

City of Falls Church, VA

Energy Savings Summary by Converting Dominion Owned Roadway Streetlights to LED

EXISTING				PROPOSED					SAVINGS	
Fixture Type-Wattage	Qty	Current Monthly Energy Use (kWh)	Current Monthly Energy Cost	Proposed LED Monthly Energy Use (kWh)	LED Monthly Distribution Service Charge	LED Monthly Electricity Supply Service Charge	LED Monthly Energy Cost	LED Conversion Cost (Including 15.34 % TERF)	Monthly Energy Savings (kWh)	Monthly Energy Savings (\$)
Basic										
70	116	3,480	\$ 960	580	\$ 703	\$ 17	\$ 720	\$ 17,393	2,900	\$240
100	125	5,000	\$ 1,165	1,875	\$ 871	\$ 55	\$ 926	\$ 18,742	3,125	\$239
150	56	3,920	\$ 670	1,400	\$ 426	\$ 41	\$ 467	\$ 8,397	2,520	\$203
250	64	6,720	\$ 1,086	4,800	\$ 579	\$ 84	\$ 663	\$ 9,596	1,920	\$423
400	4	640	\$ 104	260	\$ 44	\$ 8	\$ 52	\$ 600	380	\$52
Subtotal Basic HPS Fixtures	365	19,760	\$3,985	8,915	\$2,623	\$205	\$2,828	\$54,728	10,845	\$1,157
Premium										
70	-	-	\$ -	-	\$ -	\$ -	\$ -	\$ -	-	\$0
100	-	-	\$ -	-	\$ -	\$ -	\$ -	\$ -	-	\$0
Subtotal Premium HPS Fixtures	-	-	\$0	-	\$0	\$0	\$0	\$0	-	\$0
MV										
Basic										
100	381	15,240	\$ 3,376	1,905	\$ 2,309	\$ 57	\$ 2,366	\$ 57,126	13,335	\$1,010
175	157	10,990	\$ 1,779	3,925	\$ 1,195	\$ 115	\$ 1,310	\$ 23,541	7,065	\$469
250	25	2,500	\$ 377	1,125	\$ 226	\$ 33	\$ 259	\$ 3,749	1,375	\$118
400	90	13,500	\$ 1,972	5,850	\$ 814	\$ 119	\$ 933	\$ 13,495	7,650	\$1,039
1000	-	-	\$ -	-	\$ -	\$ -	\$ -	\$ -	-	\$0
Subtotal Basic MV Fixtures	653	42,230	\$7,504	12,805	\$4,544	\$324	\$4,868	\$97,911	29,425	\$2,636
Grand Total	1,018	61,990	\$11,489	21,720	\$7,167	\$529	\$7,696	\$152,639	40,270	\$3,793
Estimated Annual Values		743,880	\$137,868	260,640	\$86,004	\$6,348	\$92,352		483,240	\$45,516

Avoided Emissions (lbs)	SO2	NOX	CO2
Estimated Annual Savings	123	269	393,262
Estimated Lifetime Savings	1,232	2,692	3,932,617

Projected Payback (Yrs)	3.4
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Avg Conversion Cost/light	\$ 149.94
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* Source: U.S. EPA e-Grid 2016 State Annual Total Output Emission Rates (lb/MWh)

<https://www.epa.gov/energy/emissions-generation-resource-integrated-database-egrid>

Notes: Streetlight types, quantities, lumens and wattages are for Dominion lights (based on 7/30/2019 bill)

Estimates based on best information available, values will vary based on changes to inventory, tariff & rates (per VEPGA Contract Amendment No. 8 7.27.18)

Prepared by Galligan Energy Consulting Inc for Clean Energy Solutions Inc.

4/30/2020