COMMERCIAL STRATEGIC ENERGY MANAGEMENT PROGRAMS

BEST PRACTICES AND APPROACHES

OCTOBER 22, 2016

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BEST PRACTICES IN SEM

Purpose: To present findings from a national study on best practice strategies and design of commercial strategic energy management (SEM) programs for DTE Energy.
COMMERCIAL SEM PROGRAMS AND BEST PRACTICES

SEM IS A HANDSHAKE TO SAVE ENERGY OVER A LONG-TERM CYCLE BETWEEN A PROGRAM ADMINISTRATOR AND A BUSINESS OR ORGANIZATION’S OWNER/OPERATOR

“We’ll focus on O&M and any capital improvements we can identify!”

Process/O&M improvement project
- Turning equipment off when not needed
- Fixing compressed air leaks
- Compressed air system optimization
- Production scheduling optimization
- Formalizing equipment shutdown procedures
- Improving process yield and associated
- Capital Improvements
STUDY APPROACH

Navigant focused on SEM best practices of successful commercial SEM programs nationwide.

- **PRELIMINARY RESEARCH**
  - Choose interview candidates (based on inclusion of SEM elements, timelines, focus on commercial sector)
  - Gather initial information about programs

- **8 PROGRAM INTERVIEWS**
  - Include range of regions, customer types, and engagement models
  - Discuss SEM program experience

- **DEVELOP PROGRAM DESIGN/LOGIC MODEL**
  - Identify best practices and successful strategies
## CUSTOMER PROFILE

### SEM Program Interviews

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<th>Customer Type</th>
<th>Conv. Center</th>
<th>Government</th>
<th>Grocery</th>
<th>Hospitals</th>
<th>Labs</th>
<th>Offices</th>
<th>Restaurant</th>
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Source: Navigant
THREE SEM PROGRAM MODELS

**Cohort**
SEM multi-customers attend group workshops, or cohorts, over a 4-18 month period; customers share insights and results

**Flagship**
Build SEM Program starting with one site and expand to others after that

**Top-Down**
Recruit customer executives who then mandate SEM initiatives across their constituent sites
THREE SEM PROGRAM MODELS

Market research informs the choice of program model.

**Cohort**
Ideal for a market made up of many, equally strong customers or similar non-competitors

- Mid-sized Commercial Real Estate/Offices
- Schools
- Colleges/Universities

**Flagship**
Ideal for a market with fewer customers but whose customers have multiple facilities

- Hotels
- Grocery chains
- Convenience Stores
- Large-Sized Real Estate Companies/Offices

**Top-Down**
Ideal for a market with few customers who are highly centralized

- Hospitals
- Tech Companies
- Government Buildings
BEST PRACTICE SEM ELEMENTS

1. PEOPLE ENGAGEMENT
2. CUSTOMER SEM POLICY AND GOAL SETTING
3. FINANCIAL INCENTIVES
4. PROJECT PLANNING AND IMPLEMENTATION
5. MEASUREMENT AND VERIFICATION
6. MARKETING AND CASE REPORTS
BEST PRACTICES IN PEOPLE ENGAGEMENT, CUSTOMER POLICY, AND GOALS AND FINANCIAL INCENTIVES

**People Engagement**

- *A handshake* with Organization Management, Champions, Internal Energy Teams is critical
- *Maintain ongoing contact* and encourage energy teams to include employees at all levels

**Energy Policy and Goals**

- *Set Energy Goals as Targets* for Executive Oversight and Energy Team Focus = more $ savings
- *Support Goals and Policies* development for later Program Administrator Progress Tracking

**Financial Incentives** (Three Types)

- *Energy Savings Incentives* at ± $ 0.02/kwh and $0.20/therm
- *Measure-Based Incentives* use DEEM incentives for specifically defined SEM projects
- *Lump-Sum Incentives* provides large monetary amount to meet SEM/ISO50001 standards
### Project Planning and Implementation

- **Establish a system** for customers to identify and implement savings opportunities
- **System planning** needs to be ongoing not just focused on low-hanging fruit

### Measurement and Verification

- **Establish long-term data collection** to determine savings persistence
- **Estimate savings** based on at least **12 months of savings** to capture seasonal effects
- **Account for changes** in economics, etc.

### Marketing and Case Reports

- **Publish case studies** to use to advertise the value of SEM for recruitment
- **Use past contacts and direct approaches**, which are also used effectively by some programs
SEM PROGRAM ROADMAP

Ideation and Initiation
- Market Research and Customer Selection
- Customer Engagement and Relations
- Barriers

Operations and Implementation
- Organizational Insights
- Keep Focus on Continuous Improvement
- Barriers

Market Transition
# BEST PRACTICE INSIGHTS: INITIATION AND RECRUITMENT

## SEM Initiation

### RELATIONSHIP BUILDING
- Leverage existing networks or establish new ones
- If lacking in-house resources/experts, recruit experienced Third-Party Implementer

### MARKET RECONNAISSANCE
- Research the market, identify customer needs
- Understand customer’s organizational structure (e.g., command-and-control vs. collaborative)

## Recruitment

### ACCESSING CUSTOMERS
- Utilize Account Managers
- Leverage Channel Partners or Professional Associations
- Engage Customer Executives (If Top-Down SEM model)

### SELECTING CUSTOMERS
- Identify the low-hanging fruit
- Be Selective
- Customer Eligibility Criteria Are Flexible
BEST PRACTICE INSIGHTS: OPERATIONS AND IMPLEMENTATION

- Think organizationally; work with all parts of the customer’s shop
- Keep focused on continuous improvement opportunities and new needs
- Contract out (if needed) or learn and then run program
- Provide interactive support with other customers (cohort)
- Be dynamic: evolve around customer needs
BEST PRACTICE SEM PROGRAM DESIGN

Identify Internal and Market Barriers

**Internal**
- Lack of SEM policies and goals
- Lack of resources for SEM planning and implementation
- Challenges conducting EM&V
- Limited qualified contractors with SEM knowledge and expertise

**Market**
- Lack of Awareness of benefits
- High upfront project costs
- Lack of customer motivation
- Uncertainty of savings realization

Select Strategies to Overcome Barriers

**Strategies**
1. Marketing and case reports
2. People engagement
3. Customer SEM Policy and goal setting
4. Financial incentives
5. Project planning and implementation
6. Measurement and verification

Choose Activities to Implement Strategies

**Activities**
- Publish SEM articles and case studies
- Target high-potential committed customers
- Utilize account managers and trades association to recruit SEM
- Establish energy teams and internal champions and meet regularly
- Organize or sponsor trainings
- Support customers developing policies and goals and savings opportunities
- Provide energy based or performance based incentives
- Use standard M&V protocols, provide tools and software as needed
BEST PRACTICES PROGRAM DESIGN:
THEORY OF CHANGE/LOGIC MODEL

Inputs: Program Budget, Allocated Staff Time (ineluding Contractor), Market Knowledge

- Lack of awareness of SEM and its benefits
- Lack of motivation among customers to implement SEM programs
- Limited energy management training opportunities
- Lack of SEM policies and goals
- Lack of resources for SEM planning and implementation
- Limited access to qualified contractors with SEM knowledge and expertise
- High upfront cost of projects
- Uncertainty that energy savings will be realized
- Lack of support for M&E process

SEM Elements and Strategies:
- Marketing and Case Studies
  - Publish SEM articles and case studies
  - Target high-potential engaged customers
  - Utilize account managers, channel partners, and/or professional associations to recruit customers
  - Establish internal energy teams and have regular meetings with them
  - Organize or sponsor training programs
  - Support customers to develop/integrate SEM policies and goals
  - Support customers in identifying energy saving opportunities
- People Engagement
  - Recruit experienced experts and/or contractors to support SEM planning and implementation
  - Provide energy-based or measure-based incentives to customers
  - Use standard M&E protocols to track energy use and provide M&E feedback software as necessary

Short-term Outcomes:
- Customers are aware of the benefits of SEM
- Customers are willing to implement SEM
- Human energy teams are available to implement SEM
- Customers use SEM policies with the companies’ policies and set goals
- Customers identify energy saving opportunities
- Experienced experts or third-party contractors are available to support SEM planning and implementation
- High upfront cost of projects decline
- Customers begin to use energy use tracking system

Intermediate Outcomes:
- Customers implement SEM and realize energy savings associated value proposition
- Experienced experts or third-party contractors help customers implement energy saving opportunities
- Customers provide energy use data for use in M&E evaluation

Long-term Outcomes:
- Leads to verified energy and demand savings
- Leads to customer satisfaction

Impact:
- Viable and successful SEM implementation in DTE territory
OPERATION LIFECYCLE OF SEM PROGRAMS

- **Pre-Existing Program**: Market Reconnaissance
- **Initial Customer Recruitment**: Program Ideation and Initiation
- **Early-Market Maturity Phase**: Potential Third-Party Implementer/Contractor Enters
- **Mid-Market Maturity Phase**: Market Transition
- **Mature Market Maturity Phase**: Potential Third-Party Implementer/Contractor Exits

**Years from Conception**

- 0
- 1
- 3-4
- 8+
- 11+
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