



## Q3-2019 COLORADO DSM ROUNDTABLE

11.14.2019

# AGENDA

- 1:00 – 1:30 p.m. Welcome and DSM Regulatory Updates
- 1:30 – 2:30 p.m. DSM Programs: Q2-2019
  - » Q2 Achievement Update
  - » Business Programs
  - » Residential and Low-Income Programs
- 2:30 – 2:45 p.m. -- *Networking Break* –
- 2:45 – 3:15 p.m. Strategic Energy Management Update
- 3:15 – 3:30 p.m. Product Development Update

# **DSM Regulatory Updates Q3-2019**

**George McGuirk  
DSM Regulatory**

# 60/90-Day Notices

- 2018 Product Evaluations Pt. 1
  - *Posted: 2/1/2019*
  - *Implemented: 3/5/2019*
- 2018 Product Evaluations Pt 2
  - *Posted: 2/22/2019*
  - *Implemented: 3/26/2019*
- Multifamily Buildings Update - 2019
  - *Posted: 2/28/2019*
  - *Implemented: 4/2/2019*
- Home Performance with Energy Star Update - 2019
  - *Posted: 5/2/2019*
  - *Implemented: 7/1/2019*
- Lighting Efficiency and Small Business Lighting Update
  - *Posted 7/1/2019*
  - *Implementation 9/1/2019*
- New Construction Update
  - *Posted 7/1/2019*
  - *Implementation 9/1/2019*
- Multifamily Buildings RFP Update
  - *Posted 7/1/2019*
  - *Implemented 8/1/2019*

# 60/90-Day Notices

- Charging Perks Pilot
  - *Posted: 8/22/2019*
  - *Implemented: 9/24/2019*
- Energy Star New Homes Update
  - *Posted 8/30/2019*
  - *Implementation 10/1/2019*
- High Efficiency Air Conditioning and HPwES Updates
  - *Posted 8/30/2019*
  - *Implementation 10/1/2019*
- Insulation and Air Sealing Update
  - *Posted 8/30/2019*
  - *Implementation 10/1/2019*
- Motor and Drive Efficiency Update
  - *Posted 8/30/2019*
  - *Implementation 10/1/2019*
- Energy Star Retail Product Platform 90-Day Notice
  - *Posted 8/30/2019*
  - *Implementation 10/1/2019*

# 2019 Compliance Check-in

- 2019/20 Plan Settlement Items:
  - Spanish Language Marketing
    - Low-income educational material, School Kits, Multifamily
    - Energy Feedback online portal update forthcoming
  - Energy Efficiency Financing Marketing
    - Updated Residential Energy Efficiency Financing website
    - Cross marketing with other products include HPwES
  - Home Performance with Energy Star
    - Product redesign under internal review
  - Codes & Standards Study
    - Study underway – deliverable in December

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# AGIS/AMI Forum

- Venue for interested stakeholders to bring ideas to AGIS leadership
  - Help the Company cost-effectively deliver value to customers
- Company representatives include AGIS Leadership plus Product Development and Customer Solutions staff
- Tuesday December 3, 2019
  - 1800 Larimer, 1-3pm

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# DSM Regulatory Calendar

- **Upcoming Meetings – Save the Date!**

- AGIS Forum:

- 1800 Larimer*

- Tuesday, December 3, 2020

- Q4-2019 DSM Roundtable Meeting:

- 1800 Larimer*

- Wednesday, February 12, 2020



# **DSM Achievements Q3-2019**

**Mark Schoenheider  
Manager, Customer Energy Solutions**

# 2019 Q3 Achievement Highlights

## Electric Portfolio

- 389 GWh (77% of 502 GWh Target)
- 63.6 MW (71% of 90 MW Target)
- \$61.5M (67% of \$92.4M Budget)

## Business Programs

- 248 GWh (72% of Target)
- Lighting Eff/Small/Street 119 GWh (61%)
- New Construction 44 GWh (112%)
- Strategic Energy Management 30 GWh (104%)

## Residential / LI Programs

- 137 GWh (91% of Target)
- Home Lighting & Recycling – 97 GWh (108%)
- ENERGY STAR Homes – 4.4 GWh (142%)
- L.I. Non-Profit – 1.1 GWh (63%)

## Gas Portfolio

- 445,724 Net Dth (70% of Blended Target of 637,448)
- \$10.8M Spend (78% of \$13.8M Blended Budget)

## Business Programs

- 112,496 Net Dth (69% of Target)
- New Construction 75,588 Dth (97% of Target)
- Heating Efficiency 14,586 Dth (74% of Target)

## Residential / LI Programs

- 274,438 Net Dth (69% of Target)
- ENERGY STAR Homes – 93,912 Dth (104%)
- Residential Heating – 60,067 Dth (108%)
- L.I. SF Weatherization – 42,688 Dth (89%)



# Marketing Campaigns & Trade Outreach

## Business

- Commercial Financing Webinars in mid-July promoting EE Financing, 10-15 attendees each session
- Colorado Association of Mechanical and Plumbing Contractors (CAMPC) Membership Night sponsorship, Coors Field, Aug. 12, 200 attendees
- Data Center Advisory Board Meeting Aug. 29, Independent Electrical Contractors Rocky Mountain (IECRM) in Northglenn, 10 attendees
- Energize Denver monthly task force – benchmarking
- Colorado Restaurant Show, XE exhibit, Sept. 17-18, Colorado Convention Center.
- Commercial Lighting Workshop June 4, PPA Event Center, including Commercial Financing
- Rocky Mountain Association of Energy Engineers (RMAEE) Annual Energy Forum Sept. 18 PPA Center
- Compressed Air Trade Partner meetings Sept. 19-20
- EEBC Quarterly membership meeting Sept. 26, Product Development, AMI Metering Presentations

## Residential

- 2019-2020 DSM launched July 1
  - Information regarding program rule changes, rebate amounts, and rebate forms sent to trade allies and stakeholders
  - Customer facing web pages and marketing collateral updated to communicate the new plan
- Low Income Kits
  - Final email of 2019, promoting low income kits, sent out to qualifying customers
- Energy Feedback
  - Web banners promoting Residential Cooling, Home Energy Squad, and Refrigerator Recycling within the My Energy Portal
- Water heaters
  - Targeted onserts featuring heat pump water heaters to increase customer awareness of available rebates

# **DSM Business Q3-2019 Highlights**

**Jon Packer**  
**Manager, Customer Energy Solutions**

# Business Lighting Efficiency & Small Business Lighting

- C&I Lighting Efficiency project volume and pipeline recently decreasing, tracking short of 2019 savings target.
  - Additional costs lead to either lower prioritization or longer timelines
- Lighting – Small Business on track to meet or exceed 2019 targets
  - LED Troffers and High bays driving cost-effective savings
  - Coming up:
    - Network lighting controls training to increase market adoption
    - Market segmentation to promote cost-effective measures
- LED Street Lighting: Xcel Energy-owned street lights targeted to municipalities on Street Lighting Service (SL) Rate
  - Significant traction in Denver, Westminster
  - Identify future opportunities via Partners in Energy Planning phase



Photo: Holophane Lighting  
LED High Bay fixture

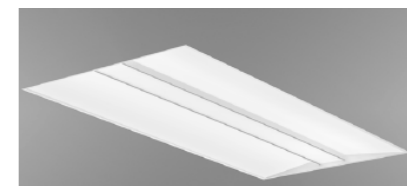


Photo: Acuity Brands  
LED Troffer fixture

# Multifamily Buildings (Electric & Gas savings)

- Outreach efforts for reaching new Property Management groups have been successful. 10% of properties contacted signed up to participate as a result of the outreach.
- Energy Savings through Q3:
  - 19,041 Dth
  - 8,216,286 kWh



# Business New Construction (Elec. & Gas)

- Influences builders, architects, engineers to build with energy efficient equipment and systems
- 490 active projects in various stages
  - Energy Design Assistance (EDA) 75%
  - Energy Efficient Buildings (EEB) 25%
- Trends affecting 2019 participation/savings
  - Improved vetting of final vs. planned project costs impacts cost-effectiveness
  - New Construction Lighting available with EEB
- Fast-growing sectors
  - Multifamily building boom, especially Denver
  - Education and Health Services
  - Leisure and Hospitality
- Continuing in 2019: trade partner training for 2019/20 updates
- Implementing additional DSM Products like Demand Management, Electric Vehicles



Photo: Legacy at Speer



Photo: Village Center Station



# **DSM Residential, Low Income Q3-2019 Highlights**

**David Hueser**  
**Team Lead, Customer Energy Solutions**

**Ann Kirkpatrick**  
**Channel Manager,**  
**Customer Energy Solutions**



# ENERGY STAR® New Homes (E&G savings)

## Q3 Program Metrics:

Metric	Second Quarter	Third Quarter
Qualifying Homes	1,720	1,459
Average Home Size	3,294 sq. ft.	3,432 sq. ft.
Average HERS	56	58
2012 IECC or Higher	72%	73%
ENERGY STAR Certified Bonus Rebate	435	357



## Q3 Achievements:

Savings	Q2	Q3
Dth	34,060	31,542
kW	352	316
kWh	1,647,828	1,529,436

## Q3 Activity

- As part of the product redesign, builder meetings were held to incorporate their feedback/concerns into future program offerings.
- 61% of the completed homes in Q3 were 2015 IECC or 2018 IECC.

# Low Income Kits

## • Q3 Achievements:

Gas Achievement	YTD	Target
Dth	9,523	14,458
Spend	\$81,240	\$148,295
Electric Achievement	YTD	Target
kW	141	329
kWh	1,426,039	2,600,605
Spend	\$239,354	\$490,368

## • Q3 Activity

- Energy Outreach Colorado distributes brochures to qualifying customers with business reply card
- “One Click” email sent to qualifying customers and engager email scheduled for fourth quarter
- Product not expected to meet year end targets, due to challenges around finding qualifying customers



**SAVE UP TO \$68 PER YEAR**  
ON YOUR ENERGY AND WATER BILLS!

¡AHORRE HASTA \$68 POR AÑO EN SUS FACTURAS DE AGUA Y ENERGÍA!

### IT'S SO EASY!

Just fill out the form, tear it off, and put it in the mailbox. No postage payment needed and we will deliver the kit right to your home within six to eight weeks.

### ¡ENVIAR SU TARJETA DE RESPUESTAS ES FÁCIL!

Simplemente complete el formulario, sádelo y colóquelo en el buzón de correo. No necesita pagar franquise postal. Lo enviaremos el kit directamente a su hogar dentro de 6 a 8 semanas.

Please remove before mailing.

Name \_\_\_\_\_  
Nombre \_\_\_\_\_

Street Address \_\_\_\_\_  
Dirección \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
Ciudad \_\_\_\_\_ Estado \_\_\_\_\_ Código postal \_\_\_\_\_

Phone Number \_\_\_\_\_  
Número de teléfono \_\_\_\_\_

Email Address \_\_\_\_\_  
Dirección de correo electrónico \_\_\_\_\_

Please take a moment to tell us what type of water heater you have: ☐ Natural gas ☐ Electric ☐ Unknown  
Tómese un momento y díganos qué tipo de calentador de agua tiene: ☐ A gas natural ☐ Eléctrico ☐ Lo desconoce



# **Evaporative Coolers 2019 Update**

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# The Challenges

1. Grow a stagnant, cost-effective residential cooling product 20%
2. Be innovative: find new ways to connect with customers and educate them about evaporative cooling
3. Create a great customer experience and keep accountability high
4. Train retail staff well
5. Design a protocol for evaluating retail staff knowledge
6. Keep wholesaler/distributor/contractor channel strong

# Fresh Tactics

- Special customer events
  - “Personalized” invitations to non-AC use customers
  - at retail stores
  - late April to mid-June
- Offer instant rebates

**Join us for sweet treats, cool giveaways and instant rebates!**

Stop by your neighborhood home improvement store to learn about evaporative coolers, also known as swamp coolers.

**Saturday, June 2**  
9 a.m. – 12 p.m. at **The Home Depot**  
5600 S. Chambers Road, Aurora, CO 80015  
1 p.m. – 4 p.m. at **Lowe's**  
123 Alphabet St., Aurora, CO 80015

**Sunday, June 3**  
1 p.m. – 4 p.m. at **The Home Depot**  
2255 E. Yale Blvd., Aurora, CO 80016



 **Xcel Energy**<sup>®</sup>

RESPONSIBLE BY NATURE<sup>®</sup>

# Special Events: The Customer Experience



## Instant Rebate Signs



The sign features a red top section with white text and a white bottom section with black text. A black curved line separates the two sections.

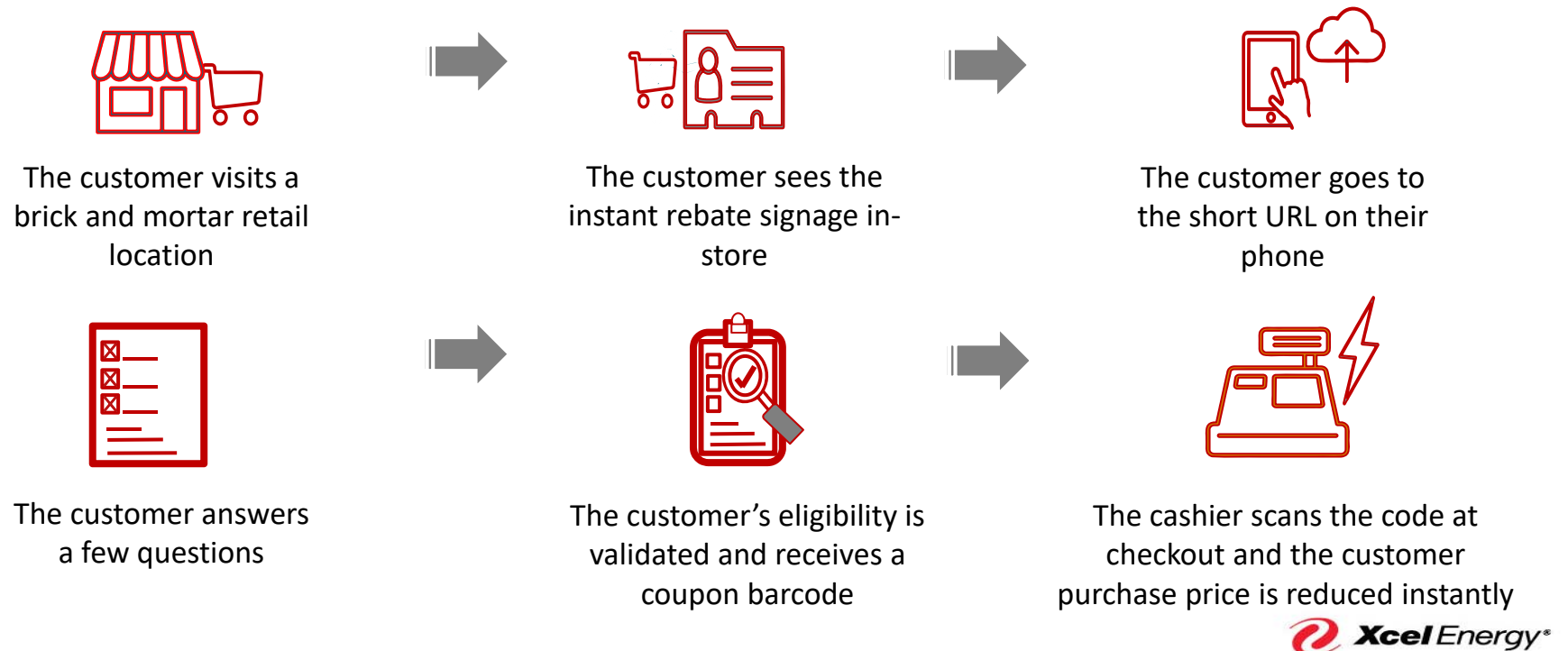
**\$300 OFF**  
up to  
an Evaporative Cooler

Are you an Xcel Energy customer?  
Go to [Rebates.XcelEnergyStore.com/THD](https://Rebates.XcelEnergyStore.com/THD) to get  
your instant rebate coupon on qualifying products.

 **Xcel**Energy®

Terms and conditions apply. View details  
online at [Rebates.XcelEnergyStore.com](https://Rebates.XcelEnergyStore.com).

# Instant Retail Rebates





# Results and Top Lessons Learned

- 2018 rebated coolers: 3005
- 2019 rebated coolers:  $\approx$  4700 (goal was 3860)
- Some shifts in customer participation
  - Standard coolers were 55% in 2018. 80% in 2019
  - 20% rise in customers saying “non-replacement”
- Adjust in 2020
  - Pursue additional ways to simplify the customer experience
  - Instant rebates available only for standard coolers

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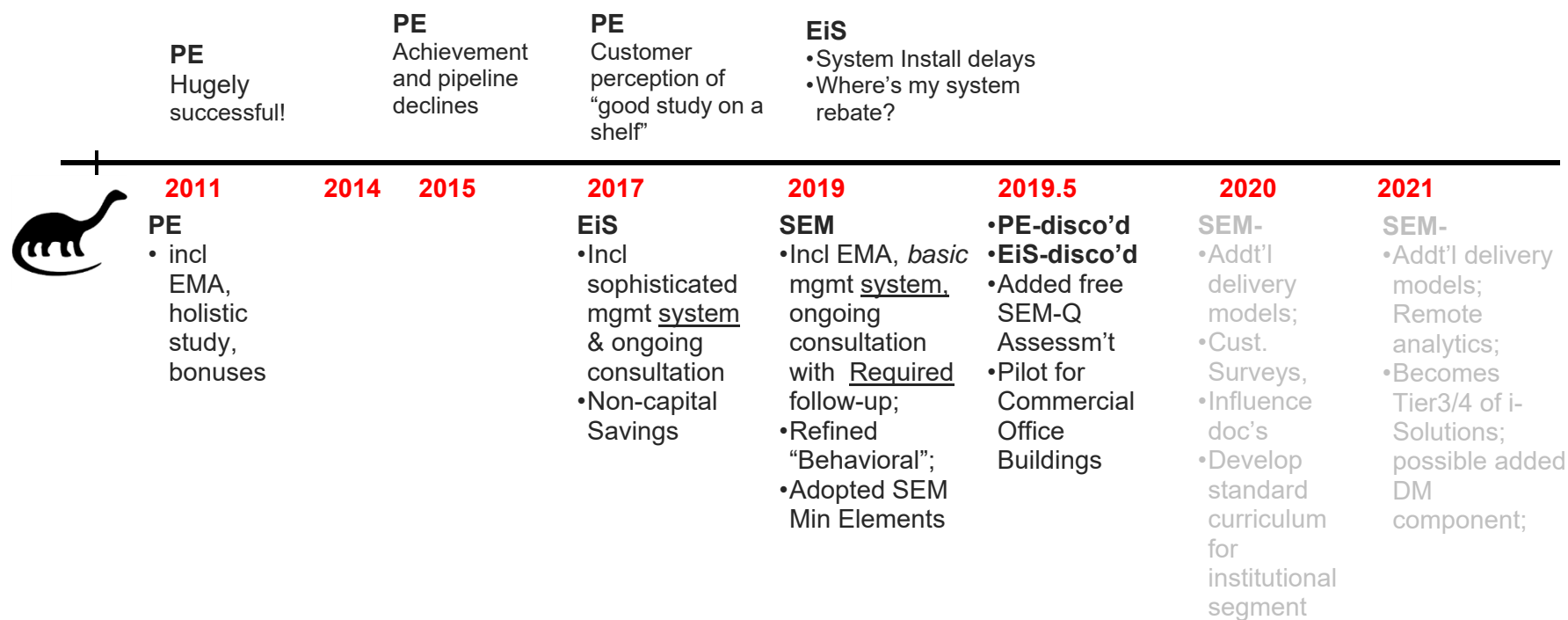
- *Networking Break* -



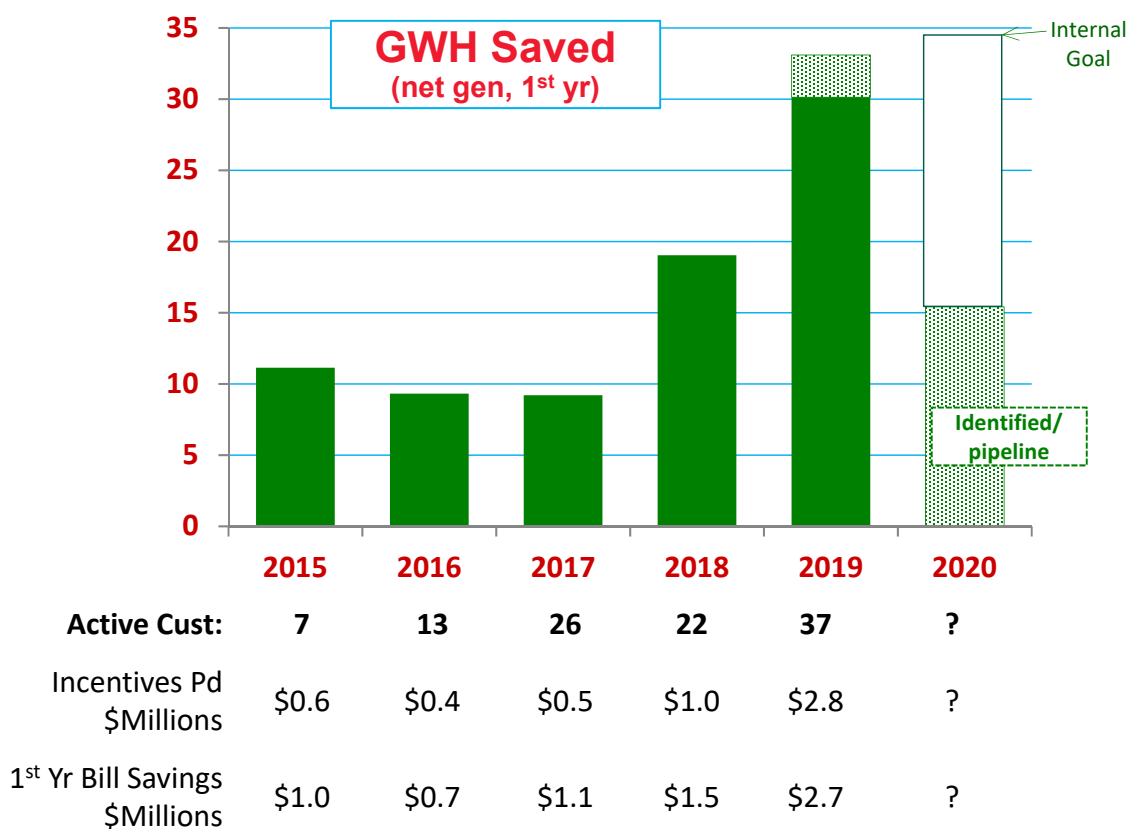
# **Strategic Energy Management Product Update**

**Steve Warkentin**  
**Sr Product Manager, Customer Energy Solutions**

# Xcel Energy Colorado SEM Evolution



# SEM Results



- SEM incremental
- Improved legacy customer activity
- Deeper customer savings

## SEM Offer

- Available via MOU
- Adopts CEE<sub>SM</sub><sup>1</sup> Minimum Elements of SEM, where possible
- Xcel Energy contracted SEM-Consultants
- Opportunity Register review – min of 6/yr required!
- Non-capital savings - proven annually, with interval-data modeled by XE/XE contracted consultants
  - Meets or exceeds MT&R Guidelines<sup>2</sup>
  - Using only interval data (No monthly data)

<sup>1</sup> Consortium for Energy Efficiency, Inc. – [cee1.org](http://cee1.org).

<sup>2</sup> Equally or more stringent than the Bonneville Power Authority Energy Smart Industrial MT&R Guidelines.

# CEE<sup>1</sup> Minimum Elements

<b>1. Customer Commitment</b> <b>a) Policy and Goals</b> Set & communicate long-range objectives via energy policy & energy reduction goals. <b>b) Resources</b> Ensure that SEM initiatives are resourced for goal attainment. Assign responsibility to an individual energy champion, or team.	✓ Yes ✓ Yes
<b>2. Planning &amp; Implementation</b> <b>a) Energy Management Assessment</b> – current performance scorecard. <b>b) Energy Map</b> – of energy uses & costs; include all significant systems and other relevant variables such as production, weather, & product mix. <b>c) Metrics &amp; Goals</b> – Establish measurable goals for improvement, using EnPIs based based on baseline usage & relevant variables. <b>d) Project Register</b> – Describe actions over 1 or more years, for capital, O&M, procurement procedures, and awareness programs. Include savings, \$, prioritization, & implementation timeline. <b>e) Employee Engagement</b> – Develop & implement plan to educate employees on the impacts of their actions. Empower all to take energy improvement actions in area, and encourage ideas for actions beyond their areas. <b>f) Implementation</b> – Complete measures in the register. Ensure O&M persist by engaging employees. <b>g) Reassessment</b> – Periodically review performance by comparing actual to expected results. Reassess goals, metrics, and plans; and re-prioritize register.	✓ Yes ✓ Yes ✓ Yes ✓ Yes ○ Among all operators ✓ Yes ✓ Yes
<b>3. System for Measuring and Reporting</b> <b>a) Measurement</b> – automated or manual; may include sub-metering <b>b) Data Collection</b> – Collect and store measurements & improvements vs. EnPIs. <b>c) Analysis</b> – Analyze all relevant data. Create model from baseline data to predict usage based on changes in significant drivers. Reestablish the baseline for changes that are outside model's norms. <b>d) Reporting</b> – Regularly communicate results in terms of EnPIs to internal/external stakeholders.	✓ Yes ✓ Yes ✓ Yes ✓ Yes

<sup>1</sup> Consortium for Energy Efficiency, Inc. – cee1.org

# SEM – Not Just a Name Change

## PE

- ✓ Expert advisors
- ✓ Energy Mgmt Assessment
- ✓ Facility/system energy usage report
- ✓ In-depth holistic study
- ✓ Prioritized implementation plan
- ✓ Bonuses based on ECO packages
  - 3 MOUs
  - Focus on Capital ECOs
  - Follow-ups as to status

## EIS

- Engagement starts with the system; could take 6 - 20 months & \$\$\$\$.
- Set rebate expectations for software consulting
- ✓ Up to 30% incentive for scope (with creep)
- ✓ Study focusing on non-capital ECOs
- ✓ Prioritized implementation plan

## SEM

- ✓ Expert advisors
- ✓ Energy Mgmt Assessment
- ✓ Facility/system energy usage report
- ✓ In-depth holistic study
- ✓ Prioritized implementation plan
- ✓ Starts with some non-capital (quick wins)
- ✓ Tracking/validation of savings efforts
- ✓ \$0.02/kWh for non-capital ECOs
- ✓ Only one MOU
- ✓ EMIS Consulting as to cost-effective scope
  - Up to 30% incentive for suggested scope
- ***Opp Register/Re-prioritization Reviews: Must commit to bi-monthly***

✓ = Customer Benefits



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*“I can’t tell you enough about how great this has been. We’ve seen huge impacts. I can’t emphasize enough how important some of the simplest things have been. Having someone keep us focused on getting only 2 or 3 priorities done, and having them keep us on-track to then move on to the next 2 or 3, has had the biggest impact.”*

*- Dir for North America, high volume manufacturer,  
10/18/19, to a group of peer manufacturers*

## SEM Qualification for Industrial or Institutional Customers

- Legacy customers → Automatic enrollment if they re-engage
- New prospects of > 6 GWh/yr → Exploratory meeting to determine fit
- New prospects of 1.9 to 6 GWh/yr → “Free” SEM-Qualification Assessment

Considerations For “Fit”	Organizational	Technical
	✓Willing to dedicate staff time ✓Has or will assign Energy Champion & Exec. Sponsor	✓Interval data, or EMIS or other sub-metering
	+ In a period of relative stability of process, infrastructure, & people + Committed to continuous improvement (ISO cert, staff certs or other indicators) + Financially viable/low credit risk	+ Multiple energy systems or distributed use + Older facilities/equipment + Non-continuous production schedules + Straightforward layout/few utility meters + Diversity of complex systems, with tuning opportunity + Process Refrigeration or lots of compressed air

- ALL prospects get something

# **DSM Pilot and Product Development Q3 2019 Highlights**

**Thor Bjork**  
**Product Developer, Customer Energy Solutions**

## New Rate for Business EV Charging

- **Background:**

- Designed as alternative to SG rate & to reduce barriers to commercial EV adoption
- Replaces demand charges with TOD and seasonal energy charges
- Includes a CPP rate of \$1.50/kWh during peak events
- Only EV loads and associated ancillaries allowed on rate
  - Separately metered
  - Net Metering available
- High interest from RTD

- **Status:**

- 60 notice planned soon
- Launch expected Q1 2020



## Thermal Energy Storage

- **Background:** Investigating a product that engages low temperature refrigeration facilities
- **Status:**
  - Slated to start in 2021
  - Product will change the refrigeration schedule of the facility 24 hours in advance
  - Product is a phase change material (PCM) that's installed on a rack near the ceiling of the facility



## Thermal Energy Storage – How it Works

### Step 1



In the cool of the night...



Run the refrigeration system...



To freeze the phase change material (PCM)

### Step 2



In the heat of the afternoon...



Turn off the refrigeration system...



Let the PCM thaw to provide cooling

# Business Smart Thermostat Demand Response

- **Background:**

- Study conducted in MN to measure peak load impacts of thermostat DR in commercial buildings

- **Status:**

- Impacts proved to be roughly twice that of residential thermostats
- Filing a 60 day notice in Q4 to launch in 2020
- Will be included as a measure in all commercial direct install programs



# Codes & Standards Research Project

- **Background:**

- Exploring landscape of utility and state code compliance programs to identify code savings quantification opportunities
- Phase 1 of the study will explore the following areas of interest through research and subject matter engagement:
  - Code enforcement levels in Xcel and surrounding territories
  - Permit issuance
  - Quantification of compliance on otherwise non-compliant buildings
  - Project intervention opportunities for code advancement
  - Non-compliant buildings
  - Quantification of voluntary advanced code savings

- **Status:**

- Project kicked off 10/14
- First phase report and research plan for early 2020 will be delivered in December



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# Product idea submissions

Share your Product Ideas:

[www.xcelenergy.com/productideas](http://www.xcelenergy.com/productideas)

