MONEY MATTERS – OR DOES IT?

A Study of Alternative Incentive Strategies

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Agenda

- Baseline study background
- Methods
- Non-financial incentive – Energy saving recommendation reports
- Results – Which commercial segment is most likely to accept non-financial incentives?
- Conclusion - Does money matter?
Baseline Study Background

- Large commercial baseline study in NY
  - 826 sites
  - 3 main sample dimensions
  - Extensive data collection

- Choice of incentive:
  - $150
  - Custom energy savings recommendation (ESR) report
Baseline Study Background (cont.)

- Extensive data collection effort
  - June 2018 – January 2019
- Two components
  - Surveys with commercial businesses
  - Site visits of nested sample of survey completes
    - Focus here
Methods: Baseline Study Sample Dimensions

Region

Upstate
(NYSEG, RG&E, NGrid)

Long Island/Hudson Valley
(PSEG Long Island, O&R, Central Hudson)

Downstate
(ConEd)

Usage Category

Medium/Large
(≥75 MWh/Year)

Small
(<75 MWh/Year)

Segment

Food Service

Grocery

Lodging/Hospitality

Education

Retail

Warehouse

Health Services/Hospitals

Office
Methods: On-Site Data Collection

- Auditors collected information on:
  - Business/Building Characteristics
    - Square footage
    - Space types (% Overall SF, conditioned)
    - Occupancy hours
  - Major Equipment
    - Presence
    - Type
    - Quantity
    - Characteristics (e.g., efficiency, size/capacity)
    - Hours of Use

- Two options for incentive
  - $150 gift card
  - Site-specific energy savings recommendations (ESR)
Creating the ESR Reports

- Use of primary data gathered
- Speed/cost of data processing and development of recommendations
- Engineering analysis leveraging site-specific inputs:
  - Location
  - Hours of use
  - Equipment characteristics (efficiency and capacity etc.)
  - Quantities
- Developed recommendations spanning most end-uses
Example Recommendation Calculations

01 A 30-year-old, inefficient boiler found on site

02 Energy savings calculation triggered

03 NY TRM, existing equipment characteristics & weather data

04 Recommendation to upgrade boiler provided
Energy Saving Recommendations Example

<table>
<thead>
<tr>
<th>Existing Equipment Found at Your Facility</th>
<th>Efficient Alternative</th>
<th>Energy Savings Tips</th>
</tr>
</thead>
<tbody>
<tr>
<td>T12 fixtures</td>
<td>Linear LED</td>
<td>Replacing linear T12 fixtures with linear LED fixtures could save up to 120 kWh per fixture per year.</td>
</tr>
<tr>
<td>T8 fixtures</td>
<td>Linear LED</td>
<td>Replacing linear T8 fixtures with linear LED fixtures could save up to 65 kWh per fixture per year.</td>
</tr>
<tr>
<td>Standard flow faucet</td>
<td>Low flow faucet</td>
<td>Installing low-flow faucet could save up to $900 per fixture per year.</td>
</tr>
<tr>
<td>Poor buildingEnvelope properties</td>
<td>Insulation, air sealing, upgrades</td>
<td>Adding insulation and sealing air leaks will significantly reduce both heating and cooling energy consumption and cost.</td>
</tr>
</tbody>
</table>
Energy Saving Recommendations Example

APPENDIX - TECHNOLOGY DESCRIPTIONS

The following descriptions provide detail on some of the energy efficient technologies that are recommended for you. Many of the descriptions have links to additional resources for more information.

LED Lighting

LEDs are a solid-state lighting technology that emit light when direct current passes through a semiconductor. Nearly every lighting application in commercial buildings, including task and overhead lighting, can be retrofitted with LED fixtures. Their long life and dimmability make LEDs particularly well suited to high-bay overhead applications such as large retail stores, warehouses, and manufacturing facilities, especially when utilizing daylighting strategies. Additional advantages of LEDs are their controllability and directionality. These features enable efficient use of light and energy.


Lighting Occupancy Sensors

Occupancy sensors for lighting control use infrared or ultraviolet sensors to detect the presence of humans in and around spaces. The sensors determine the presence of people by monitoring the infrared spectrum. The sensors are deployed in office areas, conference rooms, classrooms, and other commercial spaces where energy usage can be reduced by turning lights off when they are not needed.

What did we find?

- Completed 826 site visits
- Only 6% of participants chose the ESR
- Noteworthy differences between sample segments that chose the ESR
## ESR Report Distribution by Customer Business Segment

<table>
<thead>
<tr>
<th>Customer Business Segment</th>
<th>Number of ESR Reports [A]</th>
<th>Number of Sites Completed [B]</th>
<th>Percent of ESR Reports within Segment ([A]/[B])</th>
<th>Percent of Overall ESR Received ([A]/[Total A])</th>
<th>Percent of Site Visits ([B]/[Total B])</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office/Government</td>
<td>20</td>
<td>145</td>
<td>14%</td>
<td>43%</td>
<td>20%</td>
</tr>
<tr>
<td>Education</td>
<td>12</td>
<td>92</td>
<td>13%</td>
<td>26%</td>
<td>13%</td>
</tr>
<tr>
<td>Retail</td>
<td>5</td>
<td>144</td>
<td>3%</td>
<td>11%</td>
<td>20%</td>
</tr>
<tr>
<td>Food Service</td>
<td>3</td>
<td>136</td>
<td>2%</td>
<td>7%</td>
<td>19%</td>
</tr>
<tr>
<td>Lodging/Hospitality</td>
<td>3</td>
<td>49</td>
<td>6%</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>Warehouse</td>
<td>2</td>
<td>30</td>
<td>7%</td>
<td>4%</td>
<td>4%</td>
</tr>
<tr>
<td>Health Services/Hospitals</td>
<td>1</td>
<td>58</td>
<td>2%</td>
<td>2%</td>
<td>8%</td>
</tr>
<tr>
<td>Grocery/Convenience</td>
<td>0</td>
<td>75</td>
<td>0%</td>
<td>0%</td>
<td>10%</td>
</tr>
</tbody>
</table>
## ESR Report Distribution by Usage Category

<table>
<thead>
<tr>
<th>Customer Usage Category</th>
<th>Number of ESR Reports [A]</th>
<th>Number of Sites Completed [B]</th>
<th>Percent of ESR Reports within Segment ([A]/[B])</th>
<th>Percent of Overall ESR Received ([A]/[Total A])</th>
<th>Percent of Site Visits ([B]/[Total B])</th>
</tr>
</thead>
<tbody>
<tr>
<td>75 MWh and Greater</td>
<td>22</td>
<td>267</td>
<td>8%</td>
<td>48%</td>
<td>37%</td>
</tr>
<tr>
<td>Less Than 75 MWh</td>
<td>24</td>
<td>462</td>
<td>5%</td>
<td>52%</td>
<td>63%</td>
</tr>
</tbody>
</table>
## ESR Report Distribution by Job Function of On-site Contact

<table>
<thead>
<tr>
<th>Job Function of On-site Contact</th>
<th>Number of ESR Reports [A]</th>
<th>Number of Sites Completed [B]</th>
<th>Percent of ESR Reports within Segment ([A]/[B])</th>
<th>Percent of Overall ESR Received ([A]/[Total A])</th>
<th>Percent of Site Visits ([B]/[Total B])</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Owner/Executive</td>
<td>25</td>
<td>452</td>
<td>6%</td>
<td>54%</td>
<td>62%</td>
</tr>
<tr>
<td>Facilities Manager or Engineering Employee</td>
<td>13</td>
<td>87</td>
<td>15%</td>
<td>28%</td>
<td>12%</td>
</tr>
<tr>
<td>Property/Office Manager</td>
<td>3</td>
<td>86</td>
<td>3%</td>
<td>7%</td>
<td>12%</td>
</tr>
<tr>
<td>Other/Don’t Know</td>
<td>5</td>
<td>104</td>
<td>5%</td>
<td>11%</td>
<td>14%</td>
</tr>
</tbody>
</table>
Conclusion – Money Does Matter!

- Less participants opted for the report than originally anticipated (6%)
- Varied participation between segments:
  - More participation for:
    - Government and Education segments
    - Large Usage
    - Facilities/Engineering on site contact
- Channel customers into energy efficiency program
- Improve uptake of ESR report by:
  - Ensuring on-site contact understands value of ESR report
  - Associating dollar amount to ESR report
Contact Information

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