

THE STATE OF NEW HAMPSHIRE BEFORE THE
NEW HAMPSHIRE PUBLIC UTILITIES COMMISSION

Liberty Utilities (Granite State Electric)
Corp. d/b/a Liberty Utilities

Request for Change in Rates

Docket No. DE 19-064

Technical Statement of Heather M. Tebbetts

November 22, 2019

A. Purpose of Technical Statement

On April 30, 2019, Liberty Utilities (Granite State Electric) Corp. (“Liberty” or “the Company”) filed testimony and schedules requesting changes to the Company’s permanent rates. As part of that filing, Liberty provided a redlined version of proposed Tariff NHPUC No. 21. During the course of discovery in this docket, changes or modifications to the tariff were identified that require revision to certain pages. This technical statement addresses those changes and provides supporting information along with both redlined and clean versions of the affected tariff pages.

B. Description of Revisions to Proposed Tariff No. 21

i. Original Page 76 – Line Extension Schedule of Fees Policy 1 (Residential)

The current underground line extension tariff was approved in Docket No. DE 17-149 and since its approval the Company has found charging a per foot cost based on the amperage of the service inconsistent with how it designs its services. Charging for the services based on phase, rather than amperage, is clearer to engineers and customers. The change to the tariff provides that all single phase underground services will pay the average cost per foot of the service, but still receive the standard 300 foot credit. Any customer requesting three phase service will receive the standard 300 feet for free, but pay the actual cost for that line extension above and beyond that credit of 300 feet because a three phase service for a residential customer is not a standard service. The Company has added the single phase and three phase distinction for overhead services, as well, to be clearer as to a customer’s payment responsibilities. This adjustment has also been made for Policy 2 (Residential Developments) to clearly state a developer’s payment responsibilities. Please see Attachment HMT-CU-1 for the redlined and clean tariff pages.

ii. Original Page 116 – Rate LED-1

The Company has chosen to install Eaton Cooper light fixtures instead of fixtures

manufactured GE due to the lower cost of the Eaton Cooper fixtures. The Company has calculated lower rates associated with these lights due to lower fixture costs, along with lower maintenance costs, as provided in Attachment HMT-CU-2. The Company is also removing the LED 190 watt option from its tariff because none of our customers have shown interest in it. We are also renaming the barn light and replacing it with a Caretaker light. The Company didn't rename the light during the last rate case and is taking the opportunity now to do so. This light is designed to be used on secondary roadways and parking areas, mostly residential areas, and geared to replace 50, 70 and 100 watt high pressure sodium fixtures.

Underground Services Installed Costs for 2019

<u>Service Type</u>	<u>Cost</u>	<u>Length</u>	<u>Average</u>
	<u>(a)</u>	<u>(b)</u>	<u>(a) / (b)</u>
200A UG Res	\$ 2,634.16	200	\$ 13.17
400A UG Res	\$ 2,948.56	200	\$ 14.74
200A UG Siphon	\$ 3,270.92	200	\$ 16.35
400A UG Siphon	\$ 3,670.63	200	\$ 18.35
Total	\$ 12,524.27	800	\$ 15.66

Identifier	Cost	Burden	Profit	Total
EQ	\$282.50	\$54.38	\$0.00	\$336.88
IN	\$286.00	\$88.66	\$0.00	\$374.66
PY	\$773.69	\$1,148.93	\$0.00	\$1,922.62
SUB-TOTAL	\$1,342.19	\$1,291.97	\$0.00	\$2,634.16

Selected Events:

9151 200A URD Service

Identifier	Cost	Burden	Profit	Total
EQ	\$282.50	\$54.38	\$0.00	\$336.88
IN	\$526.00	\$163.06	\$0.00	\$689.06
PY	\$773.69	\$1,148.93	\$0.00	\$1,922.62
SUB-TOTAL	\$1,582.19	\$1,366.37	\$0.00	\$2,948.56

Selected Events:

9152 400A URD Service

Identifier	Cost	Burden	Profit	Total	
EQ		\$461.25	\$88.79	\$0.00	\$550.04
IN		\$319.48	\$99.04	\$0.00	\$418.52
PY		\$926.51	\$1,375.86	\$0.00	\$2,302.36
SUB-TOTAL		\$1,707.24	\$1,563.69	\$0.00	\$3,270.92

Selected Events:

9153 200A OH to UG Siphon Service

Identifier	Cost	Burden	Profit	Total	
EQ		\$461.25	\$88.79	\$0.00	\$550.04
IN		\$624.60	\$193.63	\$0.00	\$818.23
PY		\$926.51	\$1,375.86	\$0.00	\$2,302.36
SUB-TOTAL	\$2,012.36	\$1,658.28	\$0.00	\$3,670.63	

Selected Events:

9154 400A OH to UG Siphon Service

61. Schedule of Fees for Line Extensions

i. Policy 1

2. Allowed Overhead/Underground Distance Per House:

a) 300 feet or 1 pole, whichever is greater

b) Overhead Cost per Foot greater than 300 feet _____

<u>Single Phase</u>	<u>\$34.47</u>
<u>Three Phase</u>	<u>Actual</u>
<u>Cost</u>	<u>\$11.40</u>

b)c) _____ Excess Underground Cost per Foot greater than 300 feet:

<u>Single Phase Service</u>	<u>\$15.66</u>
<u>Three Phase Service</u>	<u>Actual Cost</u>
<u>200 Amp Underground Residential Extension</u>	<u>\$12.86</u>
<u>400 Amp Underground Residential Extension</u>	<u>\$14.26</u>
<u>200 Amp Underground Residential Extension Siphon Service</u>	<u>\$15.98</u>
<u>400 Amp Underground Residential Extension Siphon Service</u>	<u>\$17.79</u>

The Customer is given a credit equal to the cost of up to 300 feet of overhead or underground distribution line towards the construction cost and the Customer pays for the costs in excess of the amount of the credit.

ii. Policy 2

1. Allowed Overhead Distance per House 100 feet

1.

<u>Single Phase</u> Overhead Cost per Foot	
<u>\$34.47</u>	<u>\$11.40</u>
<u>Three Phase Overhead Cost per Foot</u>	<u>Actual Cost</u>

2. Allowed Underground Distance per House 100 feet

3.2.

<u>Single Phase</u> Underground Cost per Centerline Foot	_____
<u>\$15.66</u>	
<u>Three Phase Underground Cost per Centerline Foot</u>	<u>Actual Cost</u>
<u>4.71</u>	

4.3. Individual services will fall under Policy 1.

iii. Policy 4

1. Overhead

B = Allowed Credit per Buildable Lot \$4,500

2. Underground

B = Allowed Credit per Buildable Lot \$4,500

Policy 3 fees are calculated on actual costs without any credit for footage or buildable lots.

61. Schedule of Fees for Line Extensions

i. Policy 1

2. Allowed Overhead/Underground Distance Per House:

- a) 300 feet or 1 pole, whichever is greater
- b) Overhead Cost per Foot greater than 300 feet

Single Phase	\$34.47
Three Phase	Actual Cost

c) Excess Underground Cost per Foot greater than 300 feet:

Single Phase Service	\$15.66
Three Phase Service	Actual Cost

The Customer is given a credit equal to the cost of up to 300 feet of overhead or underground distribution line towards the construction cost and the Customer pays for the costs in excess of the amount of the credit.

ii. Policy 2

- 1. Allowed Overhead Distance per House 100 feet

Single Phase Overhead Cost per Foot	\$34.47
Three Phase Overhead Cost per Foot	Actual Cost
- 2. Allowed Underground Distance per House 100 feet

Single Phase Underground Cost per Centerline Foot	\$15.66
Three Phase Underground Cost per Centerline Foot	Actual Cost
- 3. Individual services will fall under Policy 1.

iii. Policy 4

1. Overhead

B = Allowed Credit per Buildable Lot \$4,500

2. Underground

B = Allowed Credit per Buildable Lot \$4,500

Policy 3 fees are calculated on actual costs without any credit for footage or buildable lots.

Revenue Requirement Summary LED-1 Street Lights

	<u>Fixture</u>	<u>20 Year Maint. Cost</u>	<u>Annual Maint. Cost</u>	<u>Annual Revenue Requirement</u>	<u>Annual Fixed Charge</u>	<u>Monthly Fixed Charge</u>
1	30W Roadway	\$10.00	\$0.50	\$83.65	\$84.15	\$7.01
2	50W Roadway	\$10.96	\$0.55	\$85.91	\$86.46	\$7.20
3	130W Roadway	\$23.84	\$1.19	\$123.24	\$124.43	\$10.37
4	30W CRTK	\$7.84	\$0.39	\$76.48	\$76.87	\$6.41
5	30W URD	\$39.36	\$1.97	\$153.76	\$155.73	\$12.98
6	90W Flood	\$23.84	\$1.19	\$121.81	\$123.00	\$10.25
7	130W Flood	\$29.12	\$1.46	\$136.88	\$138.34	\$11.53

ANNUAL REVENUE REQUIREMENT CALCULATION BY FIXTURE

LED30 STREET LIGHT INSTALLATION COST

1	<u>Tax Depreciation (Federal)</u>	
2	LED 30W	471.95
3	Bonus Depreciation	0%
4	Total Bonus Depreciation	\$ -
5	LED 30W	\$ -
6	Depreciation Rate	3.750%
7	Tax Depreciation	\$0
8	Total Federal Depreciation	\$ -
9	Annual Tax Depreciation	\$ -
10	Cumulative Tax Depreciation	\$0
11	<u>Tax Depreciation (State)</u>	
12	LED 30W	471.95
13	Depreciation Rate	3.750%
14	Tax Depreciation	\$18
15	Federal Tax Depreciation	\$ -
16	State Tax Depreciation	\$18
17	Annual Tax Depreciation	\$18
18	Cumulative Tax Depreciation	\$18
19	Book Depreciation	\$18
20	Cumulative Book Depreciation	\$18
21	Book/Tax Timer (Federal)	(\$18)
22	less: Deferred Tax Reserve (State)	\$0
23	Net Book/Tax Timer (Federal)	(\$18)
24	Effective Tax Rate (Federal)	27.08%
25	Deferred Tax Reserve (Federal)	(\$5)
26	Book/Tax Timer (State)	\$0
27	Effective Tax Rate (State)	0.00%
28	Deferred Tax Reserve (State)	\$0
29	TOTAL Deferred Tax Reserve	(\$5)
30	<u>Rate Base Calculation</u>	
31	Plant In Service	\$472
32	Accumulated Book Depreciation	(\$18)
33	Deferred Tax Reserve	\$5
34	Year End Rate Base	\$459
35	<u>Revenue Requirement Calculation</u>	
36	Year End Rate Base	\$459
37	Pre-Tax ROR	10.23%
38	Return and Taxes	\$47
39	Book Depreciation	\$18
40	Property Taxes	\$19
41	Annual Revenue Requirement	\$84

ANNUAL REVENUE REQUIREMENT CALCULATION BY FIXTURE

LED50 STREET LIGHT INSTALLATION COST

1	<u>Tax Depreciation (Federal)</u>	
2	LED 50W	487.69
3	Bonus Depreciation	0%
4	Total Bonus Depreciation	\$ -
5	LED 50W	\$ -
6	Depreciation Rate	3.750%
7	Tax Depreciation	\$0
8	Total Federal Depreciation	\$ -
9	Annual Tax Depreciation	\$ -
10	Cumulative Tax Depreciation	\$0
11	<u>Tax Depreciation (State)</u>	
12	LED 50W	487.69
13	Depreciation Rate	3.750%
14	Tax Depreciation	\$18
15	Federal Tax Depreciation	\$ -
16	State Tax Depreciation	\$18
17	Annual Tax Depreciation	\$18
18	Cumulative Tax Depreciation	\$18
19	Book Depreciation	\$18
20	Cumulative Book Depreciation	\$18
21	Book/Tax Timer (Federal)	(\$18)
22	less: Deferred Tax Reserve (State)	\$0
23	Net Book/Tax Timer (Federal)	(\$18)
24	Effective Tax Rate (Federal)	27.08%
25	Deferred Tax Reserve (Federal)	(\$5)
26	Book/Tax Timer (State)	\$0
27	Effective Tax Rate (State)	0.00%
28	Deferred Tax Reserve (State)	\$0
29	TOTAL Deferred Tax Reserve	(\$5)
30	<u>Rate Base Calculation</u>	
31	Plant In Service	\$488
32	Accumulated Book Depreciation	(\$18)
33	Deferred Tax Reserve	\$5
34	Year End Rate Base	\$475
35	<u>Revenue Requirement Calculation</u>	
36	Year End Rate Base	\$475
37	Pre-Tax ROR	10.23%
38	Return and Taxes	\$49
39	Book Depreciation	\$18
40	Property Taxes (b)	\$19
41	Annual Revenue Requirement	\$86

ANNUAL REVENUE REQUIREMENT CALCULATION BY FIXTURE

LED130 STREET LIGHT INSTALLATION COST

1	<u>Tax Depreciation (Federal)</u>	
2	LED 130W	698.58
3	Bonus Depreciation	0%
4	Total Bonus Depreciation	\$ -
5	LED 130W	\$ -
6	Depreciation Rate	3.750%
7	Tax Depreciation	\$0
8	Total Federal Depreciation	\$ -
9	Annual Tax Depreciation	\$ -
10	Cumulative Tax Depreciation	\$0
11	<u>Tax Depreciation (State)</u>	
12	LED 130W	698.58
13	Depreciation Rate	3.750%
14	Tax Depreciation	\$26
15	Federal Tax Depreciation	\$ -
16	State Tax Depreciation	\$26
17	Annual Tax Depreciation	\$26
18	Cumulative Tax Depreciation	\$26
19	Book Depreciation	\$26
20	Cumulative Book Depreciation	\$26
21	Book/Tax Timer (Federal)	(\$26)
22	less: Deferred Tax Reserve (State)	\$0
23	Net Book/Tax Timer (Federal)	(\$26)
24	Effective Tax Rate (Federal)	27.08%
25	Deferred Tax Reserve (Federal)	(\$7)
26	Book/Tax Timer (State)	\$0
27	Effective Tax Rate (State)	0.00%
28	Deferred Tax Reserve (State)	\$0
29	TOTAL Deferred Tax Reserve	(\$7)
30	<u>Rate Base Calculation</u>	
31	Plant In Service	\$699
32	Accumulated Book Depreciation	(\$26)
33	Deferred Tax Reserve	\$7
34	Year End Rate Base	\$680
35	<u>Revenue Requirement Calculation</u>	
36	Year End Rate Base	\$680
37	Pre-Tax ROR	10.23%
38	Return and Taxes	\$70
39	Book Depreciation	\$26
40	Property Taxes (b)	\$28
41	Annual Revenue Requirement	\$123

ANNUAL REVENUE REQUIREMENT CALCULATION BY FIXTURE

LED30 CRTK STREET LIGHT INSTALLATION COST

1	<u>Tax Depreciation (Federal)</u>	
2	CRKT LED30 Fixture	434.30
3	Bonus Depreciation	0%
4	Total Bonus Depreciation	\$ -
5	CRKT LED30 Fixture	\$ -
6	Depreciation Rate	3.750%
7	Tax Depreciation	\$0
8	Total Federal Depreciation	\$ -
9	Annual Tax Depreciation	\$ -
10	Cumulative Tax Depreciation	\$0
11	<u>Tax Depreciation (State)</u>	
12	CRKT LED30 Fixture	434.30
13	Depreciation Rate	3.750%
14	Tax Depreciation	\$16
15	Federal Tax Depreciation	\$ -
16	State Tax Depreciation	\$16
17	Annual Tax Depreciation	\$16
18	Cumulative Tax Depreciation	\$16
19	Book Depreciation	\$16
20	Cumulative Book Depreciation	\$16
21	Book/Tax Timer (Federal)	(\$16)
22	less: Deferred Tax Reserve (State)	\$0
23	Net Book/Tax Timer (Federal)	(\$16)
24	Effective Tax Rate (Federal)	27.08%
25	Deferred Tax Reserve (Federal)	(\$4)
26	Book/Tax Timer (State)	\$0
27	Effective Tax Rate (State)	0.00%
28	Deferred Tax Reserve (State)	\$0
29	TOTAL Deferred Tax Reserve	(\$4)
30	<u>Rate Base Calculation</u>	
31	Plant In Service	\$434
32	Accumulated Book Depreciation	(\$16)
33	Deferred Tax Reserve	\$4
34	Year End Rate Base	\$423
35	<u>Revenue Requirement Calculation</u>	
36	Year End Rate Base	\$423
37	Pre-Tax ROR	10.23%
38	Return and Taxes	\$43
39	Book Depreciation	\$16
40	Property Taxes (b)	\$17
41	Annual Revenue Requirement	\$76

ANNUAL REVENUE REQUIREMENT CALCULATION BY FIXTURE

URD LED30 STREET LIGHT INSTALLATION COST

1	<u>Tax Depreciation (Federal)</u>	
2	URD LED 30 W	868.26
3	Bonus Depreciation	0%
4	Total Bonus Depreciation	\$ -
5	URD LED 30 W	\$ -
6	Depreciation Rate	3.750%
7	Tax Depreciation	\$0
8	Total Federal Depreciation	\$ -
9	Annual Tax Depreciation	\$ -
10	Cumulative Tax Depreciation	\$0
11	<u>Tax Depreciation (State)</u>	
12	URD LED 30 W	868.26
13	Depreciation Rate	3.750%
14	Tax Depreciation	\$33
15	Federal Tax Depreciation	\$ -
16	State Tax Depreciation	\$33
17	Annual Tax Depreciation	\$33
18	Cumulative Tax Depreciation	\$33
19	Book Depreciation	\$33
20	Cumulative Book Depreciation	\$33
21	Book/Tax Timer (Federal)	(\$33)
22	less: Deferred Tax Reserve (State)	\$0
23	Net Book/Tax Timer (Federal)	(\$33)
24	Effective Tax Rate (Federal)	27.08%
25	Deferred Tax Reserve (Federal)	(\$9)
26	Book/Tax Timer (State)	\$0
27	Effective Tax Rate (State)	0.00%
28	Deferred Tax Reserve (State)	\$0
29	TOTAL Deferred Tax Reserve	(\$9)
30	<u>Rate Base Calculation</u>	
31	Plant In Service	\$868
32	Accumulated Book Depreciation	(\$33)
33	Deferred Tax Reserve	\$9
34	Year End Rate Base	\$844
35	<u>Revenue Requirement Calculation</u>	
36	Year End Rate Base	\$844
37	Pre-Tax ROR	10.23%
38	Return and Taxes	\$86
39	Book Depreciation	\$33
40	Property Taxes (b)	\$34
41	Annual Revenue Requirement	\$154

ANNUAL REVENUE REQUIREMENT CALCULATION BY FIXTURE

FLDLED90 STREET LIGHT INSTALLATION COST

1	<u>Tax Depreciation (Federal)</u>	
2	Flood LED 90W	688.68
3	Bonus Depreciation	0%
4	Total Bonus Depreciation	\$ -
5	Flood LED 90W	\$ -
6	Depreciation Rate	3.750%
7	Tax Depreciation	\$0
8	Total Federal Depreciation	\$ -
9	Annual Tax Depreciation	\$ -
10	Cumulative Tax Depreciation	\$0
11	<u>Tax Depreciation (State)</u>	
12	Flood LED 90W	688.68
13	Depreciation Rate	3.750%
14	Tax Depreciation	\$26
15	Federal Tax Depreciation	\$ -
16	State Tax Depreciation	\$26
17	Annual Tax Depreciation	\$26
18	Cumulative Tax Depreciation	\$26
19	Book Depreciation	\$26
20	Cumulative Book Depreciation	\$26
21	Book/Tax Timer (Federal)	(\$26)
22	less: Deferred Tax Reserve (State)	\$0
23	Net Book/Tax Timer (Federal)	(\$26)
24	Effective Tax Rate (Federal)	27.08%
25	Deferred Tax Reserve (Federal)	(\$7)
26	Book/Tax Timer (State)	\$0
27	Effective Tax Rate (State)	0.00%
28	Deferred Tax Reserve (State)	\$0
29	TOTAL Deferred Tax Reserve	(\$7)
30	<u>Rate Base Calculation</u>	
31	Plant In Service	\$689
32	Accumulated Book Depreciation	(\$26)
33	Deferred Tax Reserve	\$7
34	Year End Rate Base	\$670
35	<u>Revenue Requirement Calculation</u>	
36	Year End Rate Base	\$670
37	Pre-Tax ROR	10.23%
38	Return and Taxes	\$69
39	Book Depreciation	\$26
40	Property Taxes (b)	\$27
41	Annual Revenue Requirement	\$122

ANNUAL REVENUE REQUIREMENT CALCULATION BY FIXTURE

FLDLED130 STREET LIGHT INSTALLATION COST

1	<u>Tax Depreciation (Federal)</u>	
2	Flood LED 130W	775.18
3	Bonus Depreciation	0%
4	Total Bonus Depreciation	\$ -
5	Flood LED 130W	\$ -
6	Depreciation Rate	3.750%
7	Tax Depreciation	\$0
8	Total Federal Depreciation	\$ -
9	Annual Tax Depreciation	\$ -
10	Cumulative Tax Depreciation	\$0
11	<u>Tax Depreciation (State)</u>	
12	Flood LED 130W	775.18
13	Depreciation Rate	3.750%
14	Tax Depreciation	\$29
15	Federal Tax Depreciation	\$ -
16	State Tax Depreciation	\$29
17	Annual Tax Depreciation	\$29
18	Cumulative Tax Depreciation	\$29
19	Book Depreciation	\$29
20	Cumulative Book Depreciation	\$29
21	Book/Tax Timer (Federal)	(\$29)
22	less: Deferred Tax Reserve (State)	\$0
23	Net Book/Tax Timer (Federal)	(\$29)
24	Effective Tax Rate (Federal)	27.08%
25	Deferred Tax Reserve (Federal)	(\$8)
26	Book/Tax Timer (State)	\$0
27	Effective Tax Rate (State)	0.00%
28	Deferred Tax Reserve (State)	\$0
29	TOTAL Deferred Tax Reserve	<u>(\$8)</u>
30	<u>Rate Base Calculation</u>	
31	Plant In Service	\$775
32	Accumulated Book Depreciation	(\$29)
33	Deferred Tax Reserve	\$8
34	Year End Rate Base	<u>\$754</u>
35	<u>Revenue Requirement Calculation</u>	
36	Year End Rate Base	\$754
37	Pre-Tax ROR	10.23%
38	Return and Taxes	\$77
39	Book Depreciation	\$29
40	Property Taxes (b)	\$31
41	Annual Revenue Requirement	<u>\$137</u>

2019 LED Street & Area Lighting Installed Costs

LED30 30W 4000K CCT-ROADWAY STREET LIGHT INSTALLATION COST

Identifier	Cost	Burden	Profit	Total
EQ	\$38.50	\$7.41	\$0.01	\$45.92
IN	\$256.85	\$79.62	\$0.01	\$336.48
PY	\$36.04	\$53.51	\$0.00	\$89.55
SUB-TOTAL	\$331.39	\$140.55	\$0.02	\$471.95

Selected Events:

7933 30W LED ROADWAY Installation Cost

LED50 50W 4000K CCT-ROADWAY STREET LIGHT INSTALLATION COST

Identifier	Cost	Burden	Profit	Total
EQ	\$38.50	\$7.41	\$0.01	\$45.92
IN	\$268.85	\$83.34	\$0.03	\$352.22
PY	\$36.04	\$53.51	\$0.00	\$89.55
SUB-TOTAL	\$343.39	\$144.27	\$0.04	\$487.69

Selected Events:

7934 50W LED ROADWAY Installation Cost

LED130 130W 4000K CCT-ROADWAY STREET LIGHT INSTALLATION COST

Identifier	Cost	Burden	Profit	Total
EQ	\$38.50	\$7.41	\$0.01	\$45.92
IN	\$429.85	\$133.25	\$0.01	\$563.11
PY	\$36.04	\$53.51	\$0.00	\$89.55
SUB-TOTAL	\$504.39	\$194.18	\$0.02	\$698.58

Selected Events:

7935 130W LED ROADWAY Installation Cost

URDLED30 30W 3000K CCT-POST TOP STREET LIGHT INSTALLATION COST

Identifier	Cost	Burden	Profit	Total
EQ	\$55.00	\$10.59	\$0.00	\$65.59
IN	\$515.07	\$159.67	\$0.00	\$674.74
PY	\$51.48	\$76.45	\$0.00	\$127.93
SUB-TOTAL	\$621.55	\$246.71	\$0.00	\$868.26

Selected Events:

7941 30W LED Post Top (URD) Installation Cost

2019 LED Street & Area Lighting Installed Costs

FLDLED90 90W 4000K CCT-FLOOD LIGHT INSTALLATION COST

Identifier	Cost	Burden	Profit	Total
EQ	\$38.50	\$7.41	\$0.01	\$45.92
IN	\$423.04	\$131.14	\$0.04	\$554.22
PY	\$35.63	\$52.91	\$0.00	\$88.54
SUB-TOTAL	\$497.17	\$191.47	\$0.04	\$688.68

Selected Events:

7937 90W LED Flood Light Installation Cost

FLDLED130 130W 4000K CCT-FLOOD LIGHT INSTALLATION COST

Identifier	Cost	Burden	Profit	Total
EQ	\$38.50	\$7.41	\$0.01	\$45.92
IN	\$489.10	\$151.62	\$0.00	\$640.72
PY	\$35.63	\$52.91	\$0.00	\$88.54
SUB-TOTAL	\$563.23	\$211.94	\$0.00	\$775.18

Selected Events:

7938 130W LED Flood Light Installation Cost

BRNLED50 30W 3000K CCT-CARETAKER II (RESIDENTIAL) LIGHT INSTALLATION COST

Identifier	Cost	Burden	Profit	Total
EQ	\$38.50	\$7.41	\$0.01	\$45.92
IN	\$228.11	\$70.71	\$0.01	\$298.83
PY	\$36.04	\$53.51	\$0.00	\$89.55
SUB-TOTAL	\$302.65	\$131.64	\$0.02	\$434.30

Selected Events:

7940 30W LED Caretaker 2 Installation Cost

2019 LED Street & Area Lighting Installed Costs

20 YEAR MAINTENANCE COSTS

Typical HID Fixture Failure Rate 1-2% of System/Inventory (Starter, Core & Coil or Luminaire Age)			
LED Reliability Testing, Factory Returns and RMA = Annual "Random" Failure Rate < 0.4%			
Fixture Type	Fixture Cost	Annual Failure Rate	20 Year Cost
25-34W LED30	\$125.00	0.004	\$10.00
45-54W LED50	\$137.00	0.004	\$10.96
125-134W LED130	\$298.00	0.004	\$23.84
45-54W URDLED30	\$492.00	0.004	\$39.36
85-94WFLDLED90	\$298.00	0.004	\$23.84
125-134WFLDLED130	\$364.00	0.004	\$29.12
25-34WBRNLED30	\$98.00	0.004	\$7.84

For New and Existing Installations:

Lamp Light Output Lumens	Nominal Power Rating Watts	Monthly KWH per Luminaire												Monthly Distribution Rate
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
<u>LED Roadway/Highway:</u>														
43,000	30	13	11	11	10	9	9	9	10	11	12	12	13	\$7.01
6,55,000	50	22	18	19	16	16	14	15	16	18	20	20	22	\$10.87
16,500	130	56	48	48	42	40	37	39	43	46	51	53	57	\$7.20
21,000	190	82	70	71	62	59	55	58	62	67	75	78	83	\$11.32
														\$13.08
														\$17.22

LED Underground Residential Developments:

5,000	50	22	18	19	16	16	14	15	16	18	20	20	22	\$12.98
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LED Flood:

109,540	90	39	33	34	29	28	26	27	30	32	35	37	39	\$10.25
164,560	130	56	48	48	42	40	37	39	43	46	51	53	57	\$11.53

LED Caretaker II (Secondary Roadways) Barn:

4,000	4,800	350	132	118	119	106	916	914	915	106	118	1220	1220	1322	\$6.41
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Limitations on Availability

The availability of this rate to any Customer is contingent upon the availability to the Company of personnel and/or other resources necessary to perform the conversion of existing Fixtures.

Special Rate Conditions

Charges for the operation of outdoor lights may be increased if, in the Company's opinion, lights are to be installed in locations or under conditions such that estimated income will be insufficient to justify the estimated cost of construction.

Billings

One-twelfth of the annual price of luminaires, poles and accessories plus energy charges, including adjustments, will be billed each month beginning with the month following the month in which service is rendered.

Luminaire Charges and Pole and Accessory Charges will be based on the monthly rates above as measured from the date of the prior bill to the current bill date.

For New and Existing Installations:

Lamp Light Output Lumens	Nominal Power Rating Watts	Monthly KWH per Luminaire												Monthly Distribution Rate
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
<u>LED Roadway/Highway:</u>														
4,000	30	13	11	11	10	9	9	9	10	11	12	12	13	\$7.01
6,500	50	22	18	19	16	16	14	15	16	18	20	20	22	\$7.20
16,500	130	56	48	48	42	40	37	39	43	46	51	53	57	\$10.37

LED Underground Residential Developments:

5,000	50	22	18	19	16	16	14	15	16	18	20	20	22	\$12.98
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LED Flood:

10,500	90	39	33	34	29	28	26	27	30	32	35	37	39	\$10.25
16,500	130	56	48	48	42	40	37	39	43	46	51	53	57	\$11.53

LED Caretaker II (Secondary Roadways):

4,000	30	13	11	11	10	9	9	9	10	11	12	12	13	\$6.41
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