• 1:00 – 1:30 p.m. Welcome and DSM Regulatory Updates
• 1:30 – 2:15 p.m. DSM Programs: Q1-2016
  » Q1 Achievement Update
  » Business Programs
  » Recommissioning Deep Dive
  » Residential and Low-Income Programs
  » Residential Program #1 Deep Dive
• 2:15 – 2:30 p.m. -- Networking Break --
• 2:30 – 3:00 p.m. DSM Pilot Updates: Q1-2016
• 3:00 – 3:30 p.m. DSM Product Development: Q1-2016
• 3:30 – 4:00 p.m. DSM Product Express Update: Q1-2016
DSM Regulatory Updates
Q1-2016

Shawn White
DSM Regulatory
60/90-DAY NOTICES

- ENERGY STAR Retail Products Platform (ESRPP) Pilot

- Home Lighting & Recycling
  - *Posted:* Jan. 6, 2016

- ECMs

- LED Street Lights
  - *Implemented:* April 1, 2016

- Data Center Efficiency
  - *Posted:* Feb. 15, 2016
  - *Implemented:* Mar. 16, 2016

- Home Lighting & Recycling (Evaluation)
  - *Posted:* Feb. 5, 2016
  - *Implemented:* April 6, 2016
## FORECAST & TARGETS

<table>
<thead>
<tr>
<th>Year</th>
<th>GWh Savings</th>
<th>Demand Response (MW)</th>
<th>Demand Reduction from EE (MW)</th>
<th>Electric MTRC</th>
<th>Dth Savings</th>
<th>Natural Gas MTRC</th>
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</thead>
<tbody>
<tr>
<td><strong>2017</strong></td>
<td>Goal: 400</td>
<td>620</td>
<td>65</td>
<td>&gt;1.0</td>
<td>n/a</td>
<td>&gt;1.0</td>
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<tr>
<td></td>
<td>Plan Target: 401.1</td>
<td>621</td>
<td>76</td>
<td>1.28</td>
<td>636,078</td>
<td>1.49</td>
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<tr>
<td><strong>2018</strong></td>
<td>Goal: 400</td>
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<td>65</td>
<td>&gt;1.0</td>
<td>n/a</td>
<td>&gt;1.0</td>
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<tr>
<td></td>
<td>Plan Target: 401.3</td>
<td>646</td>
<td>74</td>
<td>1.32</td>
<td>573,136</td>
<td>1.58</td>
</tr>
</tbody>
</table>

*2017 Budget Proposed: $81.2 M (Elect EE), $19.3 M (DR), $13.1 M (Gas EE)*

*2018 Budget Proposed: $77.8 M (Elect EE), $20.7 M (DR), $12.8 M (Gas EE)*

*Based on R2 results, 3.25.2016*
### 2017/2018 Forecasts

<table>
<thead>
<tr>
<th>Program (MW Gen)</th>
<th>Reported 2015</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISOC</td>
<td>253</td>
<td>254</td>
<td>250</td>
</tr>
<tr>
<td>EnerNOC/Peak Day Partners</td>
<td>37</td>
<td>45</td>
<td>59</td>
</tr>
<tr>
<td>Saver’s Switch</td>
<td>208</td>
<td>235</td>
<td>242</td>
</tr>
<tr>
<td>Pilots</td>
<td>0</td>
<td></td>
<td></td>
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<tr>
<td>Other PD DR pilots to Programs</td>
<td>0</td>
<td>29</td>
<td>37</td>
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<tr>
<td>Forecasted Demand Goal for EE</td>
<td>72</td>
<td>58</td>
<td>58</td>
</tr>
<tr>
<td><strong>Reported/Forecasted Total</strong></td>
<td><strong>570</strong></td>
<td><strong>621</strong></td>
<td><strong>646</strong></td>
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<tr>
<td>DR Goal as filed</td>
<td>528</td>
<td>555</td>
<td>575</td>
</tr>
<tr>
<td>Demand Goal for EE</td>
<td>65</td>
<td>65</td>
<td>65</td>
</tr>
<tr>
<td>Total Demand Goal</td>
<td>593</td>
<td>620</td>
<td>640</td>
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<tr>
<td><strong>Differential</strong></td>
<td><strong>23</strong></td>
<td><strong>1</strong></td>
<td><strong>6</strong></td>
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# 17/18 Portfolio Additions

<table>
<thead>
<tr>
<th>Product / Pilot</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Multifamily Buildings</td>
<td>Transitioning from pilot to product in 2017</td>
</tr>
<tr>
<td>Critical Peak Pricing Pilot</td>
<td>New DR pilot to support goal achievement</td>
</tr>
<tr>
<td>EnerNOC Replacement</td>
<td>EnerNOC contract ends in 2016; need an expanded option for customer satisfaction &amp; meeting DR goals</td>
</tr>
</tbody>
</table>

**Launched via 60-Day Notice**

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESRPP Pilot</td>
<td>Energy Benchmarking</td>
</tr>
<tr>
<td>Data Center Design</td>
<td>Value LEDs</td>
</tr>
</tbody>
</table>

**New Measures to be included:**

- More than 15 new measures for Business programs:
  - Including measures to encourage industrial customer participation
- More than 10 new measures for Residential programs:
  - Including measures to help low-income participation
### 2015/16 DSM Plan Settlement Compliance Progress

<table>
<thead>
<tr>
<th>Paragraph</th>
<th>Action</th>
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</thead>
<tbody>
<tr>
<td>5(c)</td>
<td>60-Day Notice to update LED Street Light TAs to match new SL Tariff</td>
</tr>
<tr>
<td>5(j)(i)</td>
<td>Bi-Monthly PD e-mail updates circulated on 12.18.2015</td>
</tr>
<tr>
<td>5(l)(ii) &amp; 5(l)(v)</td>
<td>60-Day Notice following Comprehensive Evaluation of Home Lighting &amp; Recycling</td>
</tr>
<tr>
<td>5(n)</td>
<td>Colorado Code Consulting project plan being implemented</td>
</tr>
</tbody>
</table>

### Next Roundtable – Save the Date!

- Q2-2016 DSM Roundtable Meeting: **Wednesday**, August 17, 2016
2016 Q1 ACHIEVEMENT HIGHLIGHTS

Electric Portfolio
- 68.4 GWh (17.4% of 393.5 GWh Goal)
- 11 MW (12.5% of Target)
- $15.597M (17% of Budget)

Business Programs (% of kWh Target)
- EMS – 55% of Target
- Motors & Drive Efficiency – 34% of Target
- Self Direct – 44% of Target
- Small Business Lighting – 33% of Target

Residential / LI Programs (% of kWh Target)
- Residential Heating – 34% of Target
- ENERGY STAR New Homes – 26% of Target
- Insulation & Air Sealing – 60% of Target

Gas Portfolio
- 91,902 Net Dth (15.7% of 585,687 Dth Goal)
- $2.601M Spend (19% of Budget)

Business Programs (% of Dth Target)
- EMS – 44% of Target
- Custom Efficiency – 86% of Target

Residential / LI Programs (% of Dth Target)
- Energy Feedback Residential – 33% of Target
- Multifamily Weatherization – 51% of Target
- Insulation & Air Sealing – 40% of Target
- Water Heating – 65% of Target
MARKETING CAMPAIGNS & OUTREACH

Business

• 2016 EXPO
• Benchmarking tool workshop in Boulder
• Heating Efficiency Bonus thru 7.31.16
• EIS Roll-out to Trade
• 2016 Energy Smart Contractor Expo
• Data Center Eff. Trade Advisory Board Meeting 3.1.16

2nd Quarter

• Energy Efficiency Partner Awards Event
• AFCOM Denver Rocky Mountain Symposium 4.28.16
• Commercial Heating Eff. Trainings 5.25.16

Residential

• “Use Us” bundled residential ads/promotions
• ENERGY STAR New Homes: six free “Selling High Performance” training classes for sales agents and home raters, 126 participants
• Evaporative Cooling retail and trade readiness
• Home Energy Squad email, social media outreach, LED and discount promotions
• Home Lighting “radio remotes” in March, Earth Day event; preparation for 14 events in Q2
• Insulation/Air Sealing customer-centric video development
• Refrigerator Recycling postcard mailing
• Saver’s Switch direct mail + email campaign
• Single Family Weatherization: agency direct mail, CARE and customer workshops
28 commercial Trade partners recognized

- 78 million kWh in electrical savings
- 100,000 in natural gas therm savings
- Over $7.6 million in rebates

https://www.xcelenergy.com/Partners/Trade_Partners/Business_Trade_Partners/Energy_Efficiency_Partner_Awards_-_CO
DSM BUSINESS PROGRAM
Q1-2016 HIGHLIGHTS

Kim Spickard
Team Lead, DSM Marketing
Energy Information Systems (EIS) Update

Selected Implementation Consultants:
- Michaels Energy
- Cascade Energy

Energy Information Systems Providers
Pre-qualified Software Solutions:
- Building Logix
- SeaSuite
- MACH Energy Insights
- SENSEI
- Niagara 4
- SkySpark
- Power TakeOff
- Trane Energy Performance
Spring Heating Efficiency Marketing Campaign

- Customer bonus (25%) and trade incentive (10%) thru 7.31.16

- Two events planned for Q2:
  - Technical Training for Trade Partners
  - Customer Heating Efficiency Best Practices

- Collaboration with the Colorado State Boiler Inspectors Office
  - Provides mutual customer benefits for rebates and operational safety

- Extensive new Customer Heating Guide for customers/trade in Q2

- Promoting ECMs for furnace fans (new measure added late 2015)
2016 Participation by Size and EER
Program Cumulative Tons

Paid Tons

Cumulative Tons

Paid Tons

Q2 2015
Q3 2015
Q4 2015
Q1 2016
Q2 2016
Q3 2016
Q4 2016
Digital Application Project

Rebate Application

Step 1 of 6

Program Information

State: --None--
Customer Type: --None--
Are you a Customer or Trade Partner?: --None--
Equipment Group: --None--
Product: --None--
Commissioning: is a systematic and documented process of ensuring that specific building systems perform interactively according to the design intent and the owner’s operational needs.

Recommissioning: takes another look at a building that was previously commissioned to ensure it is once again running at optimal performance.

Retrocommissioning: involves tuning up an existing building that was never formally commissioned.

Xcel Energy’s Recommissioning program covers both recommissioning and retrocommissioning.
TYPICAL RECOMMISSIONING IMPROVEMENTS

- Optimize your HVAC equipment
- Update lighting controls
- Identify, update or optimize system controls
- Adjust equipment to reduce long term wear and tear
- Restore economizer operation

**Study Rebates:** Xcel Energy helps pay for upfront recommissioning study costs – up to 75 percent of the study cost (not to exceed $25,000)

Have a building of at least 50,000 square feet
Identify Low-Cost/No-Cost Energy Saving Solutions for Your Business

Xcel Energy’s new Building Tune-Up product offers smaller businesses the opportunity to participate in our Recommissioning program if the building has 5,000 sq. ft.– 75,000 sq. ft. of conditioned space

$250 – building size 5,000–25,000 square feet
$500 – building size 25,001–50,000 square feet
$1,000 – building size 50,001–75,000 square feet
Our energy advisor will identify and implement (if possible) the following recommissioning measures as applicable to the business, at no additional cost:

1. AHU air leak reduction
2. AHU coil cleaning
3. AHU optimize economizer
4. AHU outside air reduction
5. AHU run time reduction
6. AHU supply air static pressure adjustment/reset
7. AHU supply air temperature reset
8. AHU VAV minimum flow reduction
9. Lighting and equipment run time reduction
10. Unoccupied setback
11. Exhaust system operation
DSM RESIDENTIAL & LOW-INCOME PROGRAM
Q1-2016 HIGHLIGHTS

David Hueser
Team Lead, DSM Marketing
Of the Q1 2016 unique opportunities, 37% contained both a 95%+ AFUE gas furnace and an ECM – up to $220 in customer rebates.

Average size of furnace and corresponding natural gas savings is somewhat lower than 2015.

243 registered trade partners – up 10% from 2015 – two years after NATE Gas Heating certification was required.

Some trade partners pair an ECM with a lower-efficiency furnace, or drive electric-only rebates where Xcel Energy does not supply natural gas.

Radio and print promotions of “bundled” residential rebate messages, including heating.
Good YTD natural gas savings with increased rebate cap of $500 in 2016

- 2016 insulation/air sealing rebate maximum of $500 (previously $300) to cover higher proportion of incremental cost, and to primarily drive natural gas savings
- 50 registered Insulation & Air Sealing contractors – list at xcelenergy.com
- Q1 2016 Insulation/Air Sealing Gas DSM – 40% of filed goal on 46% budget spend, slightly ahead of 2015 pace; Electric DSM 60% of goal on 47% spend, slightly behind 2015’s pace
- Customer-centric video educating on air sealing + insulation benefits to be promoted via email, social media.
Provides targeted communications of energy-use comparisons and information in the *Home Energy Report* to residential customers in Colorado.

- Added 100K plus new participants
  - Replace participants who moved or opted-out of product
  - First reports mailed late March
    - Included *Welcome Insert*
- Customer Engagement Tracker Survey
  - Began fielding mid-March
  - Approximately 700 participants and 300 non-participants
  - Determine report engagement, interaction and satisfaction
This product, implemented by Energy Outreach Colorado (EOC) is part of a $6.4M energy efficiency commitment to income-qualified customers in 2016

- Funds from City of Denver, utilities including Xcel Energy, and contributions to EOC granted to non-profit organizations serving low-income individuals: shelters, safe houses, treatment centers.
- Facility energy audits and cost-benefit analysis determine the funded energy-saving measures. Xcel Energy Efficiency Engineering uses Custom Efficiency analysis for each proposal.
- Areas of opportunity in 2016:
  - Multi-site non-profits
  - Lighting
  - Commercial-sized boilers
  - Low water usage showerheads and faucet aerators
  - Beyond traditional measures: Energy Management Systems, Recommissioning
- Q1 2016: EOC identified gas and electric savings among 25 low-income non-profit facilities
ENERGY STAR NEW HOMES PROGRAM DEEP DIVE

Product Portfolio Manager, DSM Marketing
ENERGY STAR® NEW HOMES (ELECTRIC AND GAS SAVINGS)

Background: first introduced in 2009, the product provides homebuilders with incentives to exceed their local building energy code requirements. Homes that are ENERGY STAR certified can earn an additional incentive.

- Unlike other states where Xcel Energy operates, Colorado does not have a consistent, state-wide energy code
- Prevailing codes were less demanding in 2009
- Initially Home Energy Rating Score (HERS) determined savings and rebate levels
- Over time, stricter code adoption dictated product modification
In 2015, via product modification, rebates were better aligned with savings, and the product stayed open full-year 2015.
ENERGY STAR® NEW HOMES

Q1 2016 achievement strong. We expect to keep the product open for full year 2016

- Hit the pavement running in Q1
  - 837 homes earned rebates thus far – 100% increase over same period in 2015
- Rebated homes IECC breakdown
  - 2009 IECC or lower: 644 or 77%
  - 2012 IECC or higher: 193 or 23%
- Expect trend to reverse with more jurisdictions adopting 2015 IECC this year
  - City and County of Denver
  - Aurora and Arvada
- Results are lower claimable Dth savings per home but homebuyers inherit a higher performing home

Photo: Lennar Homes, Aurora, CO

Photo: Richmond American Homes, Fort Collins, CO
RESIDENTIAL HOME PERFORMANCE WITH ENERGY STAR®

• Q1 Achievement is lower than 2015 benchmarks, likely due to increased participation in the standalone Insulation & Air Sealing program.

• Q1 Improvements and continued incentives
  – Developed online signup form and created new brochure to help advisors sign up customers for HP the same day audits are completed.
  – Changing Home Performance contractor application and training process so HVAC contractors will be more informed on the program in general and how to sell it. This should also encourage partnerships between HVAC and insulation contractors to complete projects together.
  – Continued HVAC cooling incentives.

• The program continues to see benefits from the contractor mentoring program. The diagram above shows how many contractors are now participating in mentoring provided by our third party implementer CLEAResult. These mentoring sessions ensure the quality of customer service and submitted applications from our partnering contractors.
DSM PILOT UPDATES
Q1-2016 HIGHLIGHTS

Colin Lamb
Team Lead, Product Development
## DSM PILOT HIGHLIGHTS

<table>
<thead>
<tr>
<th>PILOT</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Smart Thermostat Pilot</td>
<td>In Progress</td>
</tr>
<tr>
<td>2 Small Business Smart Thermostat Pilot</td>
<td>In Progress</td>
</tr>
<tr>
<td>3 Energy Feedback – Business Pilot</td>
<td>In Progress</td>
</tr>
<tr>
<td>4 Building Optimization DR Pilot</td>
<td>In Progress</td>
</tr>
<tr>
<td>5 Multifamily Buildings Pilot</td>
<td>In Progress</td>
</tr>
<tr>
<td>6 ENERGY STAR Retail Products Platform</td>
<td>Launching</td>
</tr>
</tbody>
</table>
DSM PILOT HIGHLIGHTS
RESIDENTIAL SMART THERMOSTAT

• Over 4,000 participants (out of 5,000)
• Over 70% using online storefront with instant rebate
• DR recruitment going well (500 of 1,000)
DSM PILOT HIGHLIGHTS
SMALL BUSINESS SMART THERMOSTAT

• Standing up online tools with Honeywell
• Begin recruiting 100 participants in Q2
• Implement DR events during summer cooling
• February 2016 customer engagement survey
  – 2/3 of customers read the reports
  – 80% like the reports
  – Sharing reports is common
  – Half report taking steps to reduce usage

• Next steps for pilot
DSM PILOT HIGHLIGHTS
BUILDING OPTIMIZATION DR

- 1.7 million square feet enrolled
- 14 buildings
- Looking to summer control season
- Plan to pilot through 2017
• **Current Results**
  - 29 energy assessments completed
  - Direct installation of energy efficient equipment at 575 apartments
  - New goal of 1,800 units
  - Phase 3 projects identified

**DSM PILOT HIGHLIGHTS**

**MULTIFAMILY BUILDINGS**

- High-Efficiency Lighting (CFLs and LEDs)
- Energy-Efficient Showerheads (1.5 GPM)
- Bathroom/Kitchen Faucet Aerators (1.5 GPM)
- Water Heater Blanket
Energy Star Retail Products Platform (ESRPP) Pilot

- Slow national rollout
- Standing up reporting and data tools
- Retailers sharing support plans
- Engaging with national working groups
  - New products working group
  - EM&V working group
- Networking Break -
### 2017/18 DSM Plan product development:

<table>
<thead>
<tr>
<th>Concept</th>
<th>Product</th>
<th>GWh (estimate)</th>
<th>Dth (estimate)</th>
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<tbody>
<tr>
<td>C&amp;I Refrigeration</td>
<td>Commercial Refrigeration Efficiency</td>
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<tr>
<td>Mini-Split AC (Residential and Business)</td>
<td>High Efficiency Air Conditioning and Cooling Efficiency</td>
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<tr>
<td>LED Linear Ambient Measures</td>
<td>Lighting Efficiency</td>
<td>2.0</td>
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### Other development efforts:

<table>
<thead>
<tr>
<th>Concept</th>
<th>Product</th>
<th>GWh (estimate)</th>
<th>Dth (estimate)</th>
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<tbody>
<tr>
<td>Whole Facility New Construction*</td>
<td>Data Center Design Assistance</td>
<td>3.0**</td>
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<tr>
<td>Energy Benchmarking Service*</td>
<td>Indirect</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Net Zero Energy New Construction</td>
<td>New Construction</td>
<td>TBD</td>
<td>TBD</td>
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<tr>
<td>Efficient Process/Commercial Dehumidification</td>
<td>Cooling Efficiency</td>
<td>1.0</td>
<td>-</td>
</tr>
</tbody>
</table>

*60-Day Notice posted Feb 2016
**Per participant
Modern Whole House Fans; Received March 16, 2016
– REenergizeCO
– Airscape

• Description:
  – Ventilation cooling
  – Improved with insulated sealing doors and ECMs
  – Offsets standard AC

• Evaluation Result:
  – Used submitted assumptions to determine potential energy savings and cost-effectiveness
  – *Looks to be cost-effective based on submission calculations*
  – *There are challenges to program design and implementation*
    • Large behavioral dependency
    • Large divergence in savings level between submission and existing TRMs
  – *Potential inclusion in PD Process*

Photo credit: airscapefans.com
PRODUCT IDEA SUBMISSIONS

Share your Product Ideas:

www.xcelenergy.com/productideas
DSM PRODUCT DEVELOPMENT EXPRESS
Q1-2016 HIGHLIGHTS

Michael Papula
Energy Efficiency Engineer
PD EXPRESS OVERVIEW

- Alternative path for smaller, simpler, straightforward projects to become new prescriptive products.

- Initiated in the 2nd Quarter of 2014

- Managed by 3-person cross-functional team

- Goals:
  - Streamline the approval process for new prescriptive measures
  - Make easier for customers & vendors to participate in our programs
  - Make as many cost-effective prescriptive measures as possible
• PDx Measures Brought to Market in 2015 (60-Day Notice or Regulatory Filing):
  – Linear Fluorescent LED Replacements - Type A and Type C Lamps (CO/MN)
  – HID High-Bay LED Replacements (CO/MN)
  – Commercial Furnace EC Fan Motors (CO/MN)
  – Water-well Pump VFD’s (MN)
  – “Close-the-case” - Doors for Coolers & Freezers (CO/MN)
  – High Efficiency Server Power Supplies (CO/MN)
  – Unit Heaters (MN)
Top 10 custom programs 2015

Top 10 custom programs 2016
CUSTOM PROJECT ARCHIVE

- The Predominant Custom Applications are Lighting upgrades.

- Identified and Developed New Prescriptive Measures for the 2017 / 2018 DSM Filing
  
  - Lighting Efficiency Program:
    
    - HID Retrofits with LEDs Through Screw-in Lamp Replacement Options
    
    - LED Area Lighting expanded to 750 W and 1000 W HID Fixture Replacements.
    
    - LED PL/G Pin-based lamps to replace CFLs
    
    - LED Downlight Fixtures to replace CFL Pin-based fixtures
• New Prescriptive Measures for the 2017 / 2018 DSM Filing (Continued)
  – Small Business Lighting Program:
    • Several Direct Install Lamp Replacements
    • HID Retrofits with LEDs Through Screw-in Lamp Replacement Options
    • LED Area Lighting expanded to 750 W and 1000 W HID Fixture Replacements.
    • LED PL/G Pin-based lamps to replace CFLs
    • LED Downlight Fixtures to replace CFL Pin-based fixtures

• Expect a 60 Day Notice to Make the Lighting Measures Available Later in the 2016 Plan Year.
• New Prescriptive Measures for the 2017 / 2018 DSM Filing (Continued)

  – VFD Measure for Water Well Pumps

  – Unit Heater Measures for Commercial and Industrial Spaces
    • High Efficiency Non-condensing Unit Heaters
    • High Efficiency Condensing Unit Heaters
    • Infrared Radiant Unit Heaters
CUSTOM PROJECT ARCHIVE

- Trade Partner Feedback Stated That There Are Many T12 Fixtures Still In Service

- Xcel created a special group of measures for T12 fixture replacements and retrofits with LED technology. This will be a limited time offer and includes the following:
  - LED in Refrigerator and Freezer Cases
  - LED Troffers
  - LED 4 foot Tubes in Type A & C
  - LED Linear Ambient fixtures

- The T12 Measures Will Be Included In the 2017 / 2018 DSM Filing As Well as an Upcoming 60 Day Notice for 2016
CUSTOM PROJECT ARCHIVE – NEXT STEPS

• Lighting Continues To Be The Main Focus for Potential New Measures
  – Other Measures were Investigated During the 2017/2018 Plan Development, but were not found to be cost effective.
    • LED High-bay Lighting with a T8 Baseline
    • 2 foot LED Tube Lamps
    • LED Exterior Flood Fixtures
QUESTIONS