Municipal Streetlight Ownership

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Presentation outline:

• Quick background
• Differences in projects
• Finances and ROI
• Control system advantages
• Where we are today
Background

• Started in 2002 in Kennebunkport wanting a different bulb
• 2003-2013—4 attempts to change state law
• 2013-2016—PUC process rule making

New law expands to three options –

1. Status quo – lease lights from utility
2. Municipal ownership of lights with utility providing the maintenance
3. Municipal ownership and maintenance
Differences in Projects

**Falmouth**
- Real Term Energy (RTE)
- 500 cobras, 90 post tops
- Discrepancies in CMP inventory ahead of project (<5)
- Acuity fixture
- CIMCON advanced controls

**Portland**
- The Efficiency Network (TEN)
- 5,129 cobras
- Discrepancies after project (350)
- Cree fixture
- Echelon advanced controls
**Lease to Own, Falmouth**

<table>
<thead>
<tr>
<th>Category</th>
<th>CMP Leased</th>
<th>Town Owned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy $$</td>
<td>$15,820</td>
<td>$5,237</td>
</tr>
<tr>
<td>T&amp;D $$</td>
<td>$11,677</td>
<td>$4,524</td>
</tr>
<tr>
<td>Lease $$</td>
<td>$62,478</td>
<td>$0</td>
</tr>
<tr>
<td>Maintenance $$</td>
<td>$0</td>
<td>$7,176</td>
</tr>
<tr>
<td>Total Yearly $$</td>
<td>$89,975</td>
<td>$16,937</td>
</tr>
</tbody>
</table>
# Falmouth Finances & ROI

## Pre Retrofit vs. Post Retrofit Savings

<table>
<thead>
<tr>
<th>Fixture</th>
<th>Pre Retrofit</th>
<th>Post Retrofit</th>
<th>Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cobras</td>
<td>$75,672</td>
<td>$13,461</td>
<td>$62,211</td>
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<tr>
<td>Post-tops</td>
<td>$16,427</td>
<td>$3,476</td>
<td>$12,951</td>
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<tr>
<td>Totals</td>
<td>$92,102</td>
<td>$16,937</td>
<td>$75,165</td>
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</tbody>
</table>

## CMP Acquisition and RTE Fees

<table>
<thead>
<tr>
<th></th>
<th>CMP Acquisition</th>
<th>RTE Fees (17% margin and $10.80/pole data collection)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$42,618</td>
<td>$44,748</td>
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</tbody>
</table>

## Cost Analysis

<table>
<thead>
<tr>
<th>Fixture</th>
<th>Qty</th>
<th>Material ($)</th>
<th>Installation ($)</th>
<th>Total ($)</th>
<th>Total Costs</th>
<th>ROI Payback</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cobrahead</td>
<td>500</td>
<td>86,410</td>
<td>129,846</td>
<td>216,256</td>
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<td></td>
</tr>
<tr>
<td>Post-tops</td>
<td>98</td>
<td>42,247</td>
<td>20,701</td>
<td>53,777</td>
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<td></td>
</tr>
<tr>
<td>Totals</td>
<td>598</td>
<td>191,486</td>
<td>131,917</td>
<td>$270,033</td>
<td>$357,399</td>
<td>4.75</td>
</tr>
</tbody>
</table>
Gathered public input with pilot projects

Both municipalities chose 3,000K dark sky compliant fixtures

COMING SOON TO YOUR NEIGHBORHOOD: INCREASED EFFICIENCY & SAFETY

As a way to become more energy efficient, the City of Portland is converting its streetlights from metal halide and high pressure sodium to LED. Starting January 29, 2018, we’ll be making our way around the city installing 250-350 LED lights each week.

LED streetlights offer several advantages over older lighting technologies:

• Energy Efficient -- LED lights can reduce energy consumption for street lighting by 75%.
• Better Light -- LED lighting allows people to see colors more clearly, which makes it easier to recognize people and objects on the streets and sidewalks.
• Reduced Glare -- It is easy to aim LEDs to shine light where it should be and to avoid shining it where it is unwanted.
• Long Life -- LED lighting has an extremely long life which reduces overall maintenance costs.

Most of the lights we’re using range from 23 watts to 50 watts. They emit a warm, yellow light at 3000K and are Dark Sky compliant.

WWW.PORTLANDMAINE.GOV
City of Portland Streetlight Installation
Falmouth Street Light Installation
Before

After

Emery St., Portland
Advanced Controls, Falmouth

- CIMON controls work as a mesh network
- 2/3 of lights are communicating to gateway
- 1/3 are not because of communication gaps >1,700 ft. (stars on the map)
- Repeaters will address the communication gaps, still work in progress
- Have dimmed down lights in parts of Town to assist in establishing policy going forward
Advanced Controls, Public Wi-Fi Portland

Pilot Program
Two locations in the heart of the Old Port
Morrill’s Corner Surtrac Traffic Control, Portland

- Main bottleneck for east/west commute
- System sits on top of existing control and sensor equipment
- Wait time at signals reduced by more than 20%
- Will be deploying along the Forest Ave Corridor
City Hall LED exterior lighting
Questions?