UGI HVAC ENTERPRISES, Inc.

A Look Inside the CHP Development Process

Drexel University
May 5, 2014
UGI HVAC Enterprises, Inc.

- Fully owned subsidiary of UGI Corporation

- OUR FOCUS:
  - HVAC
  - Plumbing
  - Refrigeration
  and Electrical Services
UGI HVAC Enterprises, Inc.

- Industrial, commercial & residential customers in:
  - Pennsylvania
  - New Jersey
  - Delaware
  - Maryland

- UGI Performance Solutions created in 2011.
  - Energy utilization strategies for business
UGI HVAC–Regional Focus

- Projects with 10 MW or less on-site demand

- Smaller projects, less complex
  - Integration with the Electric Grid
  - Expedited permitting process

- Greater diversity
  - Across market segments and geography
  - Load factor reduces utility Contribution In Aid of Construction (CIAC)
## Project Review By Industry Segment

<table>
<thead>
<tr>
<th>Market Segment</th>
<th>Projects</th>
<th>Dollars Represented ($000,000)</th>
<th>Total MW/Segment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Care</td>
<td>3</td>
<td>$19.8</td>
<td>8.0</td>
</tr>
<tr>
<td>Hospitality</td>
<td>4</td>
<td>$9.5</td>
<td>3.8</td>
</tr>
<tr>
<td>Higher Education</td>
<td>3</td>
<td>$11.7</td>
<td>4.5</td>
</tr>
<tr>
<td>Municipal</td>
<td>2</td>
<td>$6.6</td>
<td>3.0</td>
</tr>
<tr>
<td>Commercial</td>
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<td>$12.3</td>
<td>5.45</td>
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<tr>
<td>Industrial</td>
<td>2</td>
<td>$38.0</td>
<td>14.8</td>
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<tr>
<td>Financial</td>
<td>2</td>
<td>$1.6</td>
<td>5.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>18</strong></td>
<td><strong>$99.5</strong></td>
<td><strong>44.8</strong></td>
</tr>
</tbody>
</table>
CHP Project Development

- 1- to 3-year sales cycle
- Complex sale – no assurance of success
- Attributes:
  - ROI
  - Process support
  - Resiliency
- Capital investment
- Project Development Agreement (PDA)

DID YOU KNOW?
- Installed CHP capacity in the U.S. exceeds 82 gigawatts.
- There are more than 4,100 industrial and commercial CHP facilities.
- That’s 8 percent of the U.S.’s current generating capacity.
Project Development Agreement (PDA)

- EDUCATION - EDUCATION - EDUCATION

- Project development
  - Determine energy requirements
  - Internal process review
  - Analyze key electric and HVAC systems
  - Project future energy demand
  - Complete Over-the-Top design
  - Present to customer with target IRR/Payback
  - PDA agreement signed
Typical Terms of PDA

- Customer/Developer agreement on project cost for Engineering Analysis
- Applications submitted for federal, state or utility grants.
- System integration analysis completed
- Project schedule completed.
- Decision to proceed.
- Contract executed.
- Line of credit negotiated and secured.
Customer Adoption of CHP Applications

Impediments:

- Sale complexity
- Customer uncertainty
- Smaller customers less sophisticated
- Difficulty committing resources
- Understanding “Life of Grant” programs and incentives
Customer Adoption of CHP Applications

Approaches:

• (Complex sale) Customer must have full understanding of operation and system integration-contractor must deliver the goods
• (Uncertainty) Avoid “black box” treatment of incentives
• (Less sophisticated customers) More hand holding by developer
• (Resource commitment) Promote parity with other federal, state incentives- role for both State and Federal action
• (Industry adoption of technology) Those who implement a properly designed CHP System will become more competitive - job preservation and creation
UGI HVAC Policy Recommendations

• Up to a 20% development grant – projects 10 MW or less five year commitment to the grant program
• $10/MWH credit for new CHP production – similar treatment as SRECs (Recognition of societal benefits and demand reduction)
• Avoid “black box” process for incentives and grants
• Support emerging federal legislation: tax parity for CHP with Solar
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