

ENERGY COMMITTEE
TOWN OF SOUTH WINDSOR

Minutes

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January 5, 2016

Madden Room – South Windsor Town Hall

1. Call Meeting to Order

The meeting was called to order at 4:40 p.m.

2. Roll Call

Members Present:

Hank Cullinane, Resident
Mike Gantick, Director of Public Works
Deputy Mayor Carolyn Mirek, Town Council
Councilor Janice Snyder, Town Council
Sherman Tarr, Resident
Stephen Wagner, Resident

Members Absent:

Larry Brown, Resident
Richard Grigorian, Resident
Patrick Hankard, Board of Education
Councilor Edward Havens, Town Council
Athena Loukellis, Resident
Richard Stahr, Board of Education

Others Present:

Jim Daylor, Ameresco
Austin Burt, Resident
Robert Dickinson, Resident

6. New Business

A. Solar

a. Congressional Action on Renewable Energy

Mr. Wagner explained that the US Congress extended renewable energy usage tax credits for another five years. The renewal extends the 30% solar energy tax credit to 2019, after which it will taper to 10% by 2022. This is encouraging for the Town.

ITEM:

6. New Business (Continued)

B. LED Streetlights update

a. Business Case from Ameresco

Mr. Wagner reviewed the LED Streetlight Retrofit Program presentation with the Committee, as shown in attached, **Exhibit A**.

Mr. Austin Burt came before the committee and stated that the Town should consider the right color and intensity of the LED lights and should keep the environment in mind. Committee members discuss the lumens and the wattage. Mr. Daylor explained the different type of lighting that is available. Mr. Wagner felt that the lighting should reach the sidewalks. Mr. Wagner suggested that when the Town does the demonstration for the residents, a variety of colors should be presented. The Committee discussed the consideration of turning the lights off at a certain time each night.

Mr. Daylor reviewed the business case for acquiring and retrofitting LED Streetlights. Committee members discussed in length, the cost for the project given different scenarios.

b. Streetlights on State Roads

Mr. Wagner explained that there are approximately 313 street lights on State roads that South Windsor is paying for. Mr. Gantick sent a letter to the State requesting the State pay for those. The State is looking into drafting a policy for the State road lights. It costs the Town approximately \$70,000 annually to light the State roads. Councilor Snyder felt that the Town should not be paying for the State road lights. The Committee discussed and decided when going to the Council that they would suggest that the Town stop paying for the State lights. Mr. Gantick brought to the Committee's attention that the Town could be charged a premature abandonment charge.

ITEM:

6. B. (Continued)

c. Communications to Town Council

After a lengthy discussion, the Committee decided they would do a presentation to the Council at the January 19th Town Council meeting with a resolution to follow at the February 1st Town Council meeting authorizing the Town Manager to execute an agreement with Ameresco. The Committee members discussed the steps that need to be taken for this project.

Councilor Snyder stated that it is very important to educate the Council and it should be focuses on that there is no impact to the taxpayers. It is also important to know how this project will be managed by the Town.

C. Municipal Action Plan update

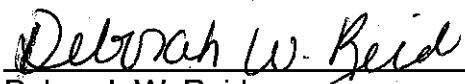
- a. Meeting with Eversource in January
- b. Wapping School support – Hank Cullinane

Mr. Cullinane explained that he spoke with Mr. Favreau and offered him help with anything he would need help with. Mr. Favreau will be seeking a grant for the Wapping School project.

8. Adjournment

The meeting adjourned at 6:22 p.m.

Respectfully submitted,



Deborah W. Reid
Clerk of the Council

South Windsor LED Streetlight Retrofit Program

South Windsor Town Council

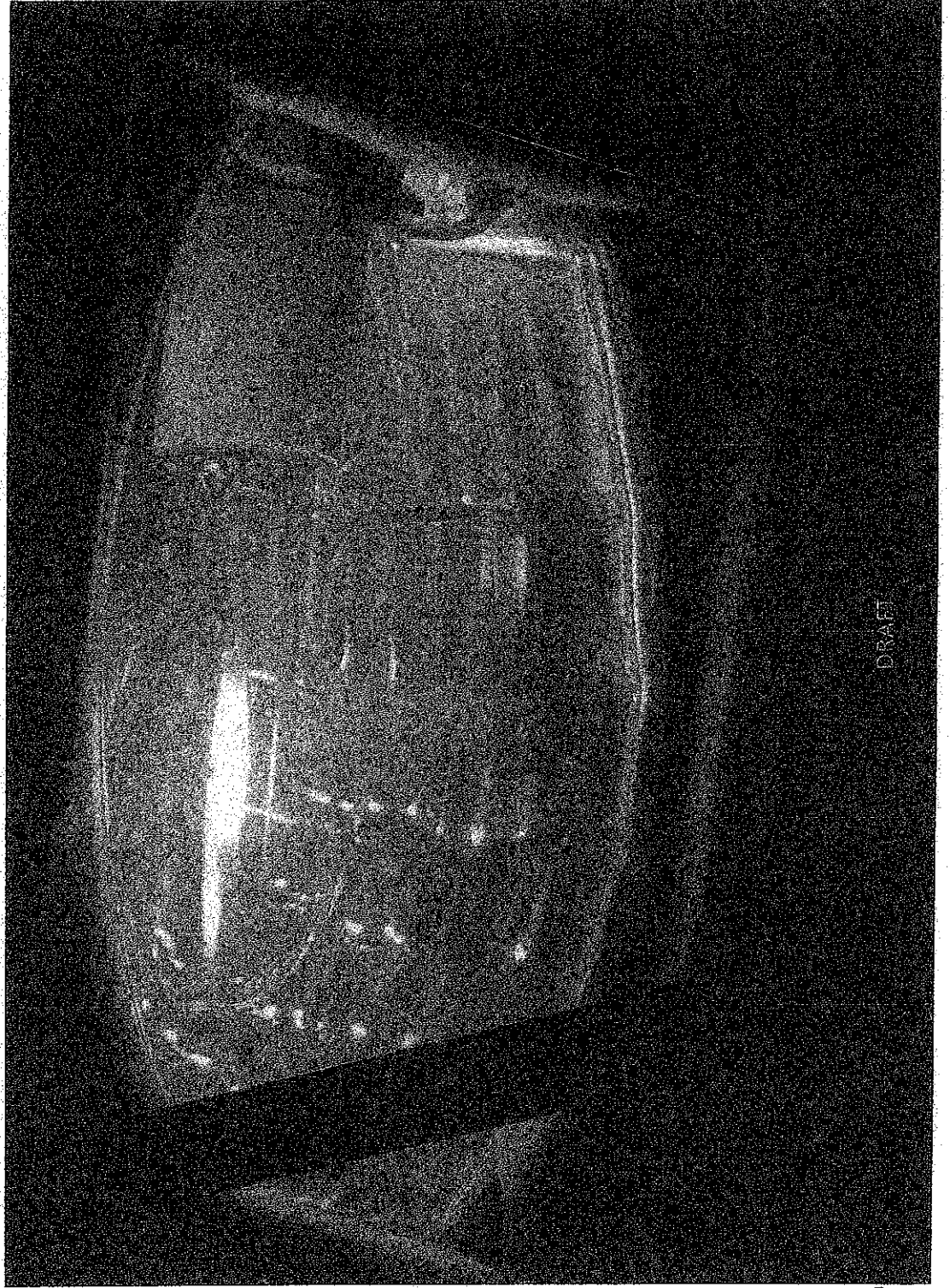
Update

January 19, 2016

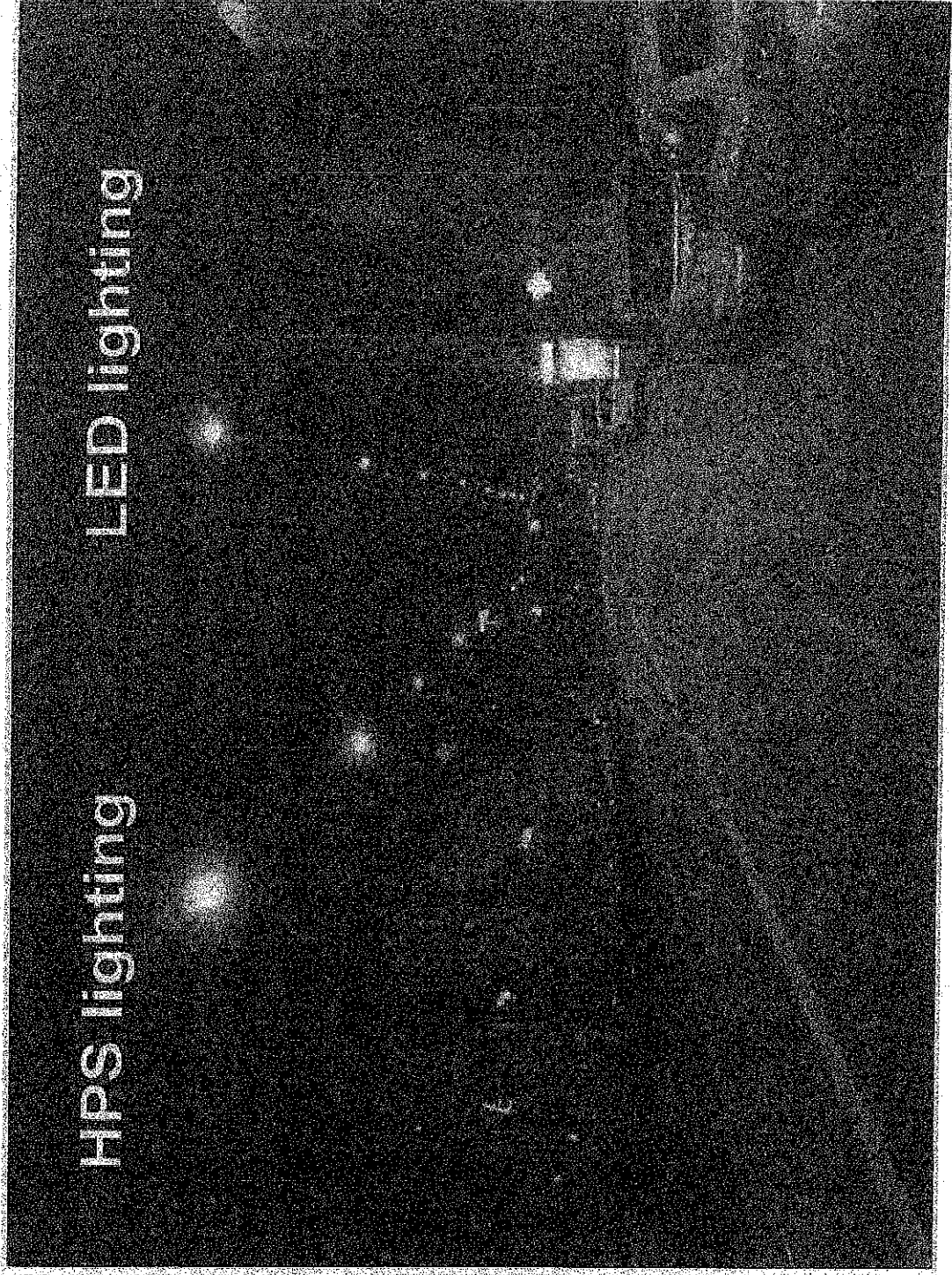
Energy Committee

- Deputy Mayor Carolyn Mirek
- Councilor Edward Havens
- Councilor Janice Snyder
- Richard Stahr – Board of Education
- Michael Gantick, Director of Public Works
- Pat Hankard, Director of Facility Operations, S.W. Public Schools
- Larry Brown, Resident
- Hank Cullinane, Resident
- Richard Grigorian, Resident
- Athena Loukellis, Resident
- Sherman Tarr, Resident, Vice-Chairperson
- Stephen Wagner – Resident, Chairperson

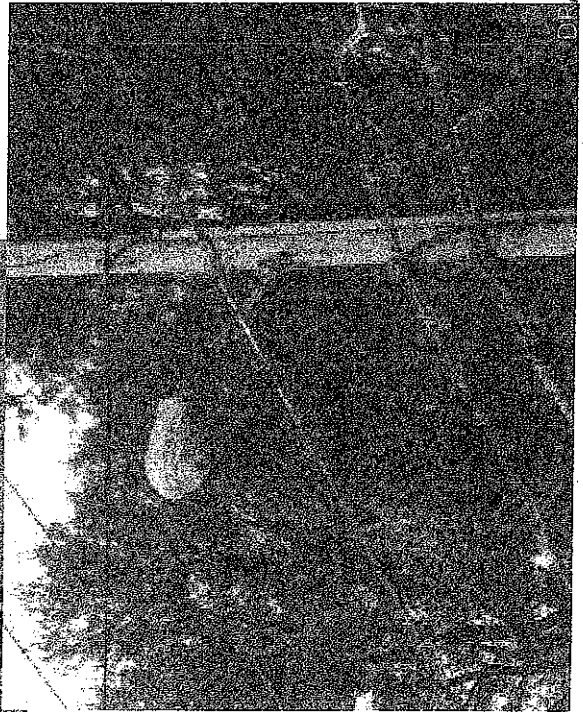
Current Streetlights High Pressure Sodium (HPS)



What will retrofit look like?



Cobra Head Retrofit



1635 Cobra Head Fixtures
20 Flood Lights

1/5/2016

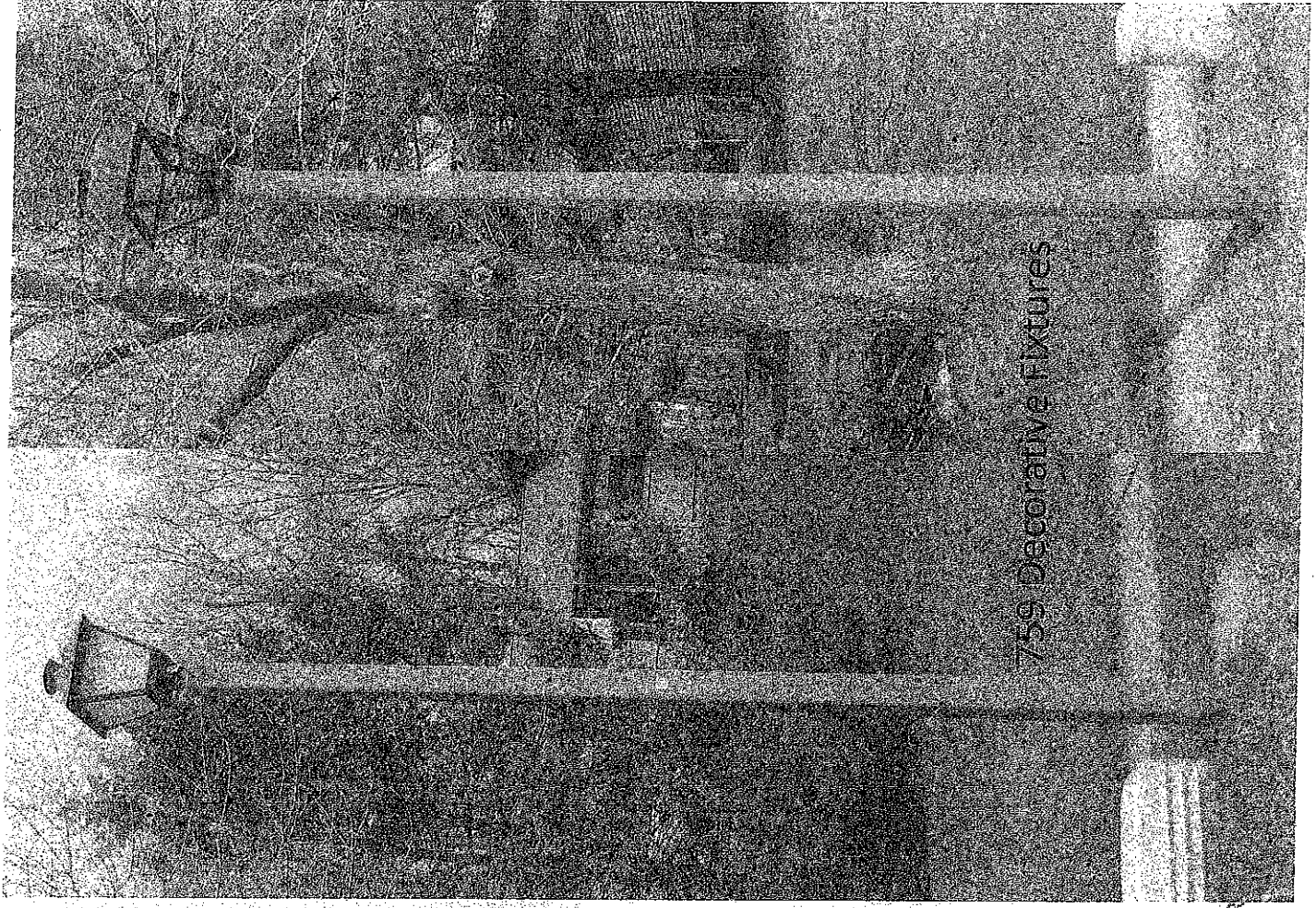
DRAFT

Decorative Fixture Retrofit

- Underground wiring
- Buy pole and fixture
- Install LED conversion kits

1/5/2016

DR



Project History

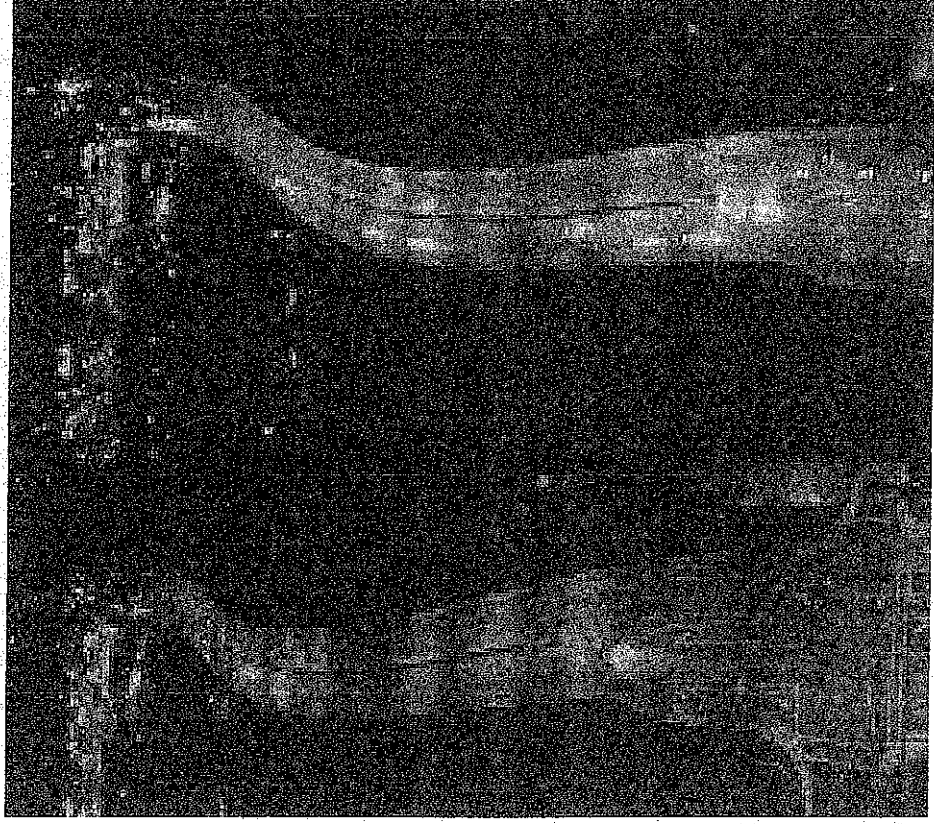
Energy Committee Established	July 14, 2014
CCM Webinar	October 8, 2014
CCM Presentation to Council	November 17, 2014
RFP issued	February 13, 2015
Proposals Due and Opened	March 12, 2015
Energy Committee evaluates proposals	March-April 2015
Presentation to Council	April 27, 2017
Energy Committee recommends contractor - AMERESCO	April 28, 2015
Public Hearing and Resolutions for Phase 1 lease/purchase up to \$1.5M	May 4, 2015
AMERESCO audits physical inventory	July-August 2015
Discussions with Eversource clarify rules and \$806,000 cost for purchase	July-Nov 2015
Letter to DOT requesting transfer of lights on state roads to DOT accounts	November 18, 2015
AMERESCO updates business case for lights on Town roads	January 5, 2015
Presentation of updated business case to Council	Today

How LED Retrofit Affects Costs

- Savings
 - Ownership of streetlights
→ 49% lower rate category
 - LEDs use 50-70% less energy for same light levels on street
 - Often able to reduce lumens due to better control of light
 - Switch to Town's energy supplier
 - 20 year vs. 6 year life
 - Incentives offset purchase price
- Costs
 - Purchase of Eversource streetlights
 - Purchase and retrofit of LED streetlights
 - Financing
 - Streetlight management
 - Maintenance contract
 - Insurance
 - Streetlights removed from grand list

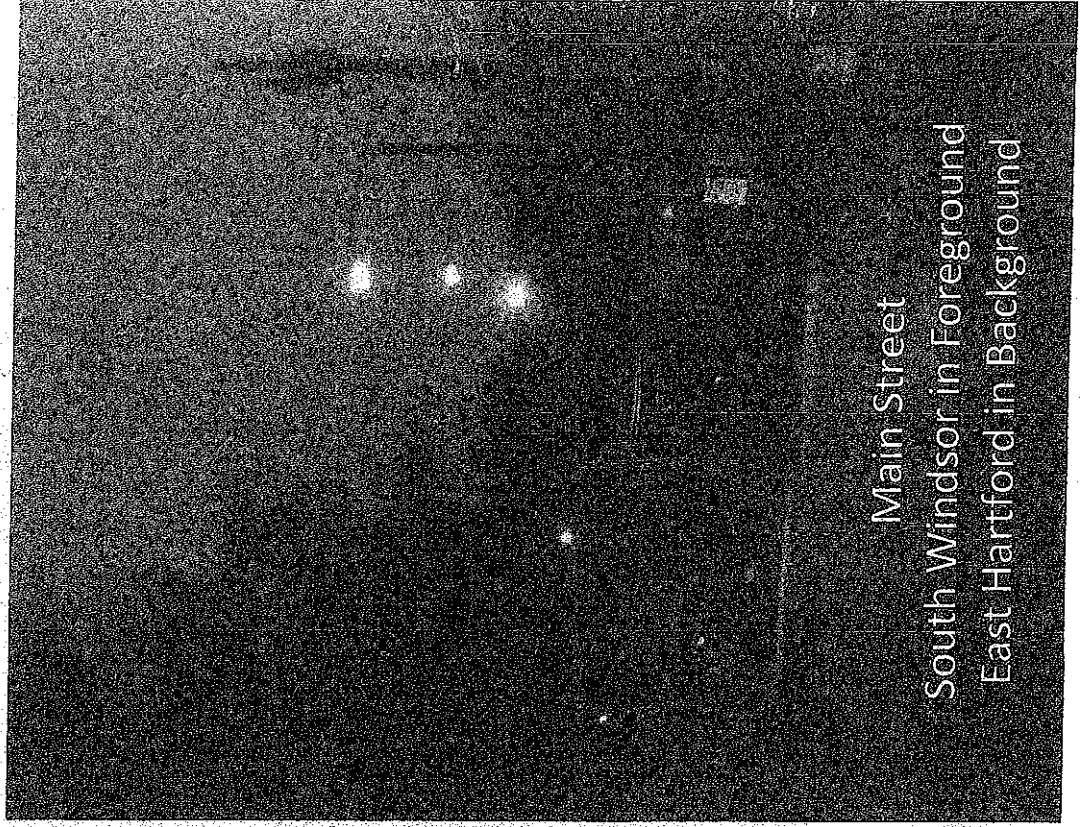
Other benefits

- Improved color rendition
 - Choice of lighting color
- More uniform light distribution
- Reduced spillover
- Tons of CO₂ saved annually
- “Dark Sky” compliance



Nearby Projects

- Connecticut
 - East Hartford
 - Stamford
 - Cromwell
 - Plainville
- Massachusetts
 - Somerville
 - Framingham
 - Ashland
 - Easton
 - Woburn



Proposed Strategy

- Phase 1
 - Buy all 2100 lights on Town roads from Eversource
 - Install samples of different color lights
 - Convert all lights on Town roads to LED by about July 2016
 - Operate lights on state roads through December 2016
- Possible Phase 2
 - If state takes over 300 lights on state roads, no Phase 2
 - If not, and Council decides to discontinue lighting on state roads, no Phase 2
 - Small charge for premature abandonment of lights < 14 years old
 - If not, and Council decides to retain some or all lights on state roads, Phase 2 to purchase and convert these lights to LED

Eversource Plan to Convert to LED

- Eversource plans to convert all their streetlights to LEDs over about 5 years
- They are running small demo projects in several towns
- So far, PURA has only established rates for cobra head lights (above ground wiring)
- Savings for Town would be smaller:
 - No savings until conversion (3-4 lost years), then ...
 - Same savings on generation charges
 - Smaller savings on fixed, per fixture charges
 - Town avoids finance, insurance, maintenance, tax costs
- Rough estimate of savings of this alternative possible

Effect on Eversource Bill

(discussion only – numbers not reconciled with AMERESCO business case numbers)

	Eversource Bill	Savings on Eversource Bill	
Current Bill	\$418,000	-	-
After transferring lights on state roads to DOT	\$343,000	\$75,000	\$75,000
After purchasing streetlights from Eversource	\$174,000	\$244,000	N/A
After installing LED fixtures	\$72,000	\$354,000	\$125,000 year 6
Assuming 3%/year rate escalation:			
1 st full year	\$74,000	\$365,000	\$353,000
6 th full year	\$86,000	\$423,000	\$374,000
10 th year	\$97,000	\$476,000	\$421,000
11 th year	\$100,000	\$490,000	\$433,000
			\$145,000

Initial Costs

(preliminary estimate)

Project Planning Phase	\$ 72,465
Purchase of Streetlights from Eversource (to be negotiated)	\$ 800,000
Installation of LED Streetlights (preliminary estimate)	\$ 996,789
Estimated incentives	(\$ 271,698)
Net purchase to be financed	\$ 1,597,556

Factoring in Our Costs

(discussion only – numbers not reconciled with AMERESCO business case numbers)

	Savings on Annual Electric Bill	10 year Lease Purchase Financing	Annual Maintenance, Insurance, Lost Revenue	Annual Savings of Town Plan	
1st year	\$365,000	\$162,000	\$54,890	\$148,110	\$77,000
6th year	\$423,000	\$216,000	\$71,619	\$135,381	\$125,000
10th year	\$476,000	\$265,000	\$73,767	\$137,233	\$141,000
11th year	\$490,000	0	\$96,250	\$393,750	\$145,000
Value of 1 st 10 years' savings in today's \$\$			\$ TBD		
Value of 20 years' savings in today's \$\$			\$ TBD		

Original Project Plan

Planning & Development

- ✓ Contractor Selection
- ✓ Public hearing on lease/purchase
- ✓ Contract negotiation
- ✓ Investment grade audit
- Negotiate acquisition from Eversource
- Ongoing Community Outreach Activities
- Retrofit design and revised cost estimate
 - If necessary, # of retrofits in a Phase 1 < \$1,500,000

--- Town Go No-Go Decision ---

Implementation

- 5 to 10 year lease/purchase
- Acquire Eversource streetlights
- Retrofit with LED fixtures
- Verification of savings
- Operation and Maintenance -
 - Contract for maintenance
 - Warranties apply

Possible Phase 2

- Complete 100% of Town streetlights

Future Energy Projects

Item Description	Est Cost
PD HVAC Heat Pumps, Cooling Tower and Control Replacement*	\$ 210,000
Wapping School Reneovation HVAC Design*	\$ 100,000
Town Hall Ventilation/VAV Upgrades	\$ 300,000
Library Roof	\$ 400,000
Community Center Heat Pumps, Boilers and Controls	\$ 200,000
Town Hall Lower level Split System and Controls Replacement	\$ 50,000
Fire House #1 & #2 Boilers and Controls	\$ 200,000
Community Center Roof	\$ 300,000
Town Hall Windows	\$ 150,000
Total	\$ 1,910,000
*Proposed FY16 Capital Projects	

Renewable

- Solar Virtual Net Metering
- Town Solar Installations

Conclusions

LED Streetlight Retrofit

- Can reduce energy costs by about \$365,000/year
- After financing and other costs, net savings about \$148,000 starting Year 1
- The 20-year value of program is about \$ TBD
- Can provide savings to finance other energy programs

LED Streetlights

- Can reduce carbon emissions by 60%
- Provide whiter, better distributed light
- Require significantly less maintenance
- Can be done this calendar year