Climate Smart Communities

Presented By:
Daniel L. Farrow | President | Abbott Energy, Inc.
Counties, Cities, Towns, Villages:

Local Governments 1,604
- Counties - 57
- Cities - 62
- Towns - 932
- Villages - 556

Special Purpose Local Governments 1,811
- School Districts - 685
- Fire Districts - 867
- Library Districts - 181
- Commissioner-Run Special Districts - 78

Other Governmental Entities 1,302
- Special Purpose Units - 311
- Local Public Authorities - 991

Total Local Government Entities: 4,720
ENGINEERING DESIGN
- Energy Analysis
- Engineering Design
- Scope of Work
- Presentation

INCENTIVE MANAGEMENT
- Site Consultation
- Application Management
- Pre/Post Inspection
- Tax Review

CONTRACTOR SERVICES
- Construct Audit
- Installation Management
- Contractor Service
- Report of Work
Typical Energy Upgrades

**Tier I**
- Lighting Systems
- Lighting Controls
- Day Lighting
- Vending Controls

**Tier II**
- HVAC Systems
- Boilers & Chillers
- Motors & Pumps
- Compressed Air
- VSD Integration
- Industrial Processes

**Tier III**
- Photovoltaic Cells
- Solar Hot Water
- Wind Power
- Green Roofs
- Geo-Thermal
- Passive Techniques

*Highest value and the most common energy consumer...*
*Comprehensive review of all other major energy consumers...*
*Renewable technology implementation is considered...*
Initial Contact

- **Find an Expert Team...**
  - Seek Local if Possible
  - Partner Referral (NYSERDA/UTILITY)
  - Website – Online Search
  - Media Reviews
  - Word of Mouth | Recommendation
The Process

Initial Meeting → Energy Audit → Installation → Pre/Post Inspection
ECM# 1: Troffer Retrofit Kit (349)

- Fixture: [LITHONIA] 2RT8R-232-MVOLT-BILP
- Ballast: [ADVANCE] IOPA-2P32-L-WN-UNV
- Lamp: [PHILIPS] F32T8/ADV841/EW/ALTO

Annual Energy Savings: 2,384 kWh
Simple Payback: 3.4 Years
Annual Cost Savings: $357
ECM Project Cost: $1,207

ECM# 1a: Troffer Retrofit (35)

**Ballast and Lamp ONLY!!

- Ballast: [ADVANCE] IOPA-2P32-L-WN-UNV
- Lamp: [PHILIPS] F32T8/ADV841/EW/ALTO

Annual Energy Savings: 76,787 kWh
Simple Payback: 2.4 Years
Annual Cost Savings: $11,517
ECM Project Cost: $28,027
# Tier I
## Lighting Energy Conservation Measures

<table>
<thead>
<tr>
<th>Energy Conservation Measure</th>
<th>Sum of Post Fixt No.</th>
<th>Sum of Annual kWh Saved</th>
<th>Annual Cost Savings Per Measure</th>
<th>Material Cost Per Unit</th>
<th>Total Material Cost</th>
<th>Total Install Cost</th>
<th>Total Project Cost</th>
<th>Simple Payback</th>
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</thead>
<tbody>
<tr>
<td>ECM 1</td>
<td>349</td>
<td>76,787</td>
<td>$11,517.98</td>
<td>$57.15</td>
<td>$19,945.35</td>
<td>$8,082.14</td>
<td>$28,027.49</td>
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<tr>
<td>ECM 1a</td>
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<td>2,384</td>
<td>$357.55</td>
<td>$11.34</td>
<td>$396.90</td>
<td>$810.53</td>
<td>$1,207.43</td>
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<td>ECM 2a</td>
<td>7</td>
<td>5,928</td>
<td>$889.22</td>
<td>$11.34</td>
<td>$79.38</td>
<td>$162.11</td>
<td>$241.49</td>
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<td>ECM 3a</td>
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<td>12,008</td>
<td>$1,801.23</td>
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<td>$2,086.56</td>
<td>$4,261.07</td>
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<td>ECM 4</td>
<td>157</td>
<td>18,786</td>
<td>$2,817.90</td>
<td>$47.05</td>
<td>$7,386.85</td>
<td>$3,635.81</td>
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<td>ECM 5a</td>
<td>102</td>
<td>37,804</td>
<td>$5,670.62</td>
<td>$21.96</td>
<td>$2,239.92</td>
<td>$2,362.12</td>
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<td>ECM 7</td>
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<td>15,311</td>
<td>$2,296.59</td>
<td>$40.80</td>
<td>$1,020.00</td>
<td>$578.95</td>
<td>$1,598.95</td>
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<td>ECM 10</td>
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<td>7,036</td>
<td>$1,055.33</td>
<td>$57.50</td>
<td>$5,232.50</td>
<td>$2,107.38</td>
<td>$7,339.88</td>
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<td><strong>GRAND TOTAL:</strong></td>
<td>950</td>
<td>176,044</td>
<td>$26,406</td>
<td></td>
<td>$38,387</td>
<td>$22,000</td>
<td>$60,387</td>
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</table>
**EXAMPLE:**

**Tier I: Engineering Analysis Summary**

<table>
<thead>
<tr>
<th>Project Status</th>
<th>Total Project Cost</th>
<th>Project Payback</th>
<th>Annual Energy Savings</th>
<th>Est. NYSERDA Incentive</th>
<th>Est. National Grid Incentive</th>
<th>Est. 1st Year Savings</th>
<th>Est. 15 Year Savings</th>
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<tbody>
<tr>
<td>Energy Analysis</td>
<td>$76,756</td>
<td>1.43</td>
<td>357,511 kWh, 61.1 kW, MMBtu</td>
<td>$0.12/kWh</td>
<td>$0.131/kWh</td>
<td>$42,901</td>
<td>$53,627</td>
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