



AGENDA

- 1:00 – 1:10 p.m. Welcome and DSM Regulatory Updates
- 1:10 – 1:15 p.m. Q1 Achievement Update
- 1:15 – 1:20 p.m. Residential Heat Pumps Training
- 1:20 – 1:40 p.m. Home Energy Squad Initiatives
- 1:40 – 1:55 p.m. Distributed Intelligence
- 1:55 – 2:15 p.m. Settlement Commitments & Timing
- 2:15 – 2:25 p.m. Heat Savers Mode Update
- 2:25 – 2:35 p.m. Commercial BE
- 2:35 – 2:50 p.m. Codes Support Evaluation Update
- 2:50 – 2:55 p.m. DR RFP for Gas/Electric
- 2:50 – 3:00 p.m. Closing Remarks/Break



DSM REGULATORY UPDATES

Q1 – 2023

Mark Schoenheider| Manager, Customer Energy Solutions



Q1 60/90-Day Notices

No 60/90 Day Notices were posted in Q1 2023.

- We expect to file Evaluation related 60/90-Day Notices before the end of Q2.

DSM Regulatory Calendar

Filing Schedule

- 2023 DSM Plan
 - Commission Deliberation expected on May 11th
- DSM Strategic Issues + Beneficial Electrification
 - Hearing - Completed February 10th
 - Statements of Position- March 10th
 - Commission Deliberation expected on May 11th

DSM Regulatory Calendar

Upcoming Meetings – Save the Date!

- Q2-2023 DSM Roundtable Meeting
 - August 9th 2023



DSM ACHIEVEMENTS

Q1 – 2023

Mark Schoenheider | Manager, Customer Energy Solutions



2023 Q1 Achievement Highlights

Electric Portfolio

- 88 GWh (18% of 486 GWh Target)
- 16 MW (16% of 100 MW Target)
- \$15M (16% of \$93M Budget)

Business Programs

- 60 GWh (17% of Target)
- Strategic Energy Management 17 GWh (25%)
- Lighting Efficiency 24.8 GWh (26%)
- Business Energy Assessments 5.7 GWh (42%)

Residential / IQ Programs

- 28 GWh (22% of Target)
- Home Lighting & Recycling 18 GWh (65%)
- IQ Single Family Weatherization 4.8 GWh (21%)
- Residential Heating & Cooling 0.8 GWh (13%)

Gas Portfolio

- 153,725 Net Dth (17% of 898,487 Target)
- \$2.8M Spend (11% of \$25M Budget)

Business Programs

- 6,434 Net Dth (4% of Target)
- New Construction 2,667 Dth (3%)
- Business HVAC+R Systems 2,098 Dth (6%)
- Small Business Solutions 213 Dth (2%)
- Business Energy Assessments 1,456 Dth (35%)

Residential / IQ Programs

- 147,290 Net Dth (20% of Target)
- ENERGY STAR Homes 19,838 Dth (13%)
- Residential Heating & Cooling 60,066 Dth (35%)
- Insulation & Air Sealing 12,867 Dth (57%)

Marketing Campaigns & Trade Relations Outreach

Residential

Customer Outreach

- Emails – Smart Thermostats and LED promotions
- Mass marketing – Payment Options & Managing higher energy costs
- Emails – TOU outreach – Saving Energy
- Emails - Refrigerator Recycling
- Flyer distribution and text messaging focused on energy education and TOU through EOC – IQMF and IQSFw
- Apogee videos – annual energy use, home energy squad, refrigerator recycling
- Emails – promoting free Home Energy Squad visits
- Emails directing customers to dedicated webpage with tips for managing higher energy costs

Trade Ally/Stakeholder Outreach

- Increased phone calls, mostly answering heat pump-related questions
- Spring heat pump training, late February
- Rebate news emails and Brainshark training: changes to rebate process
- [Top 2022 residential trade partners](#) announced
- Participation/collaboration with EEBC, City and County of Denver and Boulder, other utilities

Partners in Energy Co-branded Outreach

- Frisco – social media for to promote insulation rebates, income qualified programs, residential audits and natural gas rebates
- Aurora – social media for business assessments and rebates and targeted food service/restaurant bonus rebate
- Broomfield – monthly newsletter content and social media posts to promote residential heating conservation and energy saving tips

Marketing Campaigns & Trade Relations Outreach

Business Q1 2023

Rocky Mountain Mechanical Contractors Association:

- Industry Partner Appreciation Lunch – Eddie Merlots Centennial
- Sponsorship and presentation opportunities for 2023

Long Building Technologies

- HVACR presentations for the Coffee Chat presentation to over 100 engineers and building owners

City & County of Denver Beneficial Electrification Contractor Training

- Electrification Feasibility Study launch
- February 16 1:00 – 4:00 pm

2023 Energy Efficiency Partner Awards

- Trade Partner Awards finalized and will be presented in person starting in Q2

IECRM Industry Partner Lunch Meeting

- 2/15 Virtual due to weather

Fundamentals of Compressed Air Workshop

- Thursday March 2nd; PPA Event Center
- 25 Trade Partner and Xcel Energy attendees

Colorado Restaurant Association Trade Show

- T/W 3/21 & 3/22 at CO Convention Center
- Booth & sponsorship

Partners in Energy Network Event (virtual)

- Energy Efficiency First: Laying the Foundation for Beneficial Electrification and Renewables



RESIDENTIAL HEAT PUMPS - TRAININGS

Ann Kirkpatrick - Trade Relations Manager

SPRING HEAT PUMP TRAINING FEB. 28 – MAR. 1

- Manual S Load calculations:
 - Why they matter, even with variable capacity heat pumps
 - The importance of not padding your load calculations
 - Free Manual J software from NEEA: Better Built (demonstration)
- Duct work suitability: will this home do well with a centrally ducted heat pump?
- Switchover temperature guidelines [to back up heat]
- Rules of thumb for backup heat source sizing
- City of Denver rebates, presented by City staff

And a surprise at the conclusion of the training

A SECOND “SPRING TRAINING” – MAY 16-17

Morning: Heat pump topics

- Backup heat options: deep dive into dual fuel and all-electric scenarios
- Controls: deep dive into technical considerations and thermal, economic, and comfort balance points (switchover temperature decisions)
- Time of Use electric rates: implications for heat pump users
- Defrost cycle strategies: deep dive

Afternoon:

- Heat pump ROI (Return on Investment) strategy in an ever-changing energy cost world
- Heat pump water heaters: deep dive into sales and installation considerations
- Inflation Reduction Act: questions answered by a CPA
- Financing options and updates (Jeff King, RENU)
- Xcel Energy rebate info



Technical Sales Presenters



Dan Wildenhaus, Center for Energy and Environment

Dan has over 27 years of experience, 15 of them working directly for a contractor; performing energy audits and Ratings, weatherization and HVAC repairs, consulting, and analysis for private clients in both new construction and the existing buildings market.

Dan currently provides decarbonization and HVAC consultation, technical management, market channel development, and training and presentation services for a variety of programs across the country working for CEE.

Dan contributes to the Advanced Heat Pump Coalition, run by MEEA and NEEA, the Consortium for Energy Efficiency's ASHP QI Working Group, and the NEEP Residential Heating Electrification Working Group amongst other committees and organizations.



Zak Paine, Slipstream

Zak is a veteran of the US Marine Corps where he worked as a rescue and fire fighting specialist.

Fifteen years ago, Zak became an HVAC technician and, with many roles in between, worked into ownership. Zak has extensive knowledge of heat pumps including the sales process, installation and service for full electrification and dual fuel heat pump projects.

Zak joined Slipstream in 2022 as an HVAC technical advisor and subject matter expert specializing in HVAC and related systems. He has presented at several national conferences.

Inflation Reduction Act (Section 25C) Presenter



Matthew Dean, CPA, DFMC2, MSA
Director – Federal Tax Strategies
CLA (CliftonLarsonAllen LLP)

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With more than 8 years of experience, Matt has a substantial background in capital projects and fixed asset management. He has assisted clients in various projects such as Cost Segregation Studies, Fixed Asset Studies, Commercial Energy Efficient Building Deductions (IRC 179D), New Home Energy Efficient Credit (IRC 45L), Energy Credit (IRC 48), Inflation Reduction Act (IRA) and Work Opportunity Tax Credit.

About CLA

CLA exists to create opportunities for our clients, our people, and our communities through industry-focused wealth advisory, digital, audit, tax, consulting, and outsourcing services. With more than 8,500 people, nearly 130 U.S. locations, and a global vision, we promise to know you and help you.



HOME ENERGY SQUAD INITIATIVES

Kristin May| Team Lead, Customer Energy Solutions

Home Energy Squad

- In-home visit which assesses a customer's energy usage and offers the additional benefit of installing energy saving measures
 - Virtual visits offered with free savings kit

Standard Visit Direct Install
<ul style="list-style-type: none">- LEDs- Showerheads- Aerators- Thermostat- Weatherstripping- Safety check

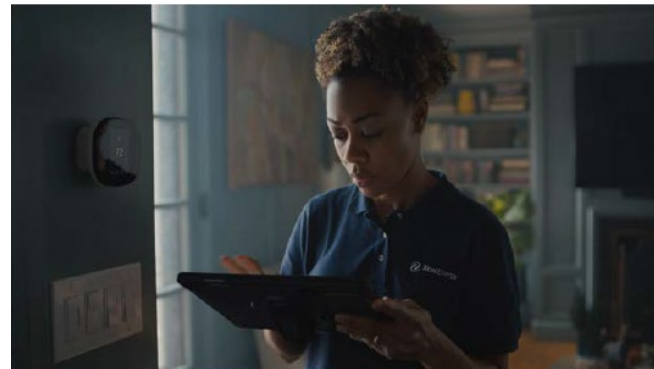
Home Energy Audit
<ul style="list-style-type: none">- Audit blower door & infrared camera- Safety check- Insulation check- Audit report with recommendations- Advising service

Plus Visit Direct Install + Audit
<ul style="list-style-type: none">- Direct install measures plus...- Audit blower door & infrared camera- Safety check- Insulation check- Audit report with recommendations- Advising service

Home Energy Squad Expansion

New Initiative

- Expand program capacity to reach 25,000 customers per year
 - Increase number of in-field technicians
 - Increase marketing campaigns
- Face-to-face interaction with customers to become a trusted advisor
- Help customers manage their energy use
 - Increase awareness of Company initiatives
 - Direct customers to additional Company resources
 - Advisor services for larger energy efficiency upgrades



Home Energy Squad Expansion

Challenges

- Technician recruitment
 - Squad Plus visits & BPI certification
- Balance needs for different types of visits

Opportunities

- Increase awareness of the benefits of energy efficiency
- Increase awareness of deeper retrofits
- Targeted outreach methods
- Customer cost reduction for visits

Next Steps

- Focus on hiring & training
- Initiate marketing campaigns
- Assess customer feedback





DISTRIBUTED INTELLIGENCE

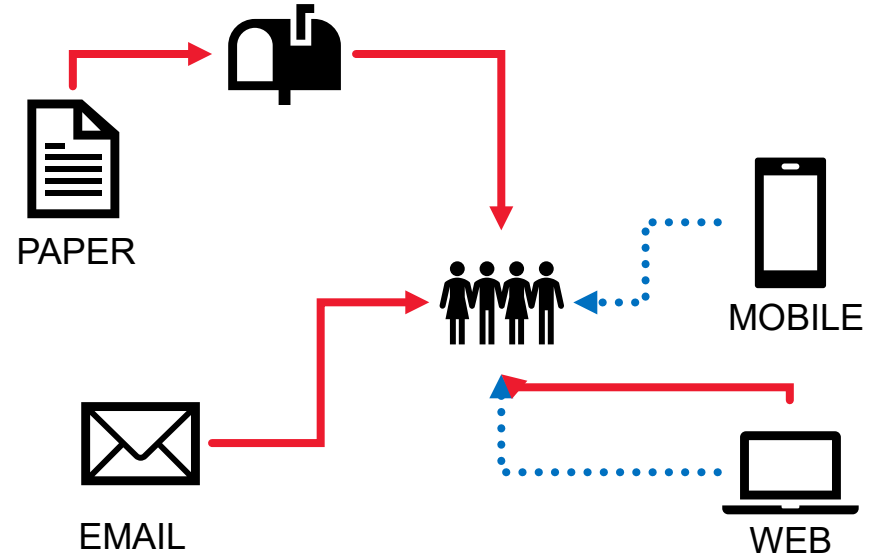
Corrine Villim | Senior Product Manager



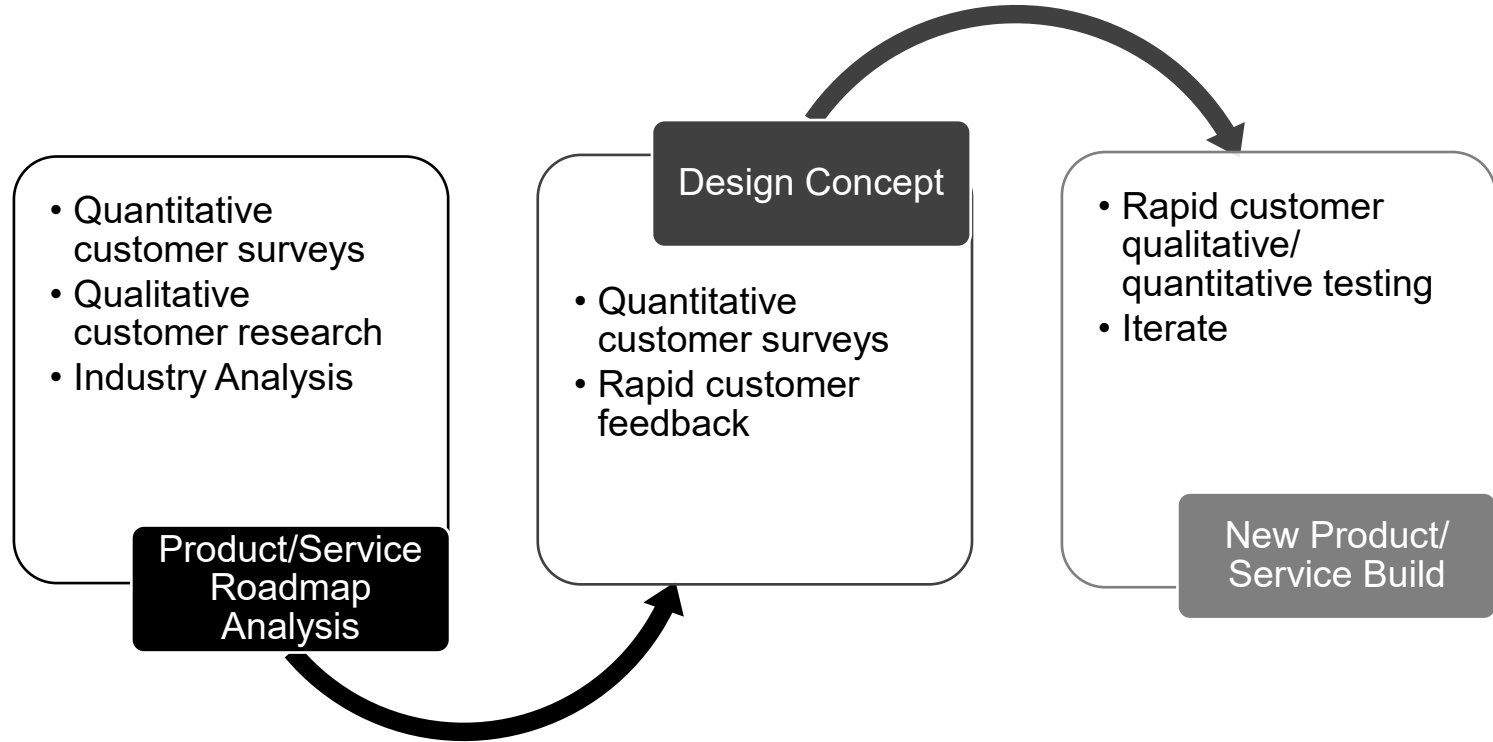
Distributed Intelligence

Demand Side Management Portfolio Fit

- Include DI as a complementary behavioral measure in Home Energy Insights:
 - My Energy Web Portal
 - Paper Reports
 - High Bill Alerts
 - ***NEW* My Energy Connection Application**
- Allow concurrent enrollment in other measures and multiple engagement channels



Voice of the Customer Informs Strategy



Distributed Intelligence Customer Research

High-Level Research Questions

- Do customers prefer to see their real time data “anywhere?”
- For real time “anywhere,” what is the preferred graph/display type?
- What other complementary information would customers want to see along with their real time info?
- Is there anything that is confusing about the real-time speedometer and “away from home” screen bar graph, the speedometer, or the real-time running graph?
- What is customer familiarity with energy usage terminology?
- What would customers like to learn more about?
- What is the preferred view for real-time energy usage?



Distributed Intelligence Customer Research

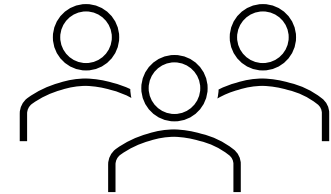
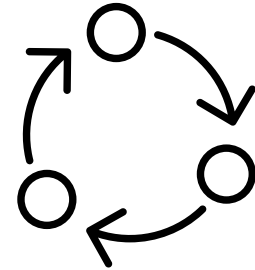
Quantitative & Qualitative Surveys

Method

- Participants (343) were given a scenario and asked to answer questions about DI concepts.

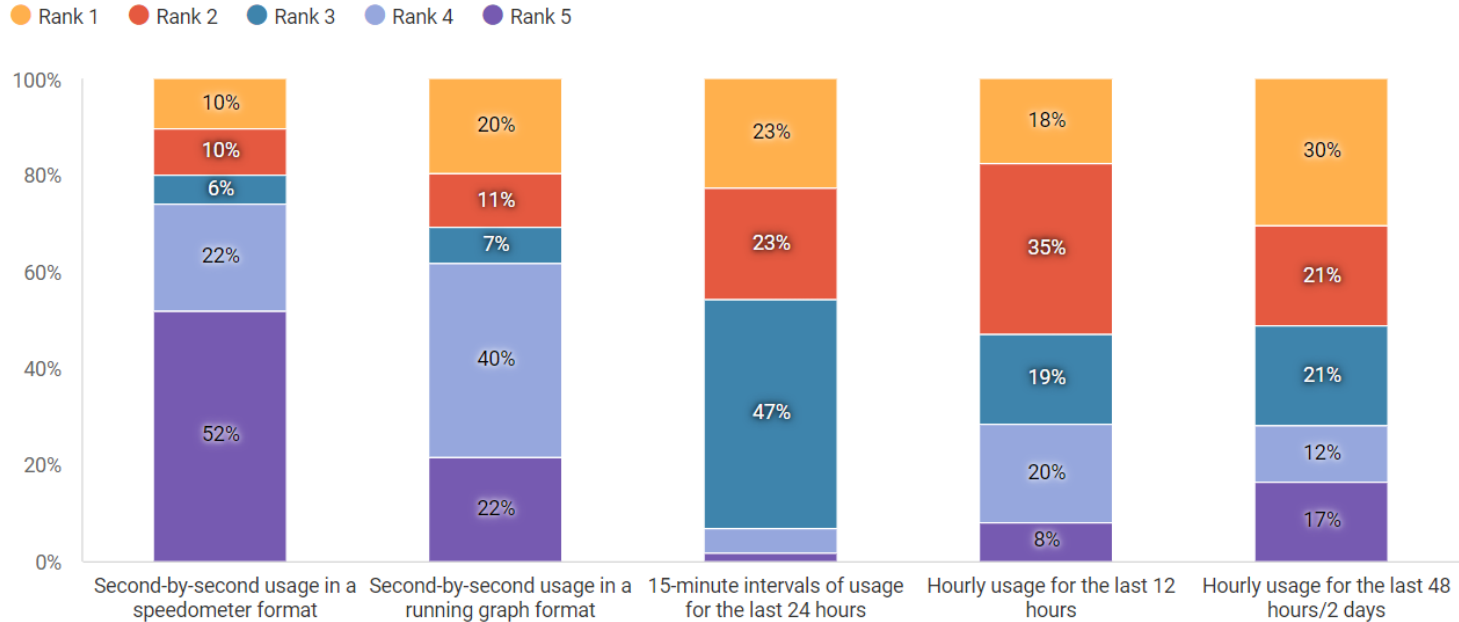
General Customer Feedback

- Customers want to understand and change their energy usage to save money, but they need help.
- Customers want baselines/comparisons so they know how they are doing.
- Customers want their data (cost and usage), but they want it at a glance.
- Customers want to see the current cost without having to do the math.
- Customers have a desire to know what behaviors they should implement to increase their cost savings.
- Customers don't always know the definitions to commonly used words in the utility space.



Distributed Intelligence Customer Research

How would you prefer to see your energy usage?



Distributed Intelligence Customer Research

How valuable would it be to have this information?

Now that you've seen a prototype of an app which shows you your energy usage in real time, how valuable would it be to have this information?

Total responses: 501

Very valuable



Somewhat valuable



Neutral



Not very valuable



Not at all valuable



Distributed Intelligence Customer Research

Application Architecture Research

Card Sorting

- Objective: Understand titles and naming conventions; most common categorization
- Methodology: Unmoderated open card sort of terms/phrases with descriptions representing the different items that will be included in the My Energy Connection app. Participants (100) asked if any of the items were confusing or difficult to categorize.

Tree Testing

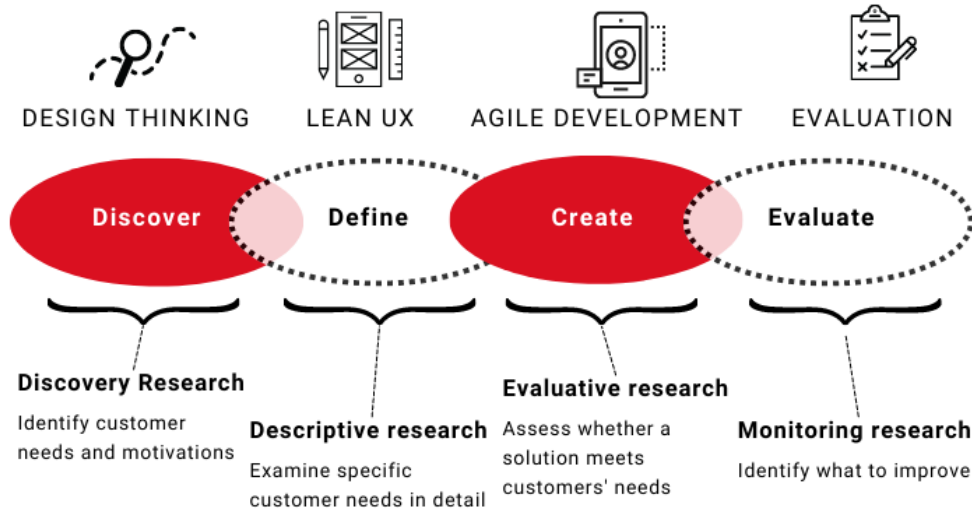
- Objective: Understand where items should live within the application.
- Methodology: Customers provided first-level, second-level, and third-level items representing the different items that will be included in the My Energy Connection app. Participants (101) asked if any of the items were difficult to find.

Usability Testing

- Objective: Get draft prototype in front of customers to improve app architecture
- Methodology: Unmoderated, remote, task-based usability testing & surveying was performed with a semi-clickable prototype. Participants (15) asked to perform pre-determined tasks within the prototype.

UX Research Involvement Throughout MEC App Development

How UX Research Fits Into the PDLC



Complete

Slated

Usability Testing

Unenrollment Survey

Intercept Survey

Usability Testing

Card Sorting

Tree Testing

Beta Testing

Alpha Testing

Concept Testing

Discovery Research

Distributed Intelligence Customer Research

Capturing & Implementing Customer Feedback – Future

- Customer feedback will be captured with an intercept feedback solution that operates within the app itself
 - Unenrollment feedback
 - Rate Your Experience (1-10) feedback
- Surveying of active users through Evaluation, Measurement, and Verification
- My Energy Connection will continue to be built through future releases
 - Key customer feedback will be added to our backlog
 - Prioritization to occur based on new features, updates to existing features, and resources needed



SETTLEMENT COMMITMENTS TIMING

Mark Schoenheider | Manager, Customer Energy Solutions



DSM Plan Settlement Terms with Absolute Dates

- 10. Public Service will provide two live, in-person trainings on BE strategies to Residential and Commercial contractors and/or distributors in 2023.
- 18. The Company agrees to research, in consultation and dialogue with EEBC and other interested stakeholders, Energy Efficiency Ratio (“EER”) requirements for variable capacity heat pumps, and remove or modify the minimum EER requirements for Variable Capacity Heat Pumps if doing so will cost effectively broaden heat pump participation without increasing peak power demand in the summer. The Company will make a determination on this matter by May 31, 2023, including a detailed explanation of the Company’s analysis and rationale for its determination.
- 20. The Company agrees to remove big box stores, including Costco, Sam's Club, Walmart, Home Depot, and Lowe's from its Residential Lighting product no later than October 1, 2023.
- 24. Public Service will implement a new pilot within the Low Income (i.e., IQ) program to test a geographic prequalification approach to DI Community neighborhood weatherization. The Company will post a 60-Day Notice no later than the end of the second quarter of 2023 with details of the pilot.
- 25. The Company commits to discussing its IQ/DI Community outreach and engagement efforts as part of each DSM quarterly roundtable in 2023.

DSM Plan Settlement Terms with Absolute Dates

- 30. The Company agrees to adopt all 2022 bonuses from the business lighting program for all invoices dated on or before September 30, 2023 and submitted by November 30, 2023. The Company will restart bonuses on January 1, 2024, if the 2023 DSM & BE Plan carries over into 2024.
- 33.2. The Company agrees to issue its Request for Proposals (“RFP”) for the Business Energy Assessment and Strategic Energy Management products by June 30, 2023.
- 35. The Company agrees to consider, in consultation with stakeholders, implementing a pilot program that tests the feasibility of carrying out Demand Response with networked lighting controls, and reporting on the results of this examination to the DSM Roundtable no later than the third quarter of 2023.
- 37. The Company will file a supplemental outreach and engagement plan by May 31, 2023



HEAT SAVERS MODE STUDY: UPDATE

Kevin Scott



Heat Savers Mode Update

Objective

- Goal is to shift gas load away from 6am to 9am due to infrastructure limitations during peak time
- Concept – create a program that is like AC Rewards for gas using the same implementer
- We are currently wrapping up season 2 of Heat Savers and are planning a 3rd season before deciding on a program

Heat Savers Mode Update

Event StartTime	Setback (T)	Day of Week	Average Outdoor Temp [°F]	Total Thermostats	Participated	OptOut Rate	No Contribution Rate	Average Capacity [Therms / hr]	Total Capacity [Therms / hr]	Shifted Energy [Therms]
1/24/2023 6:00	4	Tuesday	7.04	152	131	10%	26%	0.193	25.34	101.4
2/1/2023 5:30	3	Wednesday	-2.94	140	129	9%	18%	0.176	22.76	91.1
2/3/2023 6:00	3	Friday	5.51	140	130	6%	18%	0.162	21.02	84.1
2/8/2023 6:00	4	Wednesday	7.13	140	129	9%	16%	0.186	23.96	95.8
2/9/2023 6:00	4	Thursday	6.51	139	128	5%	17%	0.177	22.65	90.6
2/16/2023 6:00	3	Thursday	-0.41	139	129	8%	19%	0.179	23.07	92.3
2/23/2023 5:30	3	Thursday	5.03	138	127	10%	20%	0.185	23.45	93.8
2/28/2023 5:30	4	Tuesday	13.24	138	125	9%	20%	0.187	23.31	93.3
3/10/2023 6:00	4	Friday	20.66	137	128	12%	18%	0.160	20.49	81.9
3/17/2023 6:00	4	Friday	2.31	137	127	7%	20%	0.197	25.04	100.1
3/21/2023 6:00	3	Tuesday	14.49	137	125	4%	18%	0.141	17.68	70.7
3/28/2023 6:00	3	Tuesday	0.8	137	125	12%	20%	0.134	16.71	66.8
3/30/2023 6:00	4	Thursday	24.12	137	117	3%	NA	0.123	14.40	57.6
Average			7.96	139	127	8%	19%	0.169	21.53	86.12

Season 2 Obstacles

1. Multiple “unique” users
2. Multiple thermostats and multiple furnaces
3. Enrollment time
4. Investigate night setback
5. Copper Labs connectivity
6. Ecobee single program enrollment

Season 3 Areas of Focus

1. Night setback shortened on event days
2. Preheat?
3. Directly submeter specific furnaces?
4. Weekend event
5. Control groups?
6. Include additional thermostat manufacturers?
7. Weatherization effects



COMMERCIAL BE

Kevin Scott



BE Measures Update

Commercial Heat Pump Water Heaters

- Focus on integrated style
 - Two measures each
 - Two rebate levels
 - Demand response capability incentivized
- Split system and skid mounted promoted through custom
- Multiple modes of operation
- Application and design important



BE Measure Update

Dual Fuel Rooftop Unit

- Group according to current RTU ranges (4 groups based on tons)
 - Two measures per RTU group
 - Demand response?
- Market transformation



BE Measure Update

Dual Fuel Rooftop Unit

Estimated electricity increase per year:

2,000-26,000 kWh

Gas savings per year:

10-145 Dth

Commercial HPWH

Estimated electricity increase per year:

4,000-8,000 kWh

Gas savings per year:

20-60 Dth



CODES SUPPORT EVALUATION: UPDATE

Nick Minderman





DR RFP FOR GAS/ELECTRIC

Stephen Mullaly



DR RFI Overview

- RFI was agreed to in the 2023 Settlement
 - Primary focus was for Residential Electric Demand Response
 - Residential customers with smart meters
- Natural Gas Demand Response was later added
 - No smart meter requirement for natural gas
- As smart meters will be available to commercial customers soon, commercial ideas will be accepted for consideration
- All proposals should be technology neutral and provide a pay-for-performance reward structure

DR RFI Overview

- Ideas that meet the RFI requirements in a cost-effective manner may be considered for an RFP with the possibility of a pilot or inclusion in the next Demand-Side Management and Beneficial Electrification Plan
- Draft RFI was shared with stakeholders on May 3rd and we're soliciting feedback to target release of the RFI on May 22nd.

Share your product ideas

www.xcelenergy.com/productideas



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