADCO Techtra, HPS	100	9,500	43	17.86	3.29
	150	16,000	62	17.26	3.21
	250	29,000	102	17.19	3.21
HADCO Westbrooke, HPS	70	6,300	30	11.26	2.41
	100	9,500	43	10.69	2.32
	150	16,000	62	10.69	2.32
	200	22,000	79	10.89	2.36
	250	29,000	102	11.06	2.38

RATES FOR CUSTOM LIGHTING (Continued)

		Nominal	Monthly	Monthly	y Rates
Type of Light	<u>Watts</u>	<u>Lumens</u>	<u>kWh</u>	Option A	Option B
Special Types					
Flood, Metal Halide	350	30,000	139	5.94	1.92
Flood, HPS	750	105,000	285	9.00	2.85
Option C Only **					
Ornamental Acorn Twin	85	9,600	64	*	*
Ornamental Acorn	55	2,800	21	*	*
Ornamental Acorn Twin	55	5,600	42	*	*
Composite, Twin	140	6,815	54	*	*
	175	9,815	66	*	*

^{*} Not offered.

RATES FOR CUSTOM POLES

	Monthly Rates				
Type of Pole	Pole Length (feet)	Option A	Option B		
Aluminum, Regular	25	\$ 10.77	\$ 0.33	(T)	
	30	11.63	0.36		
	35	13.91	0.43		
Aluminum Davit	25	10.74	0.33		
	30	10.69	0.33		
	35	11.69	0.36		
	40	15.86	0.49		
Aluminum Double Davit	30	15.78	0.48		

^{**} Rates are based on current kWh energy charges.

RATES FOR CUSTOM POLES (Continued)

	Monthly Rates				
Type of Pole	Pole Length (feet)	Option A	Option B		
Aluminum, Fluted Ornamental	14	\$ 9.50	\$ 0.29	(C)	
Aluminum, HADCO, Smooth Techtra Ornamental	18	18.68	0.57		
Aluminum, Fluted Ornamental	16	9.70	0.30	(C)	
Aluminum, HADCO, Fluted Westbrooke	18	18.73	0.57		
Aluminum, HADCO, Smooth Westbrooke	18	19.85	0.61	(C)	
Fiberglass, Fluted Ornamental Black	14	11.48	0.35		
Fiberglass, Anchor Base, Gray or Black	35	12.76	0.39	(C)	

SERVICE RATE FOR OBSOLETE LIGHTING

The following equipment is not available for new installations under Options A and B. Tothe extent feasible, maintenance will be provided. Obsolete Lighting will be replaced with the Customer's choice of Standard or Custom equipment. The Customer will then be billed at the appropriate Standard or Custom rate. If an existing Mercury Vapor luminaire requires the replacement of a ballast, the unit will be replaced with a corresponding HPS unit.

	Nominal	Monthly	Monthly	y Rates	
<u>Watts</u>	<u>Lumens</u>	<u>kWh</u>	Option A	Option B	
150	10,000	60	\$ 5.20	\$ 1.85	(T) (M)
100	4,000	39	*	*	
175	7,000	66	4.56	1.49	(T)
250	10,000	94	*	*	
400	21,000	147	5.34	1.62	
1,000	55,000	374	5.74	1.92	
150	16,000	62	8.84	2.08	(M)
250	29,000	102	8.24	1.99	(M)
70	6,300	30	5.69	*	
175	7,000	66	5.64	1.59	
	150 100 175 250 400 1,000 150 250	Watts Lumens 150 10,000 100 4,000 175 7,000 250 10,000 400 21,000 1,000 55,000 150 16,000 250 29,000 70 6,300	Watts Lumens kWh 150 10,000 60 100 4,000 39 175 7,000 66 250 10,000 94 400 21,000 147 1,000 55,000 374 150 16,000 62 250 29,000 102	Watts Lumens kWh Option A 150 10,000 60 \$ 5.20 100 4,000 39 * 175 7,000 66 4.56 250 10,000 94 * 400 21,000 147 5.34 1,000 55,000 374 5.74 150 16,000 62 8.84 250 29,000 102 8.24 70 6,300 30 5.69	Watts Lumens kWh Option A Option B 150 10,000 60 \$ 5.20 \$ 1.85 100 4,000 39 * * 175 7,000 66 4.56 1.49 250 10,000 94 * * 400 21,000 147 5.34 1.62 1,000 55,000 374 5.74 1.92 150 16,000 62 8.84 2.08 250 29,000 102 8.24 1.99 70 6,300 30 5.69 *

^{*} Not offered.

RATES FOR OBSOLETE LIGHTING POLES

	Monthly Rates			
Type of Pole	Poles Length (feet)	Option A	Option B	
Aluminum Post	30	\$ 6.49	*	
Aluminum, Painted Ornamental	35	*	\$ 0.98	(T) (M)
Aluminum, Regular	16	6.49	0.20	(T) (M)
Bronze Alloy GardCo	12	*	0.18	(T)
Concrete, Ornamental	35 or less	10.77	0.33	
Fiberglass, Direct Bury with Shroud	18	7.70	0.24	(M)
Steel, Painted Regular **	25	10.77	0.33	
Steel, Painted Regular **	30	11.63	0.36	
Steel, Unpainted 6-foot Mast Arm **	30	*	0.33	
Steel, Unpainted 6-foot Davit Arm **	30	*	0.33	
Steel, Unpainted 8-foot Mast Arm **	35	*	0.36	
Steel, Unpainted 8-foot Davit Arm **	35	*	0.36	
Wood, Laminated without Mast Arm	20	4.78	0.15	
Wood, Laminated Street Light Only	20	4.78	*	e e
Wood, Curved Laminated	30	6.74	0.23	
Wood, Painted Underground	35	5.44	0.17	

^{*} Not offered.

SPECIALTY SERVICES OFFERED

Upon Customer request and subject to the Company's agreement, the Company will provide the following streetlighting services based on the Company's total costs including Company indirect charges:

- . Trimming of trees adjacent to streetlight equipment and circuits.
- Arterial patrols to ensure correct operation of streetlights.
- . Painting or staining of wood and steel streetlight poles.

ADJUSTMENTS

Service under this schedule is subject to adjustments approved by the Commission. Adjustments include those summarized in Schedule 100.

^{**} Maintenance does not include replacement of rusted steel poles.

RATES FOR DECORATIVE LIGHTING

Light-Emitting Diode (LED) Only – Option A Service Rates

<u>Type of Light</u> Acorn LED	<u>Watts</u> 60	Nominal <u>Lumens</u> 5,488	Monthly <u>kWh</u> 21	Monthly Rate <u>Option A</u> \$ 11.21	
,	70	4,332	24	13.00	
HADCO Acorn LED	70	5,120	24	16.87	(N)
Westbrooke (Non-Flared)	36	3,369	12	14.40	
LED	53	5,079	18	15.37	
	69	6,661	24	14.77	
	85	8,153	29	14.99	
	136	12,687	46	18.00	
	206	18,159	70	17.93	
Westbrooke (Flared)	36	3,369	12	16.24	
LED	53	5,079	18	17.47	
	69	6,661	24	17.47	
	85	8,153	29	16.42	
	136	12,687	46	19.08	
	206	18,159	70	19.08	
Post-Top, American Revolution	45	3,395	15	6.23	
LED	72	4,409	25	6.23	

SPECIALTY SERVICES OFFERED

Upon Customer request and subject to the Company's agreement, the Company will provide the following streetlighting services based on the Company's total costs including Company indirect charges:

- . Trimming of trees adjacent to streetlight equipment and circuits.
- . Arterial patrols to ensure correct operation of streetlights.
- Painting or staining of wood and steel streetlight poles.

ADJUSTMENTS

Service under this schedule is subject to adjustments approved by the Commission. Adjustments include those summarized in Schedule 100.

RATES FOR STANDARD POLES

		Monthly	y Rates	
Type of Pole	Pole Length (feet)	Option A	Option B	
Fiberglass, Black, Bronze or Gray	20	\$ 4.78	\$ 0.15	(C)
Fiberglass, Black or Bronze	30	7.53	0.23	(C)
Fiberglass, Gray	30	8.12	0.25	
Fiberglass, Smooth, Black or Bronze	18	4.77	0.15	(C) (M)
Fiberglass, Regular	18	4.26	0.13	
Black, Bronze, or Gray	35	6.99	0.21	(C) (M)
Wood, Standard	30 to 35	5.44	0.17	
Wood, Standard	40 to 55	7.11	0.22	

RATES FOR CUSTOM LIGHTING

TOTAL CONTRACTOR LIGHT		Nominal	Monthly	N	Monthly Rat	es
Type of Light	<u>Watts</u>	<u>Lumens</u>	<u>kWh</u> ´	Option A	Option B	Option C
Special Acorn-Types						
HPS	100	9,500	43	\$ 10.68	\$ 4.24	\$ 2.21
HADCO Victorian, HPS	150	16,000	62	11.68	5.22	3.18
	200	22,000	79	13.30	6.20	4.05
	250	29,000	102	14.48	7.38	5.23
HADCO Capitol Acorn, HPS	100	9,500	43	13.93	4.68	2.21
	150	16,000	62	14.22	5.57	3.18
	200	22,000	79	16.58	6.64	4.05
	250	29,000	102	16.27	7.62	5.23
Special Architectural Types						
HADCO Independence, HPS	100	9,500	43	11.47	4.33	2.21
	150	16,000	62	11.46	5.17	3.18
HADCO Techtra, HPS	100	9,500	43	20.07	5.50	2.21
	150	16,000	62	20.44	6.39	3.18
	250	29,000	102	22.42	8.44	5.23
HADCO Westbrooke, HPS	70	6,300	30	12.80	3.95	*
	100	9,500	43	12.90	4.53	2.21

Not offered.

Advice No. 16-09 Issued June 20, 2016 James F. Lobdell, Senior Vice President

Effective for service on and after July 20, 2016

RATES FOR CUSTOM LIGHTING (Continued)

Type of Light	<u>Watts</u>	Nominal <u>Lumens</u>	Monthly <u>kWh</u>	Option <u>A</u>	Monthly Rate Option B	es <u>Option C</u>	
HADCO Westbrooke, HPS	150	16,000	62	\$ 13.87	\$ 5.50	\$ 3.18	(T) (M)
	200	22,000	79	14.94	6.41	4.05	-
	250	29,000	102	16.29	7.61	5.23	(M)
Special Types							
Flood, Metal Halide	350	30,000	139	13.07	9.05	7.13	
Flood, HPS	750	105,000	285	23.62	17.47	14.62	
Option C Only **							
Ornamental Acorn Twin	85	9,600	64	*	*	3.28	
Ornamental Acorn	55	2,800	21	*	*	1.08	
Ornamental Acorn Twin	55	5,600	42	*	*	2.15	
Composite, Twin	140	6,815	54	*	*	2.77	
	175	9,815	66	*	*	3.39	

RATES FOR CUSTOM POLES

	Monthly Rates				
Type of Pole	Pole Length	Option A	Option B		
	<u>(feet)</u>				
Aluminum, Regular	25	\$ 10.77	\$ 0.33	(T)	
	30	11.63	0.36		
	35	13.91	0.43		
Aluminum Davit	25	10.74	0.33		
	30	10.69	0.33		
	35	11.69	0.36		
	40	15.86	0.49		
Aluminum Double Davit	30	15.78	0.48		
Aluminum, Fluted Ornamental	14	9.50	0.29	(C)	

Not offered.

^{**} Rates are based on current kWh energy charges.

RATES FOR CUSTOM POLES (Continued)

		Monthly	/ Rates	
Type of Pole	Pole Length	Option A	Option B	
	<u>(feet)</u>			
Aluminum, HADCO, Smooth Techtra Ornamental	18	\$ 18.68	\$ 0.57	(C)
Aluminum, Fluted Ornamental	16	9.70	0.30	(C)
Aluminum, HADCO, Fluted Westbrooke	18	18.73	0.57	
Aluminum, HADCO, Smooth Westbrooke	18	19.85	0.61	(C)
Fiberglass, Fluted Ornamental Black	14	11.48	0.35	
Fiberglass, Anchor Base, Gray or Black	35	12.76	0.39	(C)

SERVICE RATE FOR OBSOLETE LIGHTING

The following equipment is <u>not</u> available for new installations under Options A and B. Tothe extent feasible, maintenance will be provided. Obsolete Lighting will be replaced with the Customer's choice of Standard or Custom equipment. The Customer will then be billed at the appropriate Standard or Custom rate. If an existing mercury vapor luminaire requires the replacement of a ballast, the unit will be replaced with a corresponding HPS unit.

Type of Light	Watts	Nominal <u>Lumens</u>	Monthly <u>kWh</u>	N Option	Nonthly Rate Option B	es Option C	
				A			
Cobrahead, Metal Halide	150	10,000	60	\$ 8.28	\$ 4.93	\$ 3.08	(T) (M)
Cobrahead, Mercury Vapor	100	4,000	39	*	*	2.00	(T)
	175	7,000	66	7.95	4.88	3.39	(T)
	250	10,000	94	*	*	4.82	
	400	21,000	147	12.88	9.16	7.54	
	1,000	55,000	374	24.92	21.10	19.18	
Holophane Mongoose,	150	16,000	62	12.02	5.26	3.18	(M)
HPS	250	29,000	102	13.47	7.22	*	(M)

^{*} Not offered.

RATES FOR OBSOLETE LIGHTING POLES

Type of Pole	Poles Length (feet)	Option A	Option B	
Aluminum Post	30	\$ 6.49	*	
Aluminum, Painted Ornamental	35	*	\$ 0.98	(T) (M)
Aluminum, Regular	16	6.49	0.20	(T) (M)
Bronze Alloy GardCo	12	*	0.18	(T)
Concrete, Ornamental	35 or less	10.77	0.33	
Fiberglass, Direct Bury with Shroud	18	7.70	0.24	(M)
Steel, Painted Regular **	25	10.77	0.33	
Steel, Painted Regular **	30	11.63	0.36	
Steel, Unpainted 6-foot Mast Arm **	30	*	0.33	
Steel, Unpainted 6-foot Davit Arm **	30	*	0.33	
Steel, Unpainted 8-foot Mast Arm **	35	*	0.36	
Steel, Unpainted 8-foot Davit Arm **	35	*	0.36	
Wood, Laminated without Mast Arm	20	4.78	0.15	
Wood, Laminated Street Light Only	20	4.78	*	
Wood, Curved Laminated	30	6.74	0.23	
Wood, Painted Underground	35	5.44	0.17	

^{*} Not offered.

SERVICE RATES FOR ALTERNATIVE LIGHTING

The purpose of this series of luminaires is to provide lighting utilizing the latest in technological advances in lighting equipment. The Company does not maintain an inventory of this equipment, and so delays with maintenance are likely. This equipment is more subject to obsolescence since it is experimental and yet to be determined reliable or cost effective. The Company will order and replace the equipment subject to availability.

Type of Light	<u>Watts</u>	Nominal <u>Lumens</u>	Monthly <u>kWh</u>	Option <u>A</u>	Monthly Rate Option B	es <u>Option C</u>
Special Architectural Types Ir Induction Lamp Systems	ncluding	Philips QL				
HADCO Victorian, QL	85	6,000	32	*	\$ 2.37	\$ 1.64
	165	12,000	60	*	3.95	3.08
	165	12,000	60	\$ 21.68	4.23	3.08

Advice No. 16-09 Issued June 20, 2016 James F. Lobdell, Senior Vice President

^{**} Maintenance does not include replacement of rusted steel poles.

RATES FOR DECORATIVE LIGHTING

Light-Emitting Diode (LED) Only – Option A Service Rates

Type of Light	<u>Watts</u>	Nominal Lumens	Monthly <u>kWh</u>	Monthly Rate Option A	
Acorn LED	60	5,488	21	\$ 12.29	
	70	4,332	24	14.23	
HADCO Acorn LED	70	5,120	24	18.10	(N)
Westbrooke (Non-Flared)	36	3,369	12	15.02	
LED	53	5,079	18	16.29	
	69	6,661	24	16.00	
	85	8,153	29	16.48	
	136	12,687	46	20.36	
	206	18,159	70	21.52	
Westbrooke (Flared)	36	3,369	12	16.86	
LED	53	5,079	18	18.39	
	69	6,661	24	18.70	
	85	8,153	29	17.91	
	136	12,687	46	21.44	
	206	18,159	70	22.67	
Post-Top, American Revolution	45	3,395	15	7.00	
LED	72	4,409	25	7.51	

SPECIALTY SERVICES OFFERED

Upon Customer request and subject to the Company's operating constraints, the Company will provide the following streetlighting services based on the Company's total costs including Company indirect charges:

- Trimming of trees adjacent to streetlight equipment and circuits.
- . Arterial patrols to ensure correct operation of streetlights.
- . Painting or staining of wood and steel streetlight poles.

ESS CHARGES

In addition to the above charges, the Customer is subject to charges from its serving ESS for Electricity, transmission and other services as well as any other charges specified in the service agreement between the Customer and the ESS.

MONTHLY RATE (Continued)
Rates for Area Lighting (Continued)

Rates for Area Lighting (Continued))		Monthly	Monthly Data(1)	
Type of Light	<u>Watts</u>	Lumens	Monthly <u>kWh</u>	Monthly Rate ⁽¹⁾ <u>Per Luminaire</u>	
Acorn					
LED	60	5,488	21	\$ 12.86	
	70	4,332	24	14.80	
HADCO LED	70	5,120	24	17.68	(N)
Cobrahead		•			• ,
LED	37	2,530	13	3.89	
	50	3,162	17	4.09	
	52	3,757	18	4.47	
	67	5,050	23	4.97	
	106	7,444	36	6.31	
	134	14,200	46	9.32	
	156	16,300	53	10.64	
	176	18,300	60	11.43	
	201	21,400	69	12.35	
Westbrooke LED (Non-Flare)	36	3,369	12	14.60	
	53	5,079	18	16.86	
	69	6,661	24	16.58	
	85	8,153	29	17.06	
	136	12,687	46	20.93	
	206	18 , 159	70	22.09	
Westbrooke LED (Flare)	36	3,369	12	16.44	
	53	5,079	18	18.96	
	69	6,661	24	19.27	
	85	8,153	29	18.48	
	136	12,687	46	22.01	
	206	18,159	70	23.24	
CREE XSP LED	25	2,529	9	2.95	
	42	3,819	14	3.30	
	48	4,373	16	3.83	
	56	5,863	19	4.45	
	91	8,747	31	5.07	
Post-Top, American Revolution					
LED	45	3,395	15	6.57	
	72	4,409	25	7.08	

⁽¹⁾ See Schedule 100 for applicable adjustments.

MONTHLY RATE (Continued) Rates for Area Light Poles ⁽¹⁾			
<u>Type of Pole</u> Wood, Standard	Pole Length (feet) 35 or less	Monthly Rate Per Pole \$ 5.44	
	40 to 55	7.11	
Wood, Painted Underground	35 or less	5.44 ⁽²⁾	
Wood, Curved laminated	30 or less	6.74 ⁽²⁾	
Aluminum, Regular	16	6.49	
	25	10.77	
	30 35	11.63 13.91	
	33	13.91	
Aluminum, Fluted Ornamental	14	9.50	
Aluminum Davit	25	10.74	
	30	10.69	
	35	11.69	
	40	15.86	
Aluminum Double Davit	30	15.78	
Aluminum, Fluted Ornamental	16	9.70	(C)
Aluminum, HADCO, Smooth Techtra Ornamental	18	18.68	(C)
Aluminum, HADCO, Fluted Westbrooke	18	18.73	
Aluminum, HADCO, Smooth Westbrooke	18	19.85	(C)
Concrete, Ameron Post-Top	25	18.64	
Fiberglass Fluted Ornamental; Black Fiberglass, Regular	14	11.48	
Black	20	4.78	(T)
Gray or Bronze	30	8.12	(T)
Black, Gray, or Bronze	35	6.99	(C)
Fiberglass, Anchor Base, Gray or Black	35	12.76	(C)
Fiberglass, Direct Bury with Shroud	18	7.70	

⁽¹⁾ No pole charge for luminaires placed on existing Company-owned distribution poles.

⁽²⁾ No new service.

RATES FOR STANDARD POLES

Monthly	v Rates
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Type of Pole	Pole Length (feet)	Option A	Option B	
Fiberglass, Black, Bronze or Gray	20	\$ 4.78	\$ 0.15	(C)
Fiberglass, Black or Bronze	30	7.53	0.23	(C)
Fiberglass, Gray	30	8.12	0.25	
Fiberglass, Smooth, Black or Bronze	18	4.77	0.15	(C) (M)
Fiberglass, Regular	18	4.26	0.13	
Black, Bronze, or Gray	35	6.99	0.21	(C) (M)
Wood, Standard	30 to 35	5.44	0.17	
Wood, Standard	40 to 55	7.11	0.22	•

RATES FOR CUSTOM LIGHTING

		Nominal	Monthly	Monthly Rates		
Type of Light	<u>Watts</u>	<u>Lumens</u>	<u>kWh</u>	Option A	Option B	Option C
Special Acorn-Types						
HPS	100	9,500	43	\$ 10.68	\$ 4.24	\$ 2.21
HADCO Victorian, HPS	150	16,000	62	11.68	5.22	3.18
	200	22,000	79	13.30	6.20	4.05
	250	29,000	102	14.48	7.38	5.23
HADCO Capitol Acorn, HPS	100	9,500	43	13.93	4.68	2.21
	150	16,000	62	14.22	5.57	3.18
	200	22,000	79	16.58	6.64	4.05
	250	29,000	102	16.27	7.62	5.23
Special Architectural Types						
HADCO Independence, HPS	100	9,500	43	11.47	4.33	2.21
	150	16,000	62	11.46	5.17	3.18
HADCO Techtra, HPS	100	9,500	43	20.07	5.50	2.21
	150	16,000	62	20.44	6.39	3.18
	250	29,000	102	22.42	8.44	5.23
HADCO Westbrooke, HPS	70	6,300	30	12.80	3.95	*
	100	9,500	43	12.90	4.53	2.21

^{*} Not offered.

RATES FOR CUSTOM LIGHTING (Continued)

Type of Light	<u>Watts</u>	Nominal <u>Lumens</u>	Monthly <u>kWh</u>	Option <u>A</u>	Monthly Rate Option B	es <u>Option C</u>	
HADCO Westbrooke, HPS	150	16,000	62	\$ 13.87	\$ 5.50	\$ 3.18	(T) (M)
	200	22,000	79	14.94	6.41	4.05	
	250	29,000	102	16.29	7.61	5.23	(M)
Special Types							
Flood, Metal Halide	350	30,000	139	13.07	9.05	7.13	
Flood, HPS	750	105,000	285	23.62	17.47	14.62	
Option C Only **							
Ornamental Acorn Twin	85	9,600	64	*	*	3.28	
Ornamental Acorn	55	2,800	21	*	*	1.08	
Ornamental Acorn Twin	55	5,600	42	*	*	2.15	
Composite, Twin	140	6,815	54	*	*	2.77	
	175	9,815	66	*	*	3.39	

RATES FOR CUSTOM POLES

	Monthly Rates					
Type of Pole	Pole Length	Option A	Option B			
	<u>(feet)</u>					
Aluminum, Regular	25	\$ 10.77	\$ 0.33	(T)		
	30	11.63	0.36			
	35	13.91	0.43			
Aluminum Davit	25	10.74	0.33			
	30	10.69	0.33			
	35	11.69	0.36			
	40	15.86	0.49			
Aluminum Double Davit	30	15.78	0.48			
Aluminum, HADCO, Fluted Ornamental	14	9.50	0.29	(C)		

^{*} Not offered.

^{**} Rates are based on current kWh energy charges.

RATES FOR CUSTOM POLES (Continued)

		Monthly	/ Rates	
Type of Pole	Pole Length	Option A	Option B	
	(feet)			
Aluminum, HADCO, Smooth Techtra Ornamental	18	\$ 18.68	\$ 0.57	(C)
Aluminum, Fluted Ornamental	16	9.70	0.30	(C)
Aluminum, HADCO, Fluted Westbrooke	18	18.73	0.57	
Aluminum, HADCO, Smooth Westbrooke	18	19.85	0.61	(C)
Fiberglass, Fluted Ornamental Black	14	11.48	0.35	
Fiberglass, Anchor Base, Gray or Black	35	12.76	0.39	(C)

SERVICE RATE FOR OBSOLETE LIGHTING

The following equipment is <u>not</u> available for new installations under Options A and B. Tothe extent feasible, maintenance will be provided. Obsolete Lighting will be replaced with the Customer's choice of Standard or Custom equipment. The Customer will then be billed at the appropriate Standard or Custom rate. If an existing mercury vapor luminaire requires the replacement of a ballast, the unit will be replaced with a corresponding HPS unit.

Type of Light	<u>Watts</u>	Nominal <u>Lumens</u>	Monthly <u>kWh</u>	Option <u>A</u>	Monthly Rate Option B	es <u>Option C</u>	
Cobrahead, Metal Halide	150	10,000	60	\$ 8.28	\$ 4.93	\$ 3.08	(T) (M)
Cobrahead, Mercury Vapor	100	4,000	39	*	*	2.00	(T)
	175	7,000	66	7.95	4.88	3.39	(T)
	250	10,000	94	*	*	4.82	
	400	21,000	147	12.88	9.16	7.54	
	1,000	55,000	374	24.92	21.10	19.18	
Holophane Mongoose,	150	16,000	62	12.02	5.26	3.18	(M)
HPS	250	29,000	102	13.47	7.22	*	(M)

^{*} Not offered.

RATES FOR OBSOLETE LIGHTING POLES

	Monthly Rates				
Type of Pole	Poles Length (feet)	Option A	Option B		
Aluminum Post	30	\$ 6.49	*		
Aluminum, Painted Ornamental	35	*	\$ 0.98	(T) (M)	
Aluminum, Regular	16	6.49	0.20	(T) (M)	
Bronze Alloy GardCo	12	*	0.18	(T)	
Concrete, Ornamental	35 or less	10.77	0.33		
Fiberglass, Direct Bury with Shroud	18	7.70	0.24	(M)	
Steel, Painted Regular **	25	10.77	0.33		
Steel, Painted Regular **	30	11.63	0.36		
Steel, Unpainted 6-foot Mast Arm **	30	*	0.33		
Steel, Unpainted 6-foot Davit Arm **	30	*	0.33		
Steel, Unpainted 8-foot Mast Arm **	35	*	0.36		
Steel, Unpainted 8-foot Davit Arm **	35	*	0.36		
Wood, Laminated without Mast Arm	20	4.78	0.15		
Wood, Laminated Street Light Only	20	4.78	*		
Wood, Curved Laminated	30	6.74	0.23		
Wood, Painted Underground	35	5.44	0.17		

Not offered.

SERVICE RATES FOR ALTERNATIVE LIGHTING

The purpose of this series of luminaires is to provide lighting utilizing the latest in technological advances in lighting equipment. The Company does not maintain an inventory of this equipment, and so delays with maintenance are likely. This equipment is more subject to obsolescence since it is experimental and yet to be determined reliable or cost effective. The Company will order and replace the equipment subject to availability.

Type of Light	<u>Watts</u>	Nominal <u>Lumens</u>	Monthly <u>kWh</u>	Option <u>A</u>	Monthly Rate Option B	es <u>Option C</u>
Special Architectural Types In Induction Lamp Systems	cluding	Philips QL				
HADCO Victorian, QL	85	6,000	32	*	\$ 2.37	\$ 1.64
	165	12,000	60	*	3.95	3.08
	165	12,000	60	\$ 21.68	4.23	3.08

Advice No. 16-09 Issued June 20, 2016 James F. Lobdell, Senior Vice President

^{**} Maintenance does not include replacement of rusted steel poles.

RATES FOR DECORATIVE LIGHTING

Light-Emitting Diode (LED) Only – Option A Service Rates

<u>Type of Light</u> Acorn LED	<u>Watts</u> 60	Nominal Lumens 5,488	Monthly <u>kWh</u> 21	Monthly Rate Option A \$ 12.29	
	70	4,332	24	14.23	
HADCO Acorn LED	70	5,120	24	18.10	(N)
Westbrooke (Non-Flared)	36	3,369	12	15.02	
LED	53	5,079	18	16.29	
	69	6,661	24	16.00	
	85	8,153	29	16.48	
	136	12,687	46	20.36	
	206	18,159	70	21.52	
Westbrooke (Flared)	36	3,369	12	16.86	
LED	53	5,079	18	18.39	
	69	6,661	24	18.70	
	85	8,153	29	17.91	
	136	12,687	46	21.44	
	206	18,159	70	22.67	
Post-Top, American Revolution	45	3,395	15	7.00	
LED	72	4,409	25	7.51	

SPECIALTY SERVICES OFFERED

Upon Customer request and subject to the Company's operating constraints, the Company will provide the following streetlighting services based on the Company's total costs including Company indirect charges:

- Trimming of trees adjacent to streetlight equipment and circuits.
- Arterial patrols to ensure correct operation of streetlights.
- . Painting or staining of wood and steel streetlight poles.

ESS CHARGES

In addition to the above charges, the Customer is subject to charges from its serving ESS for Electricity, transmission and other services as well as any other charges specified in the service agreement between the Customer and the ESS. If the Customer chooses to receive an ESS Consolidated Bill, the Company's charges for Direct Access Service are not required to be separately stated on an ESS Consolidated Bill.