



Resource
Lighting + Energy

Energy Efficiency Project Proposal

Bristol Public Schools

129 Church Street | Bristol, CT 06010

Resource Lighting & Energy

291 McGowan Street | Fall River, MA 02723

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We conserve energy to power the future.

RLE's mission is to provide turnkey, design-build energy efficiency solutions that enable our customers to save energy, cut costs and work towards a more sustainable future.



RLE is the trusted energy efficiency upgrade partner of Eversource, the top utility company in America.



OUR CORE VALUES



Partnership

As your company's partner, we adopt your goals as our goals. Your success is our success. We cater your project to fit your company's needs, and cooperate with your schedule to assure that the job is done efficiently and effectively.



Reliability

We pride ourselves on providing clients with consistent, dependable service. You can rely on our team of insightful professionals to provide top-tier service.



Sustainability

We are proud to provide services that are not only sustainable for your business' growth and success, but are also sustainable for the planet.



TIME INVESTED

No-Cost Energy Audit 234.06 hours

Data Analysis/Engineering 380.6 hours

Turnkey Proposal Development 86.2 hours

TOTAL 700.86 hours

- ✓ **DATA COLLECTION.**
We audited and analyzed all equipment at your facility for no cost, so that we can accurately model your energy efficiency improvements.
- ✓ **DESIGN.**
We have a vision of how to upgrade your facility in a way that not only looks good, but also benefits you.
- ✓ **ENGINEERING.**
We developed a plan to properly install upgraded technology within your existing system.
- ✓ **MATERIAL SPECIFICATION.**
We have precisely selected what materials will work best for your space and application.



WE'LL HANDLE IT

- MATERIAL PROCUREMENT.**
We manage the logistics and handling of materials, including trash and recycling.
- GENERAL CONTRACTING.**
We handle the hiring of electrical contractors, and project manage the job from cradle to grave.
- CODE ENFORCEMENT.**
We adhere to all codes and obtain permitting.
- FINANCING OF CONSTRUCTION.**
We assist you with the evaluation of potential financing options.

The RLE team makes energy efficiency upgrades simple. From audit to installation to project completion, we are committed to providing you with the best service.

Summary of Savings



Resource
Lighting + Energy

Our comprehensive energy efficiency upgrades include LED lighting, Lighting Controls replacements at all facilities. This project will generate an annual savings of **\$724,003** and does not include O&M savings which amounts to an additional **\$162,991** annually.

COMPREHENSIVE ENERGY PROJECT

4.80

project payback (years)

\$4,258,619

total project investment
*after incentives

\$724,003

annual energy cost savings

3,109,429

annual kWh savings

see pg. 7 for a more
detailed overview

Summary of Savings



2.089 Metric Tons of CO₂ Removed



5,319,946 Miles Not Driven



2,320,572 LBs of Coal Not Burned



4,837 Barrels of Oil Removed

EVERSOURCE



Bristol CT Public Schools	\$ Energy Savings	\$ O&M Savings	Turnkey Price	Incentive by Measure	Customer Cost	Payback by building
Bristol Central HS	\$ 105,219	\$ 28,183	\$ 903,734	\$ 208,580	\$ 695,154	5.21
Chippens Hill MS	\$ 106,192	\$ 24,402	\$ 785,544	\$ 175,222	\$ 610,322	4.73
Briston Eastern HS	\$ 103,283	\$ 26,133	\$ 825,190	\$ 205,404	\$ 619,785	4.67
Edgewood ES	\$ 44,403	\$ 9,780	\$ 310,743	\$ 73,095	\$ 237,648	4.58
Greene Hills ES	\$ 69,658	\$ 18,895	\$ 530,213	\$ 113,837	\$ 416,376	4.73
Hubbell ES	\$ 47,700	\$ 8,338	\$ 346,676	\$ 78,578	\$ 268,098	4.74
Ivy Drive ES	\$ 37,711	\$ 10,510	\$ 288,432	\$ 62,120	\$ 226,311	4.76
Mountain View ES	\$ 35,417	\$ 6,209	\$ 259,218	\$ 58,228	\$ 200,989	4.81
South Side ES	\$ 43,506	\$ 6,567	\$ 311,860	\$ 71,784	\$ 240,076	4.85
Stafford ES	\$ 51,508	\$ 7,708	\$ 374,939	\$ 84,974	\$ 289,965	4.80
West Bristol	\$ 79,404	\$ 16,266	\$ 584,958	\$ 131,064	\$ 453,894	4.74
Northeast MS	\$ -	\$ -	\$ -	\$ -	\$ -	
	724,003	162,991	5,521,506	1,262,887	4,258,619	4.80



Financial Analysis

\$ 724,003	Annual Energy Savings
\$ 4,258,619	Total Finance Amount
\$ 4,258,619	Eversource Financing - 0%
\$ (59,147)	72 Mons. Financing Payments
\$ 60,334	Monthly Energy Savings
\$ 1,186	Total Cash Positive

NOTE Savings do not include O&M

Sustainability

Our comprehensive energy-efficiency upgrades could reduce your consumption by up to 3,109,429kWh annually.
That is equivalent to...



preventing the CO₂ emissions of...

435

homes' electricity use for one year.*

the carbon offset of planting...

34,543

tree seedlings grown for 10 years.



177,585

bags of waste recycled instead of landfilled.*



eliminating the CO₂ emissions from...

2,320,572

lbs of coal burned.*

*these values were calculated using the EPA's Greenhouse Gas Equivalencies Calculator.

Energy efficiency is not only good for your business, but it is better for our planet.

Together, we can work towards a more sustainable future.



Financing

This project qualifies for **cash-flow positive** financing.

72 months of financed payments:

\$59,147 per month

Annual Energy Savings \$724,003
Total Finance Amount \$4,258,619
Monthly Financing Cost (\$59,147)
Monthly Energy Savings \$60,334

TOTAL MONTHLY
CASH POSITIVE:

\$1,186



Proposal & Savings Guarantee





Bristol CT Public Schools
129 Church Street
Bristol, CT 06010

RE: Letter Agreement for LED Lighting Upgrades:

Dear Bristol Schools,

Our team at Resource Lighting and Energy, Inc., ("RLE.") is pleased to present you with this agreement for LED Lighting upgrades for Bristol CT Public Schools ("Customer").

Scope of Work

The proposed scope of work will provide:

Lighting Scope

- (16,069) Lighting Fixtures and/or lamps will be updated to LED with Controls
 - See scope for fixture locations
 - 1x4, 2x2 and 2x4 Fixtures will have integrated controls
 - Integrated Controls includes:
 - High-end light level tuning
 - Occupancy sensors
 - Daylight sensors
 - All Linear Fixtures will have integrated controls
 - Integrated Controls includes:
 - High-end light level tuning
 - Occupancy sensors
 - Daylight sensors
 - All Recessed Cans will be new LED Fixtures
 - Pendants, Wall Packs, High Bays & Screw Ins will be new LED Fixtures with integrated controls
 - LED Lamps installed
- This project also includes updating the Stage Lighting at each of the two High School Auditoriums
- Electrical Installation to be conducted during first or second shift with prevailing wage labor
- Project Management
 - This includes programming of all Lighting Control Systems
 - This includes system turnover and training
- Utility Rebate Paperwork
- Recycling and Trash Removal
- Electrical Permits
 - Provide new disconnect switches that may be required by new code



Summary of LED Upgrades Per Facility

Bristol Central High School: (2973 Fixtures)

- Turnkey Cost: \$903,734
 - Incentive: \$208,580
 - Annual Energy Savings: \$105,219

Eastern High School: (2069 Fixtures)

- Turnkey Cost: \$825,190
 - Incentive: \$205,404
 - Annual Energy Savings: \$103,283

Chippens Hill Middle School: (2062 Fixtures)

- Turnkey Cost: \$785,544
 - Incentive: \$175,222
 - Annual Energy Savings: \$106,192

Edgewood Elementary School: (697 Fixtures)

- Turnkey Cost: \$310,743
 - Incentive: \$73,095
 - Annual Energy Savings: \$44,403

Greene-Hills Elementary School: (2123 Fixtures)

- Turnkey Cost: \$530,213
 - Incentive: \$113,837
 - Annual Energy Savings: \$69,658

Hubbell Elementary School: (974 Fixtures)

- Turnkey Cost: \$346,676
 - Incentive: \$78,578
 - Annual Energy Savings: \$47,700

Ivy Drive Elementary School: (873 Fixtures)

- Turnkey Cost: \$288,432
 - Incentive: \$62,120
 - Annual Energy Savings: \$37,711

Mountain View Elementary School: (744 Fixtures)

- Turnkey Cost: \$259,218
 - Incentive: \$58,228
 - Annual Energy Savings: \$35,417



South Side School: (817 Fixtures)

- Turnkey Cost: \$311,860
 - Incentive: \$71,784
 - Annual Energy Savings: \$43,506

Stafford School: (967 Fixtures)

- Turnkey Cost: \$374,939
 - Incentive: \$84,974
 - Annual Energy Savings: \$51,508

West Bristol School: (1770 Fixtures)

- Turnkey Cost: \$584,958
 - Incentive: \$131,064
 - Annual Energy Savings: \$79,404

Summary Efficiency Solutions

The costs, savings, and potential estimated utility incentives developed for the energy efficiency solution are as follows.

The total turnkey project cost is **\$5,521,506**. This project saves **\$724,003** in annual energy savings, and **\$162,991** in annual lamp replacement savings for a total project savings of **\$886,994** annually. This project also qualifies for an estimated **\$1,262,887** in lighting incentives (22.9% Total Project Cost) from Eversource. RLE's customer will pay the total project cost of **\$5,521,506** less the Eversource incentive of **\$1,262,887** for a total cost of **\$4,258,619**. Resource Lighting and Energy will receive the Eversource incentive payment.

Description of Efficiency Solutions

The efficiency solution will be installed as a turnkey project with RLE providing project management, obtaining permits and performing trash removal and recycling. All work will be performed in accordance with applicable codes. Pricing is based on work performed during normal business hours or second shift hours at prevailing wage rates. The work does not include correcting existing faulty wiring. If such deficiencies are identified during the installation, a separate price will be provided for repairing the deficiencies.

LED Lighting Upgrade

All the existing interior and exterior lighting will be upgraded to new LED Fixtures. The LED Fixtures being implemented will meet or exceed IES Standard light levels and existing building lighting codes. RLE only uses name brand LED lighting with a proven track record that is DLC approved and provided with at least 5-7-year warranties. Light levels will meet or exceed IES recommended standards. There are additional maintenance savings from avoided lamp replacement.

Warranties

RLE shall perform the services and installation of the equipment and systems described and called for by this Agreement in a good and workmanlike manner and in compliance with all applicable laws. The Lighting System installation shall be warranted to be free from defects in materials and workmanship for

a period of one year thereafter. In its sole election, RLE will repair or replace nonconforming equipment at no charge to Customer. LED light fixtures carry a 5 - 7-year manufacturer's warranty. After Customer's acceptance of this agreement, it shall be the Customer's responsibility to communicate directly with the manufacturers for replacement/repair of failed equipment under warranty. Appropriate manufacturer contact information shall be provided. In no event shall RLE be liable for any incidental, indirect, special, or consequential damages (including but not limited to lost profits), or any costs of cover arising out of or related to the efficiency solutions or any use thereof. There are no other warranties, express or implied, including but not limited to the implied warranties of merchantability and fitness for a particular purpose.

Cost of Services

The total installed cost of these projects is **\$5,521,506**. RLE has qualified this project for incentives of **\$1,262,887** from Eversource with the understanding that the projects will be installed in 2025. RLE will take the incentives as direct payment from Eversource reducing "CUSTOMER" capital cost and removing incentive risk from "CUSTOMER" if RLE receives acceptance of this proposal by March 7, 2025. The remaining cost (**\$5,521,506 - \$1,262,887**) of **\$4,258,619** will be paid by Customer to RLE as follows:

Customer (jointly and severally) agrees to pay RLE total turnkey price of **\$5,521,506** as follows.

1. Bristol will finance the total of **\$4,258,619** through Eversource. This will be paid at 0% interest over 72 months. Eversource will pay RLE the financed amount of **\$4,258,619** directly once the project has been completed and fully inspected by the utility. Eversource will also pay the incentive amount of **\$1,262,887** once the project has been completed and fully inspected by the utility.
2. This contract is only valid if the Eversource Letter of Agreement has been signed by the City of Bristol.
3. If any change orders have been accrued over the course of the project, they shall be paid by Bristol directly to RLE.
4. RLE is offering a savings guarantee on this project. Please see *Attachment A* for additional details.

We appreciate this opportunity to collaborate and work with you and your energy needs. If you are in agreement, please sign, date, and return a copy of this agreement to my attention.

All the best,

Nicholas Procko – RLE

Date

Superintendent of Schools

Date



Attachment A: Savings Guarantee

Resource Energy Solutions, Inc. (RLE) guarantees to the city of Bristol (Customer) that the Eversource Energy Efficiency Project will realize an annual energy savings of *3,190,429 kWh (+/- 20%). *This is pending Eversource LOA savings number* These savings will be obtained through the installation and operation of combined Energy Conservation Measures (ECM's) outlined in our proposal. The 80% savings guarantee is based on Public Utility Regulatory Authority (PURA) standards. Our energy savings estimate will be verified Pre-Installation and Post-Installation by the performance of Measurement and Verification activities.

Savings, Cost and Energy Analysis

Our baseline and energy saving calculations are based on standard energy engineering principles and all calculations are available for our customers to review.

An additional analysis step that RLE takes is to compare the historical utility bills to industry standard benchmarks. This process allows us to have a high level of accuracy when performing our savings analysis.

Existing:

Baseline energy consumption for lighting will be based on industry standard fixture wattages and use the number and type of lamps per fixture along with the number and type of ballasts per fixture. Wattages will be confirmed via spot checking the existing system using the appropriate measurement devices. These fixture wattages will be multiplied by the number of fixtures in each room and categorized by area type (i.e. hallways, restrooms, private offices, open areas, gymnasiums). Operating hours are based on information provided by our customers and on-site facility personnel. Annual run times will be adjusted to reflect holidays and other times at which the facilities may not open for business.

The total of the fixture wattages multiplied by the number of fixtures multiplied by the corresponding operating hours per area type will give us the baseline kW and kWh (kilowatt hours) electrical consumption in total and by area type.

$$\text{area fixture wattage} \times \text{area operating hours} = \text{baseline kWh/area type}$$

$$\text{sum of baseline kWh/area type} = \text{total baseline consumption}$$

Proposed

The proposed energy consumption for the lighting will be calculated in a similar manner using the specified manufacturer's published wattages and based on the associated improvements specified for various fixtures multiplied by the annual operating hours after the installation of occupancy sensors. The operating hours used for the post occupancy sensor installation will be calculated based on information provided by our customers and on-site facility personnel.

The product of the fixture wattages (post retrofit) multiplied by the number of fixtures multiplied by the corresponding operating hours (post occupancy sensor installation) per area type will provide the post kWh (kilowatt hours) electrical consumption. The difference between the baseline consumption and the post consumption is the energy savings that will be seen with the combined lighting improvement and sensor installation.



post retrofit area fixture wattage x post sensor installation area operating hours = proposed kWh/area type

sum of proposed kWh/area type = total proposed consumption
total baseline consumption – total proposed consumption = savings

Pre and Post M&V Activities

Actual savings will be determined from data collection, engineering calculations and stipulated factors. Pre-Installation and Post-Installation power measurements will be taken in statistically significant quantities (areas and measures) to establish the pre-installation baseline and the post-installation performance. Measurements will be taken using a digital multimeter and a recent calibration certificate will be provided. All measurements will be documented and provided in a Savings Reconciliation Report. All calculations in this report will be transparent. This report will be provided to the customer within 45 days of final project acceptance.

In the event that the post measured savings is less than our estimate (within 80% accuracy), RLE will adjust the contract value of any such shortfall per Table 1. Resulting compensation shall be RLE’s sole liability for any shortfall in the Guaranteed Savings. In case of a shortfall, RLE may, at no cost to the Customer and subject to Customer’s written authorization, correct deficiencies in the Work that it believes have created the shortfall and/or implement additional operational improvements or conservation measures that will generate additional savings.

Table 1

Project Cost	Incentive	Annual Savings	kWh Savings	Financed Amount	Payback
\$5,521,506	\$1,262,887	\$724,003	3,190,429	\$4,258,619	4.80
Value of Energy Savings – 4.80 Years			\$ 3,475,214		
<u>Contract Adjustment Calculation for Verified Shortfall in Savings</u>					
% kWh Savings achieved - 80% x Value of 4.80 Year Savings					
Example: 75% achieved					
(75% - 80%) * \$3,475,214 = -\$173,761.72					



Resource
Lighting + Energy

We look forward to
discussing next steps
with you.

Thank you.

Resource Lighting + Energy, Inc.

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