EEAC Update

Presentation to the EEAC

October 15th, 2014
Agenda

• Two major questions –
  • Will we achieve 2014 C&I goals?
  • Will we achieve aggregate three-year C&I goals?

• We have 90 minutes for discussion
• Welcome questions and comments from councilors during presentation
• We would like to leave 15 minutes at end for additional discussion
• Facilitator will move us along if needed
Agenda

- Statewide Sales Projections
  - 2014 Projection
  - Cumulative three-year
- Customer Insights
  - Primary and Secondary Segmentations
  - Segment Highlights
- Technology Mix
- Channels
- Q&A
Projections
Projections for 2014

Lifetime C&I Savings – 2014 vs 2013 (through September)

Electric

- 2014 (% Of Lifetime Goal): 31%
- 2013 (% Of Lifetime Goal): 27%

Gas

- 2014 (% Of Lifetime Goal): 12%
- 2013 (% Of Lifetime Goal): 9%
Cumulative Projections for 2013-2015

Statewide Lifetime C&I Savings – 2013-2015

Electric

<table>
<thead>
<tr>
<th></th>
<th>C&amp;I Electric Lifetime Savings</th>
<th>Total Portfolio (Lifetime MWh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year-To-Date (Through Sep)</td>
<td>18%</td>
<td>43%</td>
</tr>
<tr>
<td>Work in Progress</td>
<td>37%</td>
<td>15%</td>
</tr>
</tbody>
</table>

Gas

<table>
<thead>
<tr>
<th></th>
<th>C&amp;I Gas (% Of Lifetime Goal)</th>
<th>Portfolio (% of Lifetime Goal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year-End Forecast</td>
<td>37%</td>
<td>55%</td>
</tr>
<tr>
<td>Remaining Gap</td>
<td>6%</td>
<td>3%</td>
</tr>
<tr>
<td>Goal</td>
<td>37%</td>
<td></td>
</tr>
</tbody>
</table>
Portfolo is on track

- Year over year growth
- Volatility increases with larger C&I

It is not how we "fix" C&I, it’s how do we accelerate the trends and successes
Customer Insights
Market Opportunity

- Expectation of greater savings opportunities in C&I
  - Larger sources of capital
  - More customer sophistication
  - Broader range of applicable technologies
  - Concentration of opportunities allow for targeted go to market approaches

- Actuals vs Sales
  - Residential: overindexing
  - C&I: underindexing

- Results are within 3% of the indexed portfolio
Trends – By Quartile

- First level of segmentation – by usage quartile
- Natural ebbs and flows year over year
- Changes are more pronounced in higher quartiles due to large individual projects
2014 Indexed (YTD)
2014 Indexed (YTD)
### CRE Segmentation Results

- Vertically integrated players (owners + managers) represent the largest opportunity

<table>
<thead>
<tr>
<th># Segment</th>
<th>Building Count</th>
<th>Avg. Building Size (MSF)</th>
<th>Percent of Total Energy Usage</th>
<th>EE Savings as a % of Total EE Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Proposed, Construction/Renovation</td>
<td>136</td>
<td>0.18</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>2 Vertically Intgrated w/ Large Owners</td>
<td>280</td>
<td>0.17</td>
<td>29%</td>
<td>48%</td>
</tr>
<tr>
<td>3 Institutional Owners w/ &gt;1 MSF</td>
<td>259</td>
<td>0.15</td>
<td>21%</td>
<td>14%</td>
</tr>
<tr>
<td>4 Vert-Intg. (Med Or Sm Owner)</td>
<td>697</td>
<td>0.05</td>
<td>9%</td>
<td>5%</td>
</tr>
<tr>
<td>5 Institutional Owner w/ 300K - 1MSF</td>
<td>220</td>
<td>0.15</td>
<td>14%</td>
<td>10%</td>
</tr>
<tr>
<td>6 Managed by Large Property Mgr.</td>
<td>96</td>
<td>0.09</td>
<td>5%</td>
<td>3%</td>
</tr>
<tr>
<td>7 Bldgs &gt; 50K SF w/no Large Prop. Mgr.</td>
<td>344</td>
<td>0.10</td>
<td>11%</td>
<td>13%</td>
</tr>
<tr>
<td>8 Bldgs &lt; 50K SF w/no Large Prop. Mgr.</td>
<td>4016</td>
<td>0.01</td>
<td>11%</td>
<td>8%</td>
</tr>
<tr>
<td>9 Total</td>
<td>6048</td>
<td>0.04</td>
<td>100%</td>
<td>100%</td>
</tr>
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</table>

- Largest opportunities addressed with one-to-one sales model leveraging MOU/SEMP framework
- Streamlined tenant fit out model rolled out
- CRWG developing road map to further adoption
Sustainable Office Design (SOD)

- Targeted to fast pace of Tenant Fit Out Market
- Obtain better savings by moving beyond simple prescriptive lighting incentives with integrated design solutions
- An incentive at $1.00 per sq/ft of leased space
- Simple and streamlined application process
- Initiative rolled out in Q3 2014 – several projects in pipeline:
  - 1 application in review at NSTAR – ›200,000 sf
  - 5+ additional projects of varying sizes in development
• Building Benchmarking Ordinances have been passed in Boston and Cambridge.

• First reporting deadline for Boston was Sept. 15, 2014. Over 70% of the eligible buildings have already reported.

• At full rollout, these ordinances will encompass nearly 3,000 buildings in Boston/Cambridge area.

• These ordinances will enable greater understanding of contextual building energy load.

• Understanding energy usage is key to developing energy efficiency planning and projects.
Commercial Real Estate Working Group

- Mission: to create market based solutions to enable EE
- Completed research to identify barriers and opportunities
- Exploring solutions/strategies with stakeholder groups
  - Streamlining energy efficiency investments during tenant fit out
  - Specialized approach serving smaller CRE users
  - Energy efficiency leases
  - Effective sharing of energy use information with tenants and owners
- Intended outcome: a roadmap that guides delivering value to the CRE market, through the EE programs
Segment Specific Program Delivery: Grocery

**Unique Attributes**
- Heavy refrigeration
- Regional or national decision making structure
- High energy intensity
- Low margin business

**Solutions**
- Dedicated sales and engineering resources
- Trade ally training to build specialized installation capacity
- Customized product/service marketing and messaging

![Savings Results](chart)

*Legend:*
- Standard Approach
- Customized Approach
- Typical Grocer Usage
Technology Mix
Trends - Savings

- **2009 Savings**
  - Refrigeration: 3%
  - Compressed Air: 1%
  - Motors: 1%
  - Lighting: 50%
  - HVAC: 40%
  - Industrial Processing: 5%

- **2011 Usage**
  - Compressed Air: 2%
  - HVAC: 23%
  - Computers & Electronics: 10%
  - Refrigeration: 8%
  - Other: 14%
  - Industrial Processing: 1%
  - Lighting: 38%
  - Motors: 4%

- **2013 Savings**
  - CHP: 25%
  - HVAC: 37%
  - Refrigeration: 2%
  - Motors: 0%
  - Lighting: 33%
  - Industrial Processing: 2%

- **Usage is indicative of opportunity**
  - Good proxy but not perfect
  - Tech evolution, C&S, hard to reach end-use

- **Success with large CHP**

- **Portfolio is relatively balanced to opportunity**

- **Where is the future? Volume**
Trends – Baseline Shift & Innovation

- National and state Codes and Standards have improved energy efficiency
  - More efficient baseline
  - Less savings from programs

- New technologies offer additional opportunities
  - May or may not compensate for baseline shift
Channels
MA Channel Characteristics

Based on our analysis we targeted the Top Market Segments by highest end use of the Channel...

As a result the Channel Sales approach:

- **Municipal**
  - Outdoor Roadway Lighting
  - Pump Stations
  - School Facilities

- **Distribution Supply**
  - Lighting & Controls
  - Mechanical (HVAC, EMS, VSD, CAIR)
  - Boilers, Combustion Controls, Steam Traps

- **Hospitality & Property Owners**
  - Hotels (Classified & Unclassified)
  - Restaurants

- **National Accounts**
  - Retail & Retail Offices
  - Franchise Owners
Trade Ally Partners

- Built around end-use channels (HVAC, Lighting, Refrigeration, CHP, domestic hot water)
- Targets Top Market Segments (by highest end-use)
- Articulated Value Proposition
  - Trade Ally: Short-Term business related – revenue & growth
  - Distributor: Long-Term value partnerships – co-marketing, …
- 4-steps engagement strategy
  1. Support & Structure: training and resources
  2. Communication: events and tools
  3. Development: training and guidance
  4. Partnership: materials, referrals, …
High Performers

- Channel Partners are critical to our success
- Programs are designed to encourage growth and investment
- Trend is positive, we are getting more production from more vendors
- Top 35 vendors in 2013 produced equivalent of entire 2009 goal
Upstream – Channel Leverage

- Any product-focused incentive not directed to the end user
- Results driven via the Manufacturer and Distributor
- Leveraging the value chain to optimize the savings impact

**PA Upstream Program**

- Any product-focused incentive not directed to the end user
- Results driven via the Manufacturer and Distributor
- Leveraging the value chain to optimize the savings impact
Progressive Strategy

- **2012**
  - **Upstream Lighting**
    - LFL and LED Lamps

- **2013**
  - **Upstream HVAC**
    - RTU, Unitary and Heat Pumps

- **2014**
  - **Upstream Lighting**
    - Additional fixture types

- **2015**
  - **Upstream Gas Equipment**
    - Water Heaters

- **Future**
  - **Other**
    - Commercial Kitchen Equipment, VFD’s, EX Motors, High Efficiency Pumps, etc.
Grundfos Example

- Largest Pump Manufacturer in world
- Their market is new construction or replacement on burnout
- They are competing for a share of this *fixed* market
- Efficiency at best is a value add

**What we did –**
- Introduce them to a far larger market, the built environment
- Replacement based on *efficiency*
- Began process to incorporate into upstream market
Munro Lighting Example

- Large Electrical Distribution Company
- Identified opportunity in downtown Boston hotel lobbies to replace incandescents with LEDs
  - Developed common collateral
  - Leveraged Munro sales force (dedicated 2 FTEs)
  - Leveraged customer resources to install
  - Facilitation/Introductions by account executives to customers
- Results
  - In ~3 months over 61,000 bulbs replaced
  - Over 14 MkWh reductions
  - Halo affect, resulting in numerous follow-on work
Conclusion
Conclusion

• **We have the most aggressive goals in the nation**
  - Recognized at state level as well as recognizing our state capital

• **We have a statewide gap for 2014 and cumulative 2015 projections**
  - Both are still within reach
  - All PAs remain fully committed to achieving goals and have implemented gap strategies

• **The data shows that our strategies are working**
  - Residential and C&I production is within 3% of index
  - Growth trend of both production as well as market is positive