



**High Performance
Lighting Improvement Project
Prepared for**



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**Carl Edin
February 11, 2019**





February 11, 2019

Mr. Matt Henry
Town Administrator
Town of Henniker
18 Depot Hill Road
Henniker, NH 03242

Re: 2019 High Performance Lighting Improvement Project

Dear Matt,

Enclosed you will find our turnkey energy saving lighting proposal. By implementing these cost savings measures, the Town of Henniker will achieve the following benefits:

- Reduced operating cost
- Reduced owning cost by removing inefficient incandescent, HID and T12 technology along with standard CFL & T8 technology
- Utilization of high efficiency LED technology and controls
- Standardization of lighting components
- Improved light quality and quantity
- Eversource Incentive (pending approval)
- Excellent payback/ROI

We look forward to working with you to reach your goals of lighting improvements and energy conservation. After reviewing, please contact me at (207) 767-1313 or (207) 400-4767 to answer any questions.

Sincerely,

Carl Edin
Project Developer
Project Manager





Table of Contents:

Benefits of a Turnkey Lighting Upgrade

Environmental Impact

Supporting Information

Room by Room Savings Analysis

Community Center

Fire Department

Grange Hall

Library

Police Department

Recycling Center

Town Hall

Waste Water Facility

Financial Investment

Cost-Savings Summary

Project Process Recap





Benefits of a Turnkey Lighting Upgrade

- Complete cost analysis: room by room survey of existing system compared to a new proposed system, providing kW and kWh savings projections
- Product specification: high efficiency equipment being specified to reduce energy and maintenance cost
- Turnkey Installation/Project Management:
 - Providing detailed information of work to be completed
 - Overseeing of Installation with sub-contractors
 - Proper disposal of all waste-(hazardous and non-hazardous) with certificates of recycling provided
 - Weekly updates-communication with customer on progress of project completion
 - Pre and Post walkthrough's with Eversource for final approvals
- Customer benefits:
 - With the exception of scheduling, Town of Henniker is able to focus on other pressing matters.
 - Cost savings will be achieved in a much quicker time frame

Warranty information

Ballast	5 years
LED Lamps	3-5 years
LED Fixtures/Kits	5 years
Controls	5 years
Labor	90 days
Labor Workmanship	1 year

EMC's Assurance

As a "turnkey" Energy Service Company, (ESCO) EMC will design and project manage the installation of proven energy saving technologies as well as provide periodic follow up to assure complete customer satisfaction.





Environmental Impact – Going Green February 2019

The **67,192 kWh** saved annually by this project equates to the following positive environmental impacts:

- **6 households** is the average number of houses that can now be powered from this project. The average U.S. household consumes 11,280 kWh annually.
- **4,636 fewer gallons of oil** need to be imported, reducing our dependence on foreign oil.
- **41 tons of CO₂**
Carbon Dioxide is considered a greenhouse gas and is a major contributor to global warming.
- **813 lbs. of SO₂**
Sulfur Dioxide- some major health effects associated with this pollutant are: asthma, respiratory illness and aggravation of existing cardiovascular disease.
- **414 lbs. of Nox**
Nitrogen Oxides are considered contributors to acid rain and ground level ozone (or smog).
- **28 lbs. of visible particulate**



Supporting Information

Room by Room Savings Analysis

**Community Center
Fire Department
Grange Hall
Library
Police Department
Recycling Center
Town Hall
Waste Water Facility**





Town of Henniker, NH

Community Center

Room By Room Savings Analysis



Line	Room	EMC CM Code	Count	Hours/Week	Hours/Year	Curr kW	Curr I/W	Curr Watts	Curr kWh	Prop kW	Prop I/W	Prop Watts	Prop kWh	kWh Svgs	Add'l kWh Svgs
1	1FL- Back Entry	W2L4-T8/LED2L4-10-L	2	30/52	1560	0.12	60.00	120.00	187.20	0.04	20.00	40.00	62.40	124.80	0.00
2	1FL- RR 1	WM2L2-T8/LED2L2-7-L	1	15/52	780	0.04	37.00	37.00	28.86	0.01	14.00	14.00	10.92	17.94	0.00
3	1FL- RR 1	FAN14CF/LED6A-NL	1	15/52	780	0.02	16.00	16.00	12.48	0.01	6.00	6.00	4.68	7.80	0.00
4	1FL- Open	WM2L4/LED2L4-10-L	16	30/52	1560	1.28	80.00	1280.00	1996.80	0.32	20.00	320.00	499.20	1497.60	0.00
5	1FL- Open	PM3L40BX/LED3L22BX-NL	2	30/52	1560	0.20	102.00	204.00	318.24	0.13	66.00	132.00	205.92	112.32	0.00
6	1FL- Stg 1&2	PS60/LED6A-NL	1	10/52	520	0.06	60.00	60.00	31.20	0.01	6.00	6.00	3.12	28.08	0.00
7	1FL- Front Entry	W2L4-T8/LED2L4-10-L	2	30/52	1560	0.12	60.00	120.00	187.20	0.04	20.00	40.00	62.40	124.80	0.00
8	EXT- Back	FL2L75PAR38/LED2L15PAR38-NL	1	84/52	4368	0.15	150.00	150.00	655.20	0.03	30.00	30.00	131.04	524.16	0.00
9	EXT- Front	WM18CF/LED6A-NL	1	84/52	4368	0.02	20.00	20.00	87.36	0.01	6.00	6.00	26.21	61.15	0.00
10	LL- Teen Center	T4L4-T8/LED2L4-12-N	12	20/52	1040	1.34	112.00	1344.00	1397.76	0.29	24.00	288.00	299.52	1098.24	0.00
11	LL- Corr 1	W2L4-T8/LED2L4-10-L	2	20/52	1040	0.12	60.00	120.00	124.80	0.04	20.00	40.00	41.60	83.20	0.00
12	LL- Kitchen	W2L4-T8/LED2L4-10-L	1	20/52	1040	0.06	60.00	60.00	62.40	0.02	20.00	20.00	20.80	41.60	0.00
13	LL- Kitchen	W4L4-8F-T8/LED4L4-10-L	2	20/52	1040	0.22	112.00	224.00	232.96	0.08	40.00	80.00	83.20	149.76	0.00
14	LL- Stg	S2L4-T8/LED2L4-10-L	2	10/52	520	0.12	60.00	120.00	62.40	0.04	20.00	40.00	20.80	41.60	0.00
15	LL- RR 1	FAN14CF/LED6A-NL	1	15/52	780	0.02	16.00	16.00	12.48	0.01	6.00	6.00	4.68	7.80	0.00
16	LL- RR 1	WM2L2-T8/LED2L2-7-L	1	15/52	780	0.04	37.00	37.00	28.86	0.01	14.00	14.00	10.92	17.94	0.00
17	LL- RR 2	FAN14CF/LED6A-NL	1	15/52	780	0.02	16.00	16.00	12.48	0.01	6.00	6.00	4.68	7.80	0.00
18	LL- RR 2	WM2L2-T8/LED2L2-7-L	1	15/52	780	0.04	37.00	37.00	28.86	0.01	14.00	14.00	10.92	17.94	0.00
			50			3.98			5467.54	1.10				3964.53	0.00
										2.88					3964.53



Town of Henniker, NH

Fire Department

Room By Room Savings Analysis



Line	Room	EMC CM Code	Count	Hours/Week	Hours/Year	OS Type	Curr kW	Curr I/W	Curr Watts	Curr kWh	Prop kW	Prop I/W	Prop Watts	Prop kWh	kWh Svgs	Add'l kWh Svgs
1	1FL- Entry	WLED/REMAIN	1	60/52	3120		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	1FL- Radio	WLED/REMAIN	2	60/52	3120		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	1FL- Stair	W2L4-T8/LED2L4-10-L	1	60/52	3120		0.06	60.00	60.00	187.20	0.02	20.00	20.00	62.40	124.80	0.00
4	2FL- Day Rm	W4L4-T8/LED4L4-10-L	8	60/52	3120		0.90	112.00	896.00	2795.52	0.32	40.00	320.00	998.40	1797.12	0.00
5	2FL- PO 1	W4L4-T8/LED4L4-10-L	2	40/52	2080		0.22	112.00	224.00	465.92	0.08	40.00	80.00	166.40	299.52	0.00
6	2FL- PO 2	W4L4-T8/LED4L4-10-L	2	40/52	2080		0.22	112.00	224.00	465.92	0.08	40.00	80.00	166.40	299.52	0.00
7	2FL- Stg	SM3L14CF/LED3L6A-NL	1	10/52	520		0.05	48.00	48.00	24.96	0.02	18.00	18.00	9.36	15.60	0.00
8	2FL- RR 1	SM3L14CF/LED3L6A-NL	1	20/52	1040		0.05	48.00	48.00	49.92	0.02	18.00	18.00	18.72	31.20	0.00
9	2FL- RR 1	RC14CF/LED6A-NL	1	20/52	1040		0.02	16.00	16.00	16.64	0.01	6.00	6.00	6.24	10.40	0.00
10	2FL- RR 2	RC14CF/LED6A-NL	1	20/52	1040		0.02	16.00	16.00	16.64	0.01	6.00	6.00	6.24	10.40	0.00
11	2FL- RR 2	SM3L14CF/LED3L6A-NL	1	20/52	1040		0.05	48.00	48.00	49.92	0.02	18.00	18.00	18.72	31.20	0.00
12	2FL- Stg 2	SM3L14CF/LED3L6A-NL	1	10/52	520		0.05	48.00	48.00	24.96	0.02	18.00	18.00	9.36	15.60	0.00
13	2FL- Stg 3	PSLED/REMAIN	1	10/52	520		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	2FL- Bunk 1	SM3L14CF/LED3L6A-NL	1	20/52	1040		0.05	48.00	48.00	49.92	0.02	18.00	18.00	18.72	31.20	0.00
15	2FL- Bunk 2	SM3L14CF/LED3L6A-NL	1	20/52	1040		0.05	48.00	48.00	49.92	0.02	18.00	18.00	18.72	31.20	0.00
16	2FL- Stair 2	W2L4-T8/LED2L4-10-L	1	60/52	3120		0.06	60.00	60.00	187.20	0.02	20.00	20.00	62.40	124.80	0.00
17	1FL- RR 1	SM3L14CF/LED3L6A-NL	1	20/52	1040		0.05	48.00	48.00	49.92	0.02	18.00	18.00	18.72	31.20	0.00
18	1FL- Corr	SM3L14CF/LED3L6A-NL	1	60/52	3120		0.05	48.00	48.00	149.76	0.02	18.00	18.00	56.16	93.60	0.00
19	1FL- Kitchen	W4L4-T8/LED4L4-10-L	2	50/52	2600		0.22	112.00	224.00	582.40	0.08	40.00	80.00	208.00	374.40	0.00
20	1FL- Training	W4L4-T8/LED4L4-10-L	8	30/52	1560		0.90	112.00	896.00	1397.76	0.32	40.00	320.00	499.20	898.56	0.00
21	1FL- Training	W2L4-T8/LED2L4-10-L	1	30/52	1560		0.06	60.00	60.00	93.60	0.02	20.00	20.00	31.20	62.40	0.00
22	1FL- Fire Bays	I2L4-8F-T8/LED2L4-12-N	36	40/52	2080		2.16	60.00	2160.00	4492.80	0.86	24.00	864.00	1797.12	2695.68	0.00
23	1FL- Fire Bays	ILED/REMAIN	9	40/52	2080		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	1FL- Antique	TR18CF-R20/LED10R20-NL	6	10/52	520		0.12	20.00	120.00	62.40	0.06	10.00	60.00	31.20	31.20	0.00
25	1FL- Fire Bays	HB/REMAIN	1	40/52	2080		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	1FL- Laundry	SMLED/REMAIN	1	20/52	1040		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	1FL- RR 1 & 2	SMLED/REMAIN	2	20/52	1040		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	1FL- Oxygen	S2L4-T8/LED2L4-10-L	1	20/52	1040	EMS	0.06	60.00	60.00	62.40	0.02	20.00	20.00	20.80	41.60	0.00
29	1FL- Furnace	S2L4-T8/LED2L4-10-L	1	10/52	520	EMS	0.06	60.00	60.00	31.20	0.02	20.00	20.00	10.40	20.80	0.00
30	1FL- Electric	S2L4-T8/LED2L4-10-L	1	20/52	1040		0.06	60.00	60.00	62.40	0.02	20.00	20.00	20.80	41.60	0.00
31	EXT	LED/REMAIN	1				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			98				5.52			11369.28	2.08				7113.60	0.00
											3.44					7113.60



Town of Henniker, NH

Grange Hall

Room By Room Savings Analysis



Line	Room	EMC CM Code	Count	Hours/Week	Hours/Year	Curr kW	Curr l/W	Curr Watts	Curr kWh	Prop kW	Prop l/W	Prop Watts	Prop kWh	kWh Svgs	Add'l kWh Svgs
001	1FL- Open	W2L4-T8/LED2L4-10-L	5	20/52	1040	0.30	60.00	300.00	312.00	0.10	20.00	100.00	104.00	208.00	0.00
002	1FL- Open	W2L4-T8/LED2L4-10-L	2	20/52	1040	0.12	60.00	120.00	124.80	0.04	20.00	40.00	41.60	83.20	0.00
003	1FL- Front	SM60/LED6A-NL	1	20/52	1040	0.06	60.00	60.00	62.40	0.01	6.00	6.00	6.24	56.16	0.00
004	LL- Stair	WM14CF/LED6A-NL	1	20/52	1040	0.02	16.00	16.00	16.64	0.01	6.00	6.00	6.24	10.40	0.00
005	LL- Food Pantry	I2L4-T8/VLED4-22-NF	4	20/52	1040	0.24	60.00	240.00	249.60	0.09	22.00	88.00	91.52	158.08	0.00
006	LL- Food Pantry	I2L4-T8/VLED4-22-NF	4	20/52	1040	0.24	60.00	240.00	249.60	0.09	22.00	88.00	91.52	158.08	0.00
007	1FL- RR	FAN14CF/LED6A-NL	1	20/52	1040	0.02	16.00	16.00	16.64	0.01	6.00	6.00	6.24	10.40	0.00
008	1FL- Copy	PC4L4-T8/LED4L4-10-L	2	20/52	1040	0.22	112.00	224.00	232.96	0.08	40.00	80.00	83.20	149.76	0.00
009	EXT- Back	WPLED/REMAIN	1	84/52	4368	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
010	EXT- Stair	SM60/LED6A-NL	1	20/52	1040	0.06	60.00	60.00	62.40	0.01	6.00	6.00	6.24	56.16	0.00
			22			1.28			1327.04	0.42				890.24	0.00
										0.86					890.24



Town of Henniker, NH

Library

Room By Room Savings Analysis



Line	Room	EMC CM Code	Count	Hours/Week	Hours/Year	Curr kW	Curr I/W	Curr Watts	Curr kWh	Prop kW	Prop I/W	Prop Watts	Prop kWh	kWh Svgs	Add'l kWh Svgs
1	LL- Entry Stair	SM2L4-T8/LED2L4-10-L	6	50/52	2600	0.36	60.00	360.00	936.00	0.12	20.00	120.00	312.00	624.00	0.00
2	1FL- Children's	T2L4-1X4-T8/LED2L4-10-L	18	50/52	2600	1.08	60.00	1080.00	2808.00	0.36	20.00	360.00	936.00	1872.00	0.00
3	1FL- Open	W2L4-T8/LED2L4-10-L	3	50/52	2600	0.18	60.00	180.00	468.00	0.06	20.00	60.00	156.00	312.00	0.00
4	1FL- Open	W4L4-8F-T8/LED4L4-10-L	9	50/52	2600	1.01	112.00	1008.00	2620.80	0.36	40.00	360.00	936.00	1684.80	0.00
5	1FL- Corr 1	W2L4-T8/LED2L4-10-L	1	50/52	2600	0.06	60.00	60.00	156.00	0.02	20.00	20.00	52.00	104.00	0.00
6	1FL- Corr 1	T2L2U6-T8/VLED2-15-KIT	1	50/52	2600	0.06	60.00	60.00	156.00	0.02	15.00	15.00	39.00	117.00	0.00
7	1FL- RR 1	T2L2U6-T8/VLED2-15-KIT	1	20/52	1040	0.06	60.00	60.00	62.40	0.02	15.00	15.00	15.60	46.80	0.00
8	1FL- Man Lift	SM2L14CF/SMLED14-12-NF	1	50/52	2600	0.03	32.00	32.00	83.20	0.01	14.00	14.00	36.40	46.80	0.00
9	2FL- Open	PM2L4-T8/LED2L4-10-L	2	50/52	2600	0.12	60.00	120.00	312.00	0.04	20.00	40.00	104.00	208.00	0.00
10	2FL- Open	CW2L4-8F-T8/LED2L4-10-L	6	50/52	2600	0.36	60.00	360.00	936.00	0.12	20.00	120.00	312.00	624.00	0.00
11	2FL- Open	CW1L4-T8/LED1L4-10-L	6	50/52	2600	0.18	30.00	180.00	468.00	0.06	10.00	60.00	156.00	312.00	0.00
12	2FL- Reception	SM4L4-T8/LED4L4-12-N	7	50/52	2600	0.78	112.00	784.00	2038.40	0.34	48.00	336.00	873.60	1164.80	0.00
13	2FL- Kitchen	WM1L4-T8/LED1L4-10-L	1	50/52	2600	0.03	30.00	30.00	78.00	0.01	10.00	10.00	26.00	52.00	0.00
14	2FL- RR1	WM14CF/LED6A-NL	1	20/52	1040	0.02	16.00	16.00	16.64	0.01	6.00	6.00	6.24	10.40	0.00
15	2FL- Entry	SM2L14CF/SMLED14-12-NF	1	50/52	2600	0.03	32.00	32.00	83.20	0.01	14.00	14.00	36.40	46.80	0.00
16	2FL- Loft Strg	SM60/LED6A-NL	4	20/52	1040	0.24	60.00	240.00	249.60	0.02	6.00	24.00	24.96	224.64	0.00
17	2FL- Sitting	SM4L4-T8/LED4L4-12-N	13	50/52	2600	1.46	112.00	1456.00	3785.60	0.62	48.00	624.00	1622.40	2163.20	0.00
18	2FL- Media Center	SM4L4-T8/LED4L4-12-N	10	50/52	2600	1.12	112.00	1120.00	2912.00	0.48	48.00	480.00	1248.00	1664.00	0.00
19	2FL- Check Out	PM4L4-T8/LED4L4-10-L	1	50/52	2600	0.11	112.00	112.00	291.20	0.04	40.00	40.00	104.00	187.20	0.00
20	2FL- PO 1	PM2L4-T8/LED2L4-10-L	3	50/52	2600	0.18	60.00	180.00	468.00	0.06	20.00	60.00	156.00	312.00	0.00
			95			7.47			18929.04	2.78				11776.44	0.00
										4.69					11776.44



Town of Henniker, NH

Police Department

Room By Room Savings Analysis

Line	Room	EMC CM Code	Count	Hours/Week	Hours/Year	Curr kW	Curr I/W	Curr Watts	Curr kWh	Prop kW	Prop I/W	Prop Watts	Prop kWh	kWh Svgs	Add'l kWh Svgs
001	1FL- PO 1	T3L4-T8/VLED4-22-KIT	4	40/52	2080	0.35	88.00	352.00	732.16	0.09	22.00	88.00	183.04	549.12	0.00
002	1FL- File	T3L4-T8/VLED4-22-KIT	1	10/52	520	0.09	88.00	88.00	45.76	0.02	22.00	22.00	11.44	34.32	0.00
003	1FL- Corr 1	T3L4-T8/VLED4-22-KIT	4	60/52	3120	0.35	88.00	352.00	1098.24	0.09	22.00	88.00	274.56	823.68	0.00
004	1FL- Kitchen	T3L4-T8/VLED4-22-KIT	1	60/52	3120	0.09	88.00	88.00	274.56	0.02	22.00	22.00	68.64	205.92	0.00
005	1FL- Interview	T3L4-T8/VLED4-22-KIT	2	10/52	520	0.18	88.00	176.00	91.52	0.04	22.00	44.00	22.88	68.64	0.00
006	1FL- PO 2	T3L4-T8/VLED4-22-KIT	4	40/52	2080	0.35	88.00	352.00	732.16	0.09	22.00	88.00	183.04	549.12	0.00
007	1FL- Corr 1	I2L20/LED-EM-NF	2	168/52	8736	0.08	40.00	80.00	698.88	0.00	2.00	4.00	34.94	663.94	0.00
008	1FL- Evidence	T3L4-T8/VLED4-22-KIT	2	10/52	520	0.18	88.00	176.00	91.52	0.04	22.00	44.00	22.88	68.64	0.00
009	1FL- Copy	T3L4-T8/VLED4-22-KIT	2	60/52	3120	0.18	88.00	176.00	549.12	0.04	22.00	44.00	137.28	411.84	0.00
010	1FL- Officer's Rm	T3L4-T8/VLED4-22-KIT	8	60/52	3120	0.70	88.00	704.00	2196.48	0.18	22.00	176.00	549.12	1647.36	0.00
011	1FL- Lockers	T3L4-T8/VLED4-22-KIT	1	40/52	2080	0.09	88.00	88.00	183.04	0.02	22.00	22.00	45.76	137.28	0.00
012	1FL- Strg	W2L4-8F-T8/LED2L4-10-L	1	10/52	520	0.06	60.00	60.00	31.20	0.02	20.00	20.00	10.40	20.80	0.00
013	1FL- Boiler	W2L8/LED2L8-35-L	1	10/52	520	0.14	138.00	138.00	71.76	0.07	70.00	70.00	36.40	35.36	0.00
014	1FL- Booking	WLED/REMAIN	1	10/52	520	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
015	1FL- Holding 1	TP60I/LED6A-NL	1	10/52	520	0.06	60.00	60.00	31.20	0.01	6.00	6.00	3.12	28.08	0.00
016	1FL- Holding 2	TP60I/LED6A-NL	1	10/52	520	0.06	60.00	60.00	31.20	0.01	6.00	6.00	3.12	28.08	0.00
017	1FL- Sally Part	SLED4L4-8F/REMAIN	2	40/52	2080	0.10	48.00	96.00	199.68	0.10	48.00	96.00	199.68	0.00	0.00
018	1FL- Armory	RCLED/REMAIN	2	10/52	520	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
019	1FL- Shower's	T3L4-T8/VLED4-22-KIT	1	20/52	1040	0.09	88.00	88.00	91.52	0.02	22.00	22.00	22.88	68.64	0.00
020	1FL- Shower's	FAN14CF/LED6A-NL	1	20/52	1040	0.02	16.00	16.00	16.64	0.01	6.00	6.00	6.24	10.40	0.00
021	1FL- Women	FAN14CF/LED6A-NL	1	20/52	1040	0.02	16.00	16.00	16.64	0.01	6.00	6.00	6.24	10.40	0.00
022	1FL- Women	WMLED/REMAIN	1	20/52	1040	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
023	1FL- PO	T3L4-T8/VLED4-22-KIT	4	40/52	2080	0.35	88.00	352.00	732.16	0.09	22.00	88.00	183.04	549.12	0.00
024	1FL- Lobby	T3L4-T8/VLED4-22-KIT	1	60/52	3120	0.09	88.00	88.00	274.56	0.02	22.00	22.00	68.64	205.92	0.00
025	EXT- Right	WPLED/REMAIN	1			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			50			3.61			8190.00	0.98				6116.66	0.00
										2.62					6116.66



Town of Henniker, NH
 Recycling Center
 Room By Room Savings Analysis



Line	Room	EMC CM Code	Count	Hours/Week	Hours/Year	Control Type	Curr kW	Curr I/W	Curr Watts	Curr kWh	Prop kW	Prop I/W	Prop Watts	Prop kWh	kWh Svgs	Add'l kWh Svgs
001	1FL- Garage	HIF4L4-T5HO/HBLED2-100-POS-NF	2	25/52	1300	POS	0.47	234.00	468.00	608.40	0.20	100.00	200.00	260.00	348.40	98.80
002	1FL- Garage	FL500H/FLLED45-NF	1	25/52	1300		0.50	500.00	500.00	650.00	0.05	45.00	45.00	58.50	591.50	0.00
003	EXT- Right	WP400S/WPLED57-NF	1	84/52	4368		0.46	460.00	460.00	2009.28	0.06	57.00	57.00	248.98	1760.30	0.00
004	EXT- Left	WP400S/WPLED57-NF	1	84/52	4368		0.46	460.00	460.00	2009.28	0.06	57.00	57.00	248.98	1760.30	0.00
005	EXT- Back/Front	WP70S/WPLED22-NF	2	84/52	4368		0.18	90.00	180.00	786.24	0.04	22.00	44.00	192.19	594.05	0.00
006	EXT- Hopper	WP70S-PE/WPLED22-PE-NF	2	84/52	4368		0.18	90.00	180.00	786.24	0.04	22.00	44.00	192.19	594.05	0.00
007	EXT- Hopper	WPLED/REMAIN	1	84/52	4368		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
008	1FL- Office	W2L4-T8/LED2L4-10-L	1	25/52	1300		0.06	60.00	60.00	78.00	0.02	20.00	20.00	26.00	52.00	0.00
009	1FL- Hopper	WP250S/WPLED57-NF	2	25/52	1300		0.59	295.00	590.00	767.00	0.11	57.00	114.00	148.20	618.80	0.00
010	1FL- Hopper PO 1	W2L4-T8/LED2L4-10-L	1	25/52	1300		0.06	60.00	60.00	78.00	0.02	20.00	20.00	26.00	52.00	0.00
011	EXT- Hopper Front	WP250S-PE/WPLED57-PE-NF	1	84/52	4368		0.30	295.00	295.00	1288.56	0.06	57.00	57.00	248.98	1039.58	0.00
012	1FL- Workshop	I2L8HO/LED8-65-KIT	5	25/52	1300		1.14	227.00	1135.00	1475.50	0.33	65.00	325.00	422.50	1053.00	0.00
013	1FL- Workshop- Tanks	I2L8HO/LED8-65-KIT	4	25/52	1300		0.91	227.00	908.00	1180.40	0.26	65.00	260.00	338.00	842.40	0.00
014	EXT- Front	WP400S-PE/WPLED57-PE-NF	1	84/52	4368		0.46	460.00	460.00	2009.28	0.06	57.00	57.00	248.98	1760.30	0.00
			25				5.76			13726.18	1.30				11066.69	98.80
											4.46					11165.49



Town of Henniker, NH
 Town Hall
 Room by Room Savings Analysis



Line	Room	EMC CM Code	Count	Hours/Week	Hours/Year	WWS	Control Type	Curr kW	Curr I/W	Curr Watts	Curr kWh	Prop kW	Prop I/W	Prop Watts	Prop kWh	kWh Svgs	Add'l kWh Svgs
001	1FL- Entry Back	W2L4-T8/LED2L4-10-L	1	40/52	2080			0.06	60.00	60.00	124.80	0.02	20.00	20.00	41.60	83.20	0.00
002	1FL- RR1	T3L4-T8/VLED4-22-KIT	1	20/52	1040		EMS	0.09	88.00	88.00	91.52	0.02	22.00	22.00	22.88	68.64	0.00
003	1FL- Kitchen	T3L4-T8/VLED4-22-KIT	1	40/52	2080			0.09	88.00	88.00	183.04	0.02	22.00	22.00	45.76	137.28	0.00
004	1FL- Corr 1	T3L4-T8/VLED4-22-NL-KIT	7	40/52	2080		NLIGHT AIR	0.62	88.00	616.00	1281.28	0.15	22.00	154.00	320.32	960.96	121.72
005	1FL- Town Admin	PC3L4-T8/VLED4-22-NL-KIT	3	40/52	2080	1	NLIGHT AIR	0.26	88.00	264.00	549.12	0.07	22.00	66.00	137.28	411.84	52.17
006	1FL- Meeting Rm	T3L4-T8/VLED4-22-NL-KIT	9	40/52	2080	1	NLIGHT AIR	0.79	88.00	792.00	1647.36	0.20	22.00	198.00	411.84	1235.52	156.50
007	1FL- Selectman	PC3L4-T8/VLED4-22-NL-KIT	2	40/52	2080	1	NLIGHT AIR	0.18	88.00	176.00	366.08	0.04	22.00	44.00	91.52	274.56	34.78
008	1FL- Front Entry	W2L4-T8/LED2L4-10-L	1	40/52	2080			0.06	60.00	60.00	124.80	0.02	20.00	20.00	41.60	83.20	0.00
009	1FL- Assessing	T3L4-T8/VLED4-22-NL-KIT	2	40/52	2080	1	NLIGHT AIR	0.18	88.00	176.00	366.08	0.04	22.00	44.00	91.52	274.56	34.78
010	1FL- Vault	W2L4-T8/LED2L4-10-L	1	20/52	1040			0.06	60.00	60.00	62.40	0.02	20.00	20.00	20.80	41.60	0.00
011	1FL- Town Clerk	T3L4-T8/VLED4-22-NL-KIT	4	40/52	2080	1	NLIGHT AIR	0.35	88.00	352.00	732.16	0.09	22.00	88.00	183.04	549.12	69.56
012	1FL- Finance	T3L4-T8/VLED4-22-NL-KIT	2	40/52	2080	1	NLIGHT AIR	0.18	88.00	176.00	366.08	0.04	22.00	44.00	91.52	274.56	34.78
013	1FL- RR 2	WSLED/REMAIN	1	20/52	1040			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
014	1FL- RR 2	FANLED/REMAIN	1	20/52	1040		EMS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
015	2FL- Open Stg	PM75/LED11A-NL	6	20/52	1040			0.45	75.00	450.00	468.00	0.07	11.00	66.00	68.64	399.36	0.00
016	EXT- Back	RCLED/REMAIN	2	84/52	4368			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
017	EXT- Parking	YL175MH-PE/CHLED40-NF	1	84/52	4368			0.21	205.00	205.00	895.44	0.04	40.00	40.00	174.72	720.72	0.00
			45			6		3.56			7258.16	0.85				5515.12	504.28
												2.72					6019.40



Town of Henniker, NH

Waste Water Facility

Room By Room Savings Analysis



Line	Room	EMC CM Code	Count	Hours/Week	Hours/Year	Curr kW	Curr I/W	Curr Watts	Curr kWh	Prop kW	Prop I/W	Prop Watts	Prop kWh	kWh Svgs	Add'l kWh Svgs
001	1FL- Corr 1	T2L4-1X4-T8/LED2L4-10-L	5	40/52	2080	0.30	60.00	300.00	624.00	0.10	20.00	100.00	208.00	416.00	0.00
002	1FL- Main Elect	I2L4-T8/LED2L4-10-L	4	40/52	2080	0.24	60.00	240.00	499.20	0.08	20.00	80.00	166.40	332.80	0.00
003	1FL- RR 1	I4L4-8F-T8/LED4L4-10-L	1	20/52	1040	0.11	112.00	112.00	116.48	0.04	40.00	40.00	41.60	74.88	0.00
004	1FL- Shop	I2L4-T8/LED2L4-12-N	6	40/52	2080	0.36	60.00	360.00	748.80	0.14	24.00	144.00	299.52	449.28	0.00
005	1FL- Furnace	I2L4-T8/LED2L4-10-L	2	20/52	1040	0.12	60.00	120.00	124.80	0.04	20.00	40.00	41.60	83.20	0.00
006	1FL- Grit Rm	EXP200/LED24-NL	25	40/52	2080	5.00	200.00	5000.00	10400.00	0.60	24.00	600.00	1248.00	9152.00	0.00
007	1FL- PO 1	T4L4-T8/VLED4-22-KIT	6	30/52	1560	0.67	112.00	672.00	1048.32	0.13	22.00	132.00	205.92	842.40	0.00
008	1FL- Supply	VT2L4-T8/LED2L4-12-N	12	40/52	2080	0.72	60.00	720.00	1497.60	0.29	24.00	288.00	599.04	898.56	0.00
009	LL- Pump	VT2L4-T8/LED2L4-12-N	10	40/52	2080	0.60	60.00	600.00	1248.00	0.24	24.00	240.00	499.20	748.80	0.00
010	EXT- Blower	WP175MH/WPLED37-NF	2	84/52	4368	0.41	205.00	410.00	1790.88	0.07	37.00	74.00	323.23	1467.65	0.00
011	1FL- Blower	I4L4-8F-T8/LED4L4-10-L	5	40/52	2080	0.56	112.00	560.00	1164.80	0.20	40.00	200.00	416.00	748.80	0.00
012	Belt Press- Garage 1	S2L8HO/LED8-65-KIT	4	40/52	2080	0.91	227.00	908.00	1888.64	0.26	65.00	260.00	540.80	1347.84	0.00
013	Belt Press- Garage 1	I2L4/LED4-24-KIT	8	40/52	2080	0.64	80.00	640.00	1331.20	0.19	24.00	192.00	399.36	931.84	0.00
014	Belt Press- Garage 2	VT2L4/LED2L4-12-N	3	40/52	2080	0.24	80.00	240.00	499.20	0.07	24.00	72.00	149.76	349.44	0.00
015	Belt Press- Garage 3	PSLED/REMAIN	8	40/52	2080	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
016	Belt Press- Garage 3	PS100/LED11A-NL	1	40/52	2080	0.10	100.00	100.00	208.00	0.01	11.00	11.00	22.88	185.12	0.00
017	1FL- Sludge	VT2L4/LED2L4-12-N	15	40/52	2080	1.20	80.00	1200.00	2496.00	0.36	24.00	360.00	748.80	1747.20	0.00
018	1FL- Clarifier	JJ100/LED11A-NL	2	40/52	2080	0.20	100.00	200.00	416.00	0.02	11.00	22.00	45.76	370.24	0.00
			119			12.38			26101.92	2.86				20146.05	0.00
										9.53					20146.05



Financial Investment

Cost-Savings Summary





Town of Henniker

Cost Savings Summary

Prepared by Carl Edin

February 11, 2019

Area	Savings		Energy	Maint	Total	Project	Estimated Eversource	Net Project	Payback	ROI
	kW	kWh	Savings	Savings	Savings	Cost	Incentive	Cost		
Community Center	3	3,965	\$ 495.63	\$ 243.00	\$ 738.63	\$ 3,749.00	\$ 1,874.50	\$ 1,874.50	2.54	39.4%
Fire Department	4	7,114	\$ 889.25	\$ 498.00	\$ 1,387.25	\$ 7,143.00	\$ 3,571.50	\$ 3,571.50	2.57	38.8%
Grange Hall*	1	890	\$ 111.25	\$ 107.00	\$ 218.25	\$ 2,299.00	\$ 610.00	\$ 1,689.00	7.74	12.9%
Library	5	11,776	\$ 1,472.00	\$ 471.00	\$ 1,943.00	\$ 9,035.00	\$ 4,517.50	\$ 4,517.50	2.33	43.0%
Police Department	3	6,117	\$ 764.63	\$ 248.00	\$ 1,012.63	\$ 6,308.00	\$ 3,154.00	\$ 3,154.00	3.11	32.1%
Recycling Center	4	11,165	\$ 1,395.63	\$ 123.00	\$ 1,518.63	\$ 9,329.00	\$ 4,664.50	\$ 4,664.50	3.07	32.6%
Town Hall	3	6,019	\$ 752.38	\$ 221.00	\$ 973.38	\$ 6,815.00	\$ 3,407.50	\$ 3,407.50	3.50	28.6%
Waste Water Facility	10	20,146	\$ 2,518.25	\$ 594.00	\$ 3,112.25	\$ 10,975.00	\$ 5,487.50	\$ 5,487.50	1.76	56.7%
TOTALS	33	67,192	\$ 8,399.00	\$ 2,505.00	\$ 10,904.00	\$ 55,653.00	\$ 27,287.00	\$ 28,366.00	2.60	38.4%

Notes:

1. Estimated blended rate is \$.125/kWh

2. Eversource incentives to be approved.

3. *Indicates eligible for prescriptive incentives only





Project Process Recap

- ✓ EMC to complete site survey
- ✓ EMC to generate cost-savings proposal
- EMC to attain electric bills
- EMC to submit application to Eversource for incentive approval
- Town of Henniker to sign EMC & Eversource Terms and Conditions
- EMC to construct project
- EMC to coordinate post-utility walkthrough
- EMC to provide Town of Henniker with warranty book

