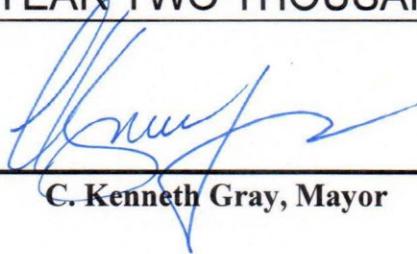




2018-023

CITY OF AMESBURY
IN THE YEAR TWO THOUSAND EIGHTEEN

SPONSORED BY:


C. Kenneth Gray, Mayor

BILL No. 2018-023

An Order to appropriate \$57,000 from Free Cash for the purchase of streetlights in connection with the streetlight LED conversion project.

Summary: This order will fund the purchase of street lights in connection with the streetlight LED conversion project

Be it Ordered by the City Council of the City of Amesbury assembled, and by the authority of the same, as follows:

That \$57,000 is hereby appropriated from Free Cash for the purchase of streetlights in connection with the streetlight LED conversion project.

RECEIVED
18 MAR -5 PM 12:57
AMESBURY CITY CLERK



Amesbury

Dept. of Energy & Environmental Affairs
Tel: (978) 388-8118
Fax: (978) 388-6727

62 Friend Street
Second Floor
Amesbury, MA 01913

MEMORANDUM

DATE: Thursday, March 01, 2018
TO: E. Kenney, Chief of Staff
FROM: T. Barrasso
SUBJECT: Funding for Streetlight LED Buy-Back and Retrofit

The City is at a point in this potential project's timeline to finalize plans to line up all funding needed to complete the project. There are three (3) entities that are needed to fund the buy-back and retrofit. They are:

- 1) City of Amesbury
- 2) MA DOER (Commonwealth of MA)
- 3) Metropolitan Area Planning Council (MAPC).

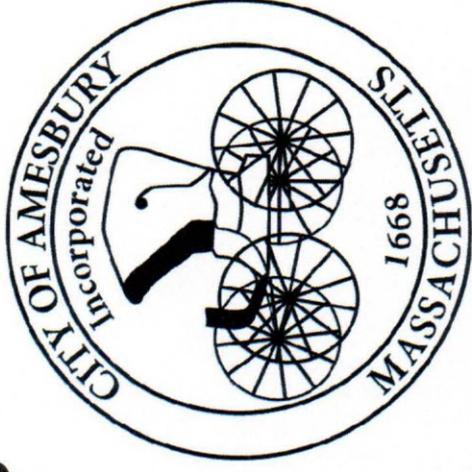
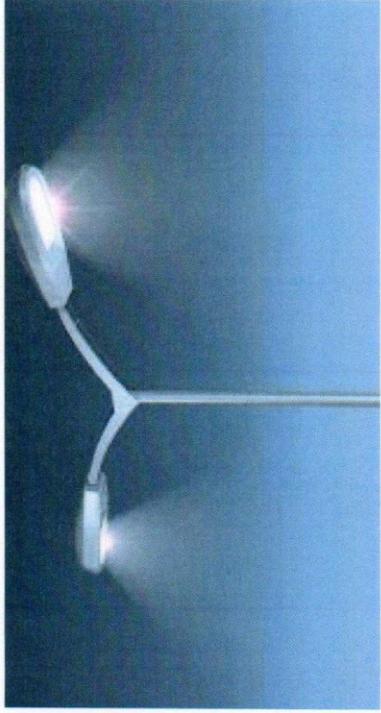
The funding can be broken down against the project costs as follows:

Project Element	Cost	Funded By
Survey/Inventory of existing lamps	\$17,000	City
Buy Back	\$57,000 (Estimate)	City
Retrofit	\$378,974 (Estimate)	Grants: MAPC = \$84,000 MA DOER = \$250,000
	Total Project = 452,974	Total Grants = \$334,000

To date the only funds secured are the MAPC Grant and the \$17,000 for the survey. The MA DOER funds must be secured through a grant application process that will be submitted in March 2018. In order to apply for the grant for this project the City must demonstrate that we have purchased the lights from National Grid before we can apply. The City has not done so, but is negotiating in good faith with the utility. The department is asking that the City Council approve our ability to allocate the money needed for the buy-back to demonstrate to MA DOER that we are committed to the project. Any expenditure will be contingent with the final price from National Grid and our successful application for the MA DOER Grant.

Amesbury Streetlight

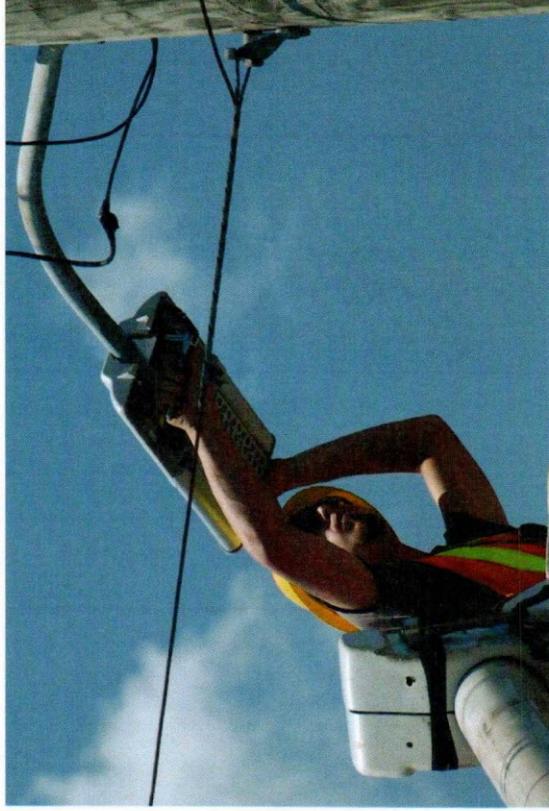
LED Conversion



[Approach](#)

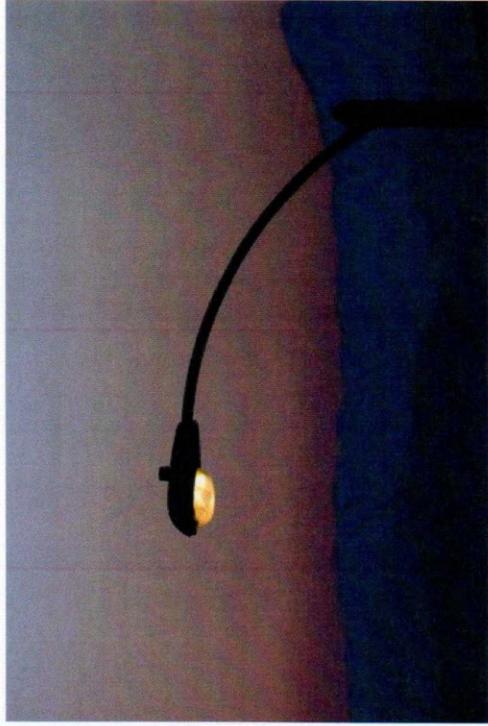
[Finances](#)

[Benefits to Amesbury](#)

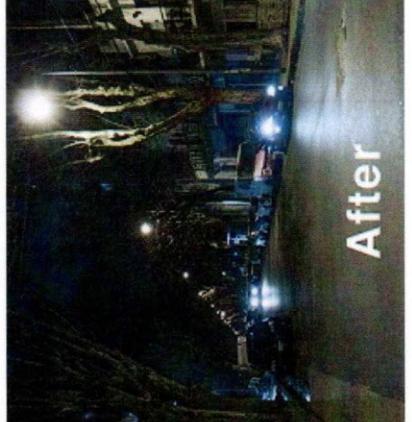
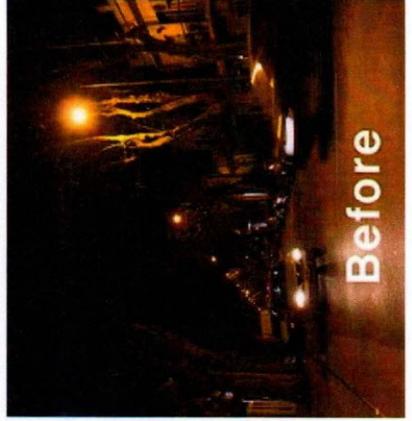


Cobra Head Metal Halide to LED

Current Fixture



LED Fixture



Amesbury Currently Deployed LED Exterior Fixtures

- Main Street Decorative Lights
- School Grounds
- City Hall Building Side Lights
- Water Street Garage



Scope: Replace all existing Cobra Head streetlights with Light Emitting Diode (LED).

Approach

1. Notify Nation Grid
2. Field Survey/Audit
3. RFP for Project Management
4. RFP for Current and Future Maintenance
5. RFP for Equipment and Install
6. Execute Install Before **December, 31 2018**

Completed Steps

- Notification of National Grid
 - Received estimates for buy back, incentives, retrofit to LED
- RFP production and execution for Survey/Audit
 - AECOM winning bid on cost and delivery time
- Conduct Field Survey/Audit –Results reviewed 1/26/2018
- Participated in Metropolitan Area Planning Council (MAPC) RFP to select Design Project Management consultant
 - Selected Real Term Energy in January 2018

Finances

Project Costs

- Total: \$452,974
 - Audit: \$17,000
 - Buy back: \$57,000
 - Retrofit: \$378,974

Grants

- MAPC Grant: \$84,000
- MA DOER 2018 Grant: \$250,000

Benefits

- Financial Savings
 - Current Utility Costs: \$196,000/year
 - Post Retrofit: \$55,000/year
- Safety
 - Greater Illumination
- Quality of Life
 - Better lighting in high traffic and residential areas
- Green Community Goals
 - Estimated 12% of City's 20% goal



CITY OF AMESBURY
IN THE YEAR TWO THOUSAND EIGHTEEN

RECEIVED

18 JAN -2 AM 9:52

AMESBURY CITY CLERK

SPONSORED BY:

C. Kenneth Gray, Mayor

BILL No. 2018-005

An Order to authorize the Mayor to accept and expend a grant in the amount of \$84,109 from the Metropolitan Area Planning Council for the purpose of conducting an LED streetlight retrofit project.

Summary: An Order to authorize the Mayor to accept and expend a grant in the amount of \$84,109 from the Metropolitan Area Planning Council for the purpose of conducting an LED streetlight retrofit project.

Be it Ordered by the City Council of the City of Amesbury assembled, and by the authority of the same as follows:

That the City Council hereby authorizes the Mayor to accept and expend a grant in the amount of \$84,109 from the Metropolitan Area Planning Council for the purpose of conducting an LED streetlight retrofit project.



MEMORANDUM OF UNDERSTANDING
BY AND BETWEEN
THE METROPOLITAN AREA PLANNING COUNCIL
AND
THE CITY OF AMESBURY

This Memorandum of Understanding (MOU) is entered into by and between the Metropolitan Area Planning Council, a public body politic and corporate established by Chapter 40B, Sections 24 through 29, of the Massachusetts General Laws with its principal office at 60 Temple Place, Boston, Massachusetts, 02111 ("MAPC"), and the City of Amesbury ("Participating Municipality"), a municipal corporation duly organized under the laws of Massachusetts and having a usual place of business at 62 Friend Street, Amesbury, MA 01913.

WHEREAS, MAPC and the Participating Municipality may be referred to collectively as the "Parties";

WHEREAS, the Commonwealth of Massachusetts' Department of Energy Resources ("DOER") selected MAPC to administer the LED Streetlight Rapid Retrofit grant program, and executed a contract ("Contract") with MAPC on January 10, 2017 delineating the roles and responsibilities of the Parties with respect to the grant program, such Contract attached hereto as Exhibit A and incorporated herein;

WHEREAS, DOER shall disburse grant funding to MAPC in segments throughout the term of the Contract and MAPC shall disburse the appropriate amount of funding to each Participating Municipality on a reimbursement basis;

WHEREAS, the Contract requires that the Participating Municipality provide MAPC with a complete streetlight audit that was completed no more than three (3) years prior to the effective date of this MOU and further requires that the Participating Municipality complete its streetlight retrofit on or before December 31, 2018;

WHEREAS, the Contract requires MAPC to provide technical assistance to Participating Municipalities at no cost to secure streetlight audit services and to organize collective purchasing opportunities for the purchase and installation of LED equipment;

WHEREAS, the Participating Municipality has provided MAPC with its most recent copy of a streetlight inventory and any available project cost estimates, attached hereto as Exhibit B and incorporated herein;



WHEREAS, the Contract authorizes MAPC to disburse grant funding to each Participating Municipality in a sum equal to 30% of the net cost of streetlight cobra-head luminaires and standard controls ("LED equipment") and installation of such equipment. For purposes of this agreement, net cost is defined as:

Net Cost = [Cost of LED Equipment + Cost of Installation] - [Utility Incentives];

NOW, THEREFORE, in consideration of the mutual promises and covenants herein contained, MAPC and the Participating Municipality agree as follows:

1. Term: This MOU shall be effective upon signing by all Parties and shall be in effect until March 4, 2019 or until terminated, whichever occurs earlier.
2. Procurements: MAPC will periodically administer collective procurements on behalf of Participating Municipalities for streetlight audits, design and project management services, streetlight equipment, and streetlight installation.
3. Streetlight audit: The Participating Municipality shall have its streetlight audit conducted by a third-party expert. The Participating Municipality may request a waiver from DOER should it desire to utilize a streetlight audit conducted by its own municipal staff.
4. Streetlight specifications: The Participating Municipality will install luminaires that have 7-pin receptacles.
5. Utility incentives: The Participating Municipality shall make a good faith effort to maximize the utility incentive received from its electric utility. The Participating Municipality shall notify MAPC if it is having difficulty securing utility incentive funding.
6. Grant funds:
 - a. MAPC shall reserve \$84,109 of the total grant funding ("reserved funds") for the Participating Municipality, as calculated in Exhibit B.
 - b. If necessary during the term of this MOU, MAPC will adjust the amount of reserved funds based on updated streetlight inventories and cost estimates and actual costs incurred by the Participating Municipality. Notice of any changes to the amount of reserved funds will be sent to the Participating Municipality in writing and shall be documented in this MOU as Exhibit C, attached hereto and incorporated herein.
7. Milestones:
 - a. The Participating Municipality shall adhere to the following schedule:
 - i. August 31, 2017: Contact electric utility to begin incentive reservation
 - ii. October 31, 2017: Complete streetlight audit
 - iii. November 15, 2017: Secure municipal approval for project financing
 - iv. December 31, 2017: Solicit material pricing for group procurement



- v. January 31, 2018: Place order for streetlight equipment
 - vi. February 28, 2018: Sign contract with installation vendor
 - vii. June 1, 2018: Complete retrofit
 - b. The Participating Municipality shall submit to MAPC documentation attesting to the completion of each milestone. The definitions for each milestone and relevant required documentation appear in Exhibit D, attached hereto and incorporated herein.
8. Disbursements:
 - a. Upon completion of the retrofit, the Participating Municipality shall provide MAPC with a Commitment, as described in Exhibit D.
 - b. Upon receipt of the Commitment, MAPC will review the documentation for approval and update the amount of reserved funds based on the Participating Municipality's final incurred costs for LED equipment and installation and received utility incentives.
 - c. MAPC will request a disbursement of funds from DOER upon receiving Commitments from one or more Participating Municipalities whose number of retrofitted streetlights, aggregated, totals approximately 7,500.
 - d. Once MAPC has received a disbursement from DOER sufficient to meet the Participating Municipality's reserved funds and MAPC's administrative costs, it will disburse such funds to the Participating Municipality, or if directed in writing by the Participating Municipality, to a vendor, within 45 business days.
9. Forfeiture of Grant Funds: The Participating Municipality's failure to adhere to the terms of this agreement, including meeting milestones in a timely manner, may result in the forfeiture of reserved funds.
10. Assignment: The Parties shall not assign nor transfer their respective interests in this MOU, in part or in whole, without the prior written consent of the other.
11. Termination of Agreement: Either Party may terminate this agreement sixty (60) days after written notice of intent to do so. In the case of a material breach of either Parties' rights or obligations described herein, either Party may terminate the agreement immediately through written notice.
12. Governing Law: This MOU shall be governed by, construed, and enforced in accordance with the laws of the Commonwealth of Massachusetts. Both Parties agree to submit to the jurisdiction of the state and federal courts in the Commonwealth of Massachusetts to resolve any disputes or disagreements that may arise under any provision of this MOU.
13. Complete Agreement: This MOU, and the Attachments and incorporated herein, constitute a total agreement of the Parties and supersede all prior agreements and understandings between the Parties, and may not be changed unless agreed upon in writing by both Parties.



14. Severability: In the event any provision of this MOU is found by a court of appropriate jurisdiction to be unlawful or invalid, the remainder of the MOU shall remain and continue in full force and effect.

IN WITNESS WHEREOF, the parties have executed this MOU as of the date last written below.

Participating Municipality:

Metropolitan Area Planning Council

By: [Handwritten Signature]

By: _____

Title: MAYOR

Rebecca Davis

Deputy Director

Date: 8/29/2017

Date: _____



Exhibit A: MAPC and DOER Contract



Exhibit B: Participating Municipality Streetlight Inventory & Grant Calculation

Category	Amount	Units	Source
Cobraheads	1203		
Audit/Design	\$ 44,712.00		
Materials	\$ 270,532.00		
Labor	\$ 80,730.00		
Per Fixture Buffer	\$ 12,030.00		Included \$10 extra per fixture as buffer.
Total Project	\$ 408,004.00		
Total for Grant	\$ 363,292.00		
Actual Energy Savings (not billed savings)	331,712	kWh	
Utility Incentive	\$ 82,928.00	\$0.25/kWh unless otherwise noted	
Net Cost After Incentives	\$ 280,364.00		
Grant Reservation (30% of Net)	\$ 84,109.20		
Cost per Light Pre Utility Incentive	301.9883624		

City of Amesbury
 Summary of Lighting Inventory as of March 28, 2017



Count of Bill Print and Tariff Description			Component Type		Source Type	Luminaire		Pole	Pole Total	
Customer Name	Account No	Bill Print and Tariff Description	Overhead	Underground		Total	Overhead	Underground		
AMESBURY ELEM SCHOOL	90345-86009	LUM HPS FLD 400W	4			4				
AMESBURY ELEM SCHOOL Total			4			4				
AMESBURY HIGH SCHOOL	03277-37002	LUM HPS FLD 250W	2			2				
AMESBURY HIGH SCHOOL Total			2			2				
AMESBURY HOUSING AUTH	15561-30003	LUM HPS RWY 50W	7			7				
	27994-52003	LUM HPS FLD 250W	1			1				
		LUM HPS RWY 50W	6			6				
	52911-12005	LUM HPS FLD 400W	1			1				
		LUM HPS RWY 50W	1			1				
AMESBURY HOUSING AUTH Total			16			16				
AMESBURY PUB SCHOOLS	27994-54007	LUM HPS FLD 250W POLE - WOOD	2			2	2		2	
AMESBURY PUB SCHOOLS Total			2			2	2		2	
DEPT OF PUBLIC WORKS	90304-99005	LUM HPS FLD 400W	2			2				
DEPT OF PUBLIC WORKS Total			2			2				
TOWN OF AMESBURY	03227-03006	LUM HPS FLD 400W	1			1				
	15561-35008	LUM HPS FLD 400W	1			1				
	27994-57008	LUM HPS FLD 400W	1			1				
	40453-23004	LUM HPS FLD 400W	3			3				
	52911-09008	LUM HPS RWY 50W	13			13				
		LUM INC RWY 105W	2			2				
	52911-14009	LUM HPS FLD 400W	1			1				
	52965-80003	LUM HPS POST 50W POLE FIBER RWY <25FT		32		32		32	32	
	65373-07007		LUM HPS FLD 250W	3			3			
			LUM HPS FLD 400W	16			16			
			LUM HPS POST 50W		33		33			
			LUM HPS RWY 100W	126	3		129			
			LUM HPS RWY 150W	3			3			
			LUM HPS RWY 250W	103	3		106			
			LUM HPS RWY 400W	2			2			
			LUM HPS RWY 50W	926			926			
			LUM HPS RWY 50W TT	1			1			
		LUM MV FLD 400W	1			1				
		LUM MV RWY 100W	13			13				
		POLE - WOOD					4			
		POLE FIBER PT <25						11		
	POLE FIBER PT <25FT						9			
	POLE FIBER RWY <25FT						13			
	POLE METAL =>25FT						5			
	77832-86007		1			1				
TOWN OF AMESBURY Total			1217	71		1288	4	70	74	
Grand Total			1243	71		1314	6	70	76	



Exhibit C: Revised Grant Fund Reservation Amounts

Revision #1

Date: _____

Rationale: _____

Revised Grant Fund Reserved: \$ _____

Revision #2

Date: _____

Rationale: _____

Revised Grant Fund Reserved: \$ _____

Revision #3

Date: _____

Rationale: _____

Revised Grant Fund Reserved: \$ _____

Exhibit D: Milestone & Commitment Detail

1. Milestone: Contact electric utility to begin incentive reservation
 - a. Definition: Contact energy efficiency representative at utility to inform them of intent to retrofit with LEDs and desire to secure a utility incentive.
 - b. Required documentation: Email from energy efficiency representative at utility confirming they are aware of Municipality's intent to retrofit streetlights and desires to secure a utility incentive.

2. Milestone: Complete streetlight audit
 - a. Definition: Determination of the existing street lighting inventory via a Geographic Information Systems (GIS) inventory assessment of all the municipally-owned streetlights. At a minimum, the inventory must include the following attributes for each streetlight:
 - GPS location
 - Fixture technology (i.e. High Pressure Sodium, Mercury Vapor, Metal Halide, Incandescent, etc.)
 - Wattage
 - Nearest street address
 - Pole #
 - Issues (e.g. corrosion, obstruction)
 - Date of data capture
 - b. Required documentation: Copy of completed inventory assessment

3. Milestone: Secure municipal approval for project financing
 - a. Definition: Municipality has allocated funding and/or has been authorized to secure bond or other financing to cover all expected costs of the retrofit.
 - b. Required documentation: Email confirmation from a finance officer that funding is allocated and/or documentation of a successful vote by City Council or Town Meeting to authorize financing.

4. Milestone: Solicit material pricing for group procurement
 - a. Definition: Participation in collective procurement with MAPC for material pricing
 - b. Required documentation: None necessary as MAPC will have a record of participation.

5. Milestone: Place order for streetlight equipment.
 - a. Definition: contract signed with product distributor or manufacturer



-
- b. Required documentation:
 - i. Copy of signed contract;
 - ii. Copy of product invoices; and
 - iii. Completed Table 1

 - 6. Milestone: Sign contract with installation vendor.
 - a. Definition: contract signed with installation vendor procured by MAPC
 - b. Required documentation: Copy of signed contract

 - 7. Milestone: Complete retrofit.
 - a. Definition: all LED streetlights installed
 - b. Required documentation: A "Commitment", which for purposes of this MOU includes
 - i. Copy of product invoices;
 - ii. Copy of utility incentive documentation; and
 - iii. Completed Table 2



Upon fixture selection, complete the following table, with a row for every unique combination of variables in the table. Then have the Chief Executive of the municipality sign the form below.

Table 1. Selected Fixture Information

I attest that fixture selection is complete and that all information contained in Table 1 is complete and accurate.

Name:

Signature:

LED Brand	LED Model #	LED Wattage	Existing Light Wattage	Advanced Control Installed (Motion Sensor, Timer, or Wireless Control)	Total Fixtures to Be Replaced	LED Lumen Output	Existing Light Lumen Output	LED Color Temperature (Kelvin)	Existing Light Color Temperature	Expected Installation Cost
Example: Cree	XSP	25	55	No	100	2700	2500	3000	2200	\$75
Example: Cree	XSP	25	110	No	113	2700	5500	3000	2200	\$75
Example: Cree	XSP	26	55	Motion Sensor	95	2700	2500	3000	2200	\$75



Upon project completion, complete the following table, with a row for every unique combination of variables in the table. Then have the Chief Executive of the municipality sign the form below.

Table 2. Completed Project Information										
I attest that the LED streetlight retrofit of cobra-head streetlights for which the municipality is requesting grant funding is complete and that all information contained in Table 2 is complete and accurate.										
Name:										
Signature:										
LED Brand	LED Model #	LED Wattage	Existing Light Wattage	Advanced Control Installed (Motion Sensor, Timer, or Wireless Control)	Total Fixtures Replaced	LED Lumen Output	Existing Light Lumen Output	LED Color Temperature (Kelvin)	Existing Light Color Temperature	Installation Cost
Example: Cree	XSP	25	55	No	100	2700	2500	3000	2200	\$75
Example: Cree	XSP	25	110	No	113	2700	5500	3000	2200	\$75
Example: Cree	XSP	26	55	Motion Sensor	95	2700	2500	3000	2200	\$75