City of Berlin, NH

Memo

To: Berlin City Council

From: Jim Wheeler, City Manager

CC: Pamela Laflamme, Community Development Director
Michael Perreault, Director of Public Works
Patty Chase, Finance Director

Date: May 21, 2018

Re: LED Lighting Project Award

The City received a total of six competitive responses to our RFP for LED Streetlight Conversion Firms submitted and were evaluated on project plans and qualifications as well as pricing. The firms and submitted pricing included:

Firm	Price
Affinity LED Light, LLC	$219,743.09
Tanko Lighting	$252,837.00
Pine Ridge Technologies, Inc.	$260,938.00
Ten Connected Solutions	$277,300.00
CEG Solutions	$495,638.00
Ray's Electric and General Contracting	$554,385.00

We have conducted a thorough review of their qualifications and pricing in accordance with the terms set in the RFP. We recommend that the City Council move to Award the Street Lighting Conversion project to Affinity LED Light of Dover, NH and authorize the City Manager to enter into an agreement with Affinity LED Light for the base contract amount of $219,743.09.

For your additional information, attached is a financial tabulation from Affinity's submittal.

affinity led lighting

City of Berlin LED Street Lighting Upgrade

Created: May 12, 2018

City	District	Town	Ledger #:
BERLIN NH	77	01	BERLIN (CITY OF)-EOL 8001104-01

MUNICIPAL STREET LIGHTING SUMMARY

Current Lighting Description	Rated Watts	Size Code	Rate Class	Fixture Qty
				870
50HPS COBRAHEAD	65	047	82	699
100HPS COBRAHEAD	130	151	82	7
150HPS COBRAHEAD	190	188	82	55
250HPS COBRAHEAD	295	153	82	107
400HPS COBRAHEAD	455	187	82	1
400HPS FLOODLIGHT	455	157	82	1
				870

CURRENT LIGHTING (annual)

Existing Rated Watts	Annual Cost Per Fixture	Total Annual Cost*	Total kWh Consumed
65	$129.02	$90,185	197,415
130	$184.67	$1,293	3,954
190	$226.47	$12,456	45,405
295	$281.29	$30,098	137,150
455	$361.79	$362	1,977
455	$361.79	$362	1,977
		$134,755	387,878

*excludes current maintenance costs

SMART READY LED (annual)

LED Rated Watts	Models	Annual Cost Per Fixture ($3.39 per fixture per mo + $0.0515 per rated watts per mo + $0.10862 per kWh)	Total Annual Cost*	Total kWh Consumed
25	Affinity S800-25W-XXK-TX-10-GR-M	$67.93	$47,482	75,929
65	Affinity S800-65W-XXK-TX-10-GR-M	$111.53	$781	1,977
80	Affinity S801-80W-XXK-TX-10-GR-M	$127.88	$7,033	19,118
100	Affinity S801-100W-XXK-TX-10-GR-M	$149.68	$16,015	46,492
100	Affinity S801-100W-XXK-TX-10-GR-M	$149.68	$150	435
150	FL2-150W-XXK	$204.17	$204	652
			$71,665	144,602
	Annual Savings		($63,090)	(243,277)
			-46.8%	-62.7%
	Annual CO^2 Abatement (tons)			(146.0)

UPGRADE PROJECT COSTS

Purchase Cost per Fixture	TOTAL COST	Installation Cost per Fixture			Total Purchase & Installed Cost
MATERIAL COST FOR EVERSOURCE BC ANALYSIS					
$137.00	$95,763.00	$83.64	$58,467.33	$220.64	$154,230.33
$183.00	$1,281.00	$83.64	$585.51	$266.64	$1,866.51
$198.00	$10,890.00	$83.64	$4,600.43	$281.64	$15,490.43
$211.00	$22,577.00	$83.64	$8,949.93	$294.64	$31,526.93
$211.00	$211.00	$83.64	$83.64	$294.64	$294.64
$379.00	$379.00	$83.64	$83.64	$462.64	$462.64
avg $150.69	$131,101	avg $83.64	$72,770	avg $234.34	$203,871
				Incentive	($86,975)
				Net	$116,896
				Simple Payback	1.85 years

INCENTIVE

TO BE VERIFIED BY EVERSOURCE

Incentive / Fixture	Product Code	Total Incentive
($100)	90L	($69,900)
($100)	90L	($700)
($100)	90L	($5,500)
($100)	90L	($10,700)
($100)	90L	($100)
($75)	81L	($75)
		($86,975)

SIMPLE PAYBACK

		Payback
Net Investment	$116,896	
Annual Savings	($63,090)	1.85 years
Monthly Savings	($5,257)	22.2 months

*SAVINGS, RETURN ON INVESTMENT and 10yr CAPEX IMPACT**

		Cumulative Savings	Cumulative ROI	
Year	1	$63,090	($53,807)	-46%
Year	2	$126,180	$9,283	8%
Year	3	$189,270	$72,373	62%
Year	4	$252,359	$135,463	116%
Year	5	$315,449	$198,553	170%
Year	10	$630,899	$514,002	440%
Year	15	$946,348	$829,451	710%
Year	20	$1,261,797	$1,144,901	979%

*excludes current and future maintenance costs

Cumulative CAPEX Impact (10yr)	
CAPEX	Profit/Loss
($11,690)	$51,400
($23,379)	$102,800
($35,069)	$154,201
($46,759)	$205,601
($58,448)	$257,001
($116,896)	$514,002

Cumulative Operating Hours
4,345
8,690
13,035
17,380
21,725
43,450
65,175
86,900

	Cumulative CO^2 Abatement (tons)
1	(146.0)
2	(291.9)
3	(437.9)
4	(583.9)
5	(729.8)
10	(1,459.7)
15	(2,189.5)
20	(2,919.3)