SEM for RCMs
Commercial Strategic Energy Management for Resource Conservation Managers

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Webinar Objectives

- Understand Commercial Strategic Energy Management
- Relationship of CSEM and RCM
- CSEM Advantages
- PNW Utilities with CSEM Programs
- Tacoma Power CSEM from a utility perspective
- Pierce County CSEM from an energy champion perspective
**What is SEM?**

**Strategic Energy Management** is a self-sustaining energy management system based on the well-established principles of process management and the **Plan-Do-Check-Act** process of continual improvement. SEM helps businesses permanently embed long-term energy management practices into the key areas of their operations: people, manufacturing systems, measurement, and organizational structure.

–NEEA SEMHUB

**Strategic energy management is a long-term approach to energy efficiency that includes setting goals, tracking progress, and reporting results.**

-DOE

**SEM is a holistic approach to energy management**
Energy Star's Guidelines for energy management, a commonly referenced process for implementing SEM.
Is SEM a Proven Concept?

**Commercial Strategic Energy Management (CSEM)**

- Not a brand new concept - SEM started as the industrial sector
- Many successful utility SEM programs in the Pacific Northwest and British Columbia
- Has been around about 20 years
- Now focusing on Commercial Strategic Energy Management (CSEM)
- Utility incentive program that is NOT traditional widget-based
- CSEM approach very similar to RCM approach
Intersect of SEM and RCM

**RCM**
- Dedicated RCM
- May have no utility support other than traditional program incentives
- Continuous engagements

**SEM**
- Employee implemented
- Usually a team approach
- Paid after performance
- Well defined system for measuring & reporting performance
- Longer engagements

**BOTH RCM AND SEM**
- Holistic approach
- Planning & implementation
- Educates participants
- Management support
- Savings calculated at meter
- Recognizes achievements
- Commitment to EE
- O&M, behavioral savings

**Pay for Performance:** utility incentive program that targets deep retrofits and capital projects, usually contractor implemented. Incentive payments are paid over time based on whole building energy savings measured at the electric meter.
CSEM Advantages

1. CSEM develops and taps the skills of your own staff to manage energy for long-term energy savings.

2. CSEM is usually delivered through a cohort—a group of diverse agencies providing opportunities for peer-to-peer learning.

3. CSEM Provides tailored energy management or “Scalable Strategic Energy Management”

4. CSEM helps agencies meet regulatory requirements of Environmental Action Plan; Ex. Carbon reduction goals, kWh reduction goals, etc.

5. CSEM incentives may be available for Therms, kWh, Cu. Ft. H2O, etc. Incentives vary by utility.

6. CSEM is flexible - CSEM is designed to meet participants where they’re at.
CSEM Programs in the NW

- Tacoma Power – In collaboration with BPA
- Clark County PUD – In collaboration with BPA
- Bonneville Power Administration (BPA) – Implementer for smaller NW utilities SEM programs
- Puget Sound Energy – Long running program
- Seattle City Light – Pay for Performance program
- Energy Trust of Oregon
- BC Hydro

Program requirements, process, and incentives vary by utility
Participation is FREE!
Baseline 1 million kWh usage annually.
Participate for two years.
Support an energy champion and team.
Engage in activities and projects that will reduce energy consumption.
Share learning experiences with other participants by presenting to your cohort.
Tacoma Power CSEM Pilot

Tacoma Power Commercial Strategic Energy Management (CSEM) Program Basics

1. Identify an energy champion and executive sponsor in your business.

2. Create an energy team. (Mindset is important!)

3. Conduct an energy management assessment (EMA).

4. Conduct building scan to develop opportunity register.

5. Establish an energy strategy for your facilities.

6. Develop an energy policy or mission statement.

7. Identify and prioritize activities and projects that reduce energy use.

8. Celebrate the savings!
Cohort 1 Participants

• Tacoma Power
• City of Tacoma
• Tacoma School District
• Pierce County
• Bethel School District
• University Place School District
• Bates Technical College
Cohort 1 Program Characteristics

- Pilot program in collaboration with BPA
- Approach to SEM
  - Cohort based approach
  - All public agencies
- Program Implementer (Contractor)
  - Program strategic planning (the day-to-day)
  - Statistical reporting (monthly performance Reports)
  - Specific customer engagement strategies
Three primary types of incentives

**Milestone Incentives**
1. Build energy team and meet twice
2. Implement new energy policy
3. Conduct survey
4. Paid in year 1 only

**Performance Incentives**
1. Paid annually for kWh savings
2. Tacoma Power CSEM $0.025 per kWh

**High Achievers Performance Incentive (HAP)**
1. Paid annually for kWh savings
2. Performance incentives for energy savings which exceed the contract kWh limit.
Cohort 1 Characteristics (Continued)

- 5 of 7 participants in the Tacoma Power pilot program;
  - Have established RCM
  - Identified RCM as the Energy Champion

- RCMs may build the foundation for CSEM more quickly.
  - Volunteer vs. voluntold
  - Level of technical expertise
  - Customer engagement experience
  - Understand customer drivers and motivations specific to their organization
What’s Working?

- Working well
  - Cohort based approach
  - Shared learning perspective
    - Workshops
    - Peer to peer calls
  - Milestone incentive – carrot

- Not so well
  - RCM vs no-RCM (bigger learning curve)
  - Understanding energy modeling
  - Common language interpretation
    - What is a Policy?
    - What is a Survey?
    - Be specific!
Leveraging the SEM Curriculum

- Organizational Structure
- Engagement – Employee, Executive
- Opportunities – Operations, maintenance and behavioral
- Metrics – Set goals, develop KPIs
What are our challenges?

• Engaging people
• Getting people to change behaviors
• Measuring impacts
• Dealing with competing priorities
What are our challenges?

- Aging building stock
- Lots of deferred maintenance (really, a lot)
- Navigating department cultures
- Competing Priorities
- Program funding sources
- Project funding sources
- Communication Silos
- Coordinated planning & effort
- Reliable data
- Lack of standards
- Leadership awareness
- Workforce engagement
FUTURE STATE

- **Strategic**: Pursues County objectives
- **Integrated**: Part of the culture and process
- **Data Driven**: Reliably inform decisions
- **Funded**: Connect strong business case
Director-Level Buy-in

Informed | Directors influence the org
Priorities | Dept. concerns vary
Inter-departmental Team

Engage | Enlist Executive Sponsors

Team | Broad representation

Policy | A statement of values

Goals | Triple Bottom Line
Opportunity & Behavior

Find Message

| Develop good questions
| Tell stories well
Better Metrics & the Business Case

Benchmark | Changes in Building Energy
Model | Capture behavioral influence
Report | Inform decisions
Decide | Prioritize the highest return
Success Factors

- Strategic Communication Plan
- Diverse Resource Conservation Team
- Accurate Data
- Effective Policy and Follow-through
CSEM Resources

- SEM hub  https://semhub.com
- WSU RCM Program
  http://www.energy.wsu.edu/PublicFacilitiesSupport/
  ResourceConservation.aspx
- NW SEM Collaborative
  https://semhub.com/nwcollaborative
- Tacoma Power CSEM
  https://www.mytpu.org/ways-to-save/business-
  rebates/commercial-strategic-energy-management/
Thank you!

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