Municipal LED Streetlight Project

Wrap-Up and Transition to O&M

November 12, 2014

Cape Light Compact Governing Board

Working together toward a smarter energy future
TOPICS

• Project Recap
• Billing Revisions
• Annual M&V
• “Last Call” Projects
• O&M Info
• Reminders & Notes

Provincetown Aerial Views*
Before (high pressure sodium)

After (LED)

*Aerial photos by Kelsey-Kennard Photography, Chatham, MA
Project Recap

OVERALL TOTALS

– 23 Participating Municipalities
– 15,700 eligible* lights converted (projected 12/31/2014)
– 17,000 points GIS GPS-mapped
– Annual energy savings > 3,310,000 kWh (approx. 70% reduction)
  • Annual utility bill savings > $657,000
  • Annual maintenance savings > $212,000
– Combined Annual billing and maintenance savings > $869,000

Energy Efficiency Program Funding by Cape Light Compact

– Approx. $5.9 million (incl. GIS GPS-audit), part of 2013-2015
  Three-Year DPU Approved Energy Efficiency Plan
– 10-year energy savings performance contract (Ch. 25A)

*Eligible lights were municipal owned-roadway street lights (NSTAR S-2 tariff (Rate Code 82))
Project Highlights

– Multi-year, multi-phase, effort from early 2012 – 2014
  • Demonstration project led to 6-phase full conversion project
  • Mostly non-Summer work, 60-day adjustment period
  • Special Terms & Conditions unique to many communities
  • Provided for purchase from NSTAR for Phase II participation

– Special Recognition
  • Falmouth – greatest # of streetlights (2,573, not incl. admiral hats)
  • West Tisbury – greatest % energy savings (87%)
  • Provincetown – most engaged community in demonstration phase

– Thanks and Appreciation
  • So many... CLC Board members & staff, DPU/DOER, NSTAR, Town Administrators, DPW/Hwy staff, Selectmen and all involved
  • Awesome Siemens Team!!
Safety First, Always!
Project Benefits

- Significant increase over planned estimates
- Combined total savings**

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<thead>
<tr>
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<th>Annual Estimated kWh Savings</th>
<th>Annual Estimated Utility Bill Savings</th>
<th>Annual Estimated Maintenance Savings</th>
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<tbody>
<tr>
<td>January, 2014</td>
<td>3,170,904</td>
<td>$652,441</td>
<td>$210,398</td>
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<tr>
<td>September, 2014</td>
<td>3,309,419</td>
<td>$656,912</td>
<td>$211,561</td>
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<td>(Peak Demand Reduction = 0.827 MW)</td>
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**Savings estimates revised based on “as installed” actuals and the addition of additional Phase II participants including: C-O-MM, Tisbury and West Tisbury who completed their purchase of street lights from NSTAR Electric. Will be revised again when Phase II installs are completed by 12/31/2014.
Admiral Hats & Extra Work Completed

- Admiral Hats (324 fixtures) retained
  - Incandescents/CFLs replaced with screw-in LEDs (including feeder wire replacements* to extend life of fixtures)

- “Last Call” opportunity (floods, decoratives) included in final Phase 6
  - Subject to cost-effectiveness screening
  - Only for outdoor roadway/parking area type-fixtures

*Feeder wire replacements funded through CLC Operating Budget – LED Streetlight Reserve.
BILLING REVISIONS

- Submitted to NSTAR by Siemens on Town-wide batch basis
- NSTAR typically implemented revised billing codes within 1 to 2 billing cycles following batch submittal by Siemens
- See **HANDOUT** for Town & Fire District specifics
  
  • Review of and resolution regarding billing adjustment delays:
    - Phase 2: NSTAR adjustment back to July, 2014
    - Phase 3 & 4: Check from Siemens*

ANNUAL MEASUREMENT & VERIFICATION

- Siemens will request by October each year a copy of billing detail from each Participant and submit energy savings performance report to Cape Light Compact
- CLC submits Annual Report to DOER (for 10-years)

*Billing delay credit/check from Siemens to Cape Light Compact who will then issue checks to each Phase 3 & Phase 4 Towns or Fire Districts.
Operations & Maintenance

- O&M contract in place with each Town or Fire District & Siemens
- Contract term: 3-years
  - Option to extend for 2-yrs
- Outage reporting call Siemens at 800-544-4876 (800-LIGHTS-ON)
- 5-business day response

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<th>O&amp;M Contract Comparison</th>
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<td>(Maintenance Pricing - $ Per Light Per Month)</td>
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<td></td>
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<tr>
<td>Old O&amp;M contract</td>
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<tr>
<td>New O&amp;M contract*</td>
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>70% lower fixture maintenance pricing with LED vs. non-LED

* Siemens may adjust the $PLPM pricing each year of the contract; e.g., by a pre-stated amount or tied to the Boston CPI-U.
Reminders & Notes

• Any new ADDED streetlights
  1. Submit Work Order Request for New Service Connection to NSTAR (Kathy White, Account Executive)
  2. NSTAR will send a bill for this W.O.

• Any ‘PRIVATE’ streetlights (S-1 tariff, Rate Code 79 or 81)
  Town or Fire District can request to buy from NSTAR and once municipal owned convert to LED through Siemens and Cape Light Compact (private residential/businesses do not have option at this time to choose an LED luminaire from NSTAR)

• Notes:
  1. Please notify Siemens when municipality adds, changes or removes a street light to keep O&M billing up to date; and,
  2. Be sure the new LED fixtures are added, if necessary, to municipalities insurance policy.
THANK YOU

Town of Falmouth Aerial Views
Before - After