Snapshot of Industrial Natural Gas Energy Efficiency Programs

Southwest Regional Energy Efficiency Workshop

November 15, 2007
On Today’s Agenda

■ Overview of two utility gas energy efficiency programs
  • MidAmerican Energy’s Non-Residential Energy Analysis Program
  • Pacific Gas & Electric Company’s Refinery Energy Efficiency Program (REEP)

■ Discussion of successes, challenges and lessons learned
Nexant Overview

- Energy Consulting and Products Firm with a staff of 300+ employees
- Completed over 1,500 energy industry assignments in more than 70 countries with nineteen offices around the world
- Nexant’s Energy and Carbon Management business unit involved with utility energy-efficiency efforts since the 1980’s
  - Market potential assessments
  - Program design activities
  - Turnkey program implementation support
MidAmerican Energy is a combined fuel investor owned utility
- Primary service territory in Iowa with some customers in South Dakota and Illinois
- Approximately 700,000 electric and natural gas customers

Implementation of DSM programs seek to meet the goals of their Energy Efficiency Plan filings with the Iowa Utility Board

2003 filing included their Non-Residential Energy Analysis Program
- Targets customers with facilities > 25,000 square feet
- Offers technical assistance and implementation incentives for cost-effective measures

Program model is similar to many other utilities
After Applying, Customer Receives a Scoping Level Audit or Strategic Management Energy Efficiency Training

- Executes EE Action Plan
  - Additional technical support
  - Implementation incentives

• Prescriptive incentives for common measures

50% upfront, balance after implementation

Incentives to provide 1 yr SPB (max 4 year buy-down)

~50% of customer cost

No cost for customer
Program Results

- Savings opportunities identified to date

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<tr>
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<th>Demand (kW)</th>
<th>Energy (kWh/yr)</th>
<th>Energy (Therms/yr)</th>
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<tbody>
<tr>
<td>Commercial</td>
<td>2,364</td>
<td>21,951,544</td>
<td>591,504</td>
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<tr>
<td>Industrial</td>
<td>8,430</td>
<td>93,377,412</td>
<td>42,578</td>
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<td>Total</td>
<td>10,794</td>
<td>115,328,956</td>
<td>634,082</td>
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- Savings opportunities realized or in process to date

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</thead>
<tbody>
<tr>
<td>Commercial</td>
<td>432</td>
<td>2,215,941</td>
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<tr>
<td>Industrial</td>
<td>1,683</td>
<td>20,102,106</td>
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<td>Total</td>
<td>2,115</td>
<td>22,318,047</td>
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PG&E is a combined fuel investor owned utility

- Serves approximately 15 million customers, covering most of central and northern California
- 5.1 million electric accounts
- 4.2 million natural gas accounts

CPUC orders 20% of utility DSM budget to be spent on 3rd party programs

- PG&E bids out 3rd party programs to address markets with atypical barriers-to-entry
- One resulting program is the Refinery Energy Efficiency Program (REEP)
Strategic Planning Meeting to Identify Needs and Opportunities

Technical Analysis and Support

Implementation Incentives

- No cost for customer

- Electric @ $0.10/kWh (6 month SPB limit)

- Gas @ $0.80/therm (50% project cost limit)
REEP Program Results

- Savings opportunities realized or in process to date
  - Electric – 45,275,000 kWh/yr
  - Gas – 3,900,000 therms/yr

- Average project savings
  - Electric – 2,650,000 kWh/yr
  - Gas – 230,000 therms/yr
What Has Worked Well

- Both utilities are combined fuel
  - Allows a seamless approach to assisting customer with energy efficiency opportunities
  - Economies of scale in fixed program delivery costs

- Support for key customer market barriers
  - External specialized engineering expertise
  - Comprehensive approach
  - Project management assistance
  - Owner’s representative services

- Incentives help reduce paybacks
Where Some of the Challenges Lie

- Still some separation of electric and gas programs
- Transport customers often are not eligible
- Competition for internal funding
- Implementation timeframes can be long
  - Scoping of complex projects
  - Internal funding cycles
  - Coordination/competition with planned plant down-time
- Program marketing through account managers
  - Point of contact not always the right person
  - Focus on customer satisfaction
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