

Colorado Roundtable Presentation

2021 DSM Evaluation Findings

February 9, 2021

Agenda

1. **C&I Compressed Air**
2. C&I New Construction
3. Residential Air Conditioning & Heat Pumps
4. Residential EnergyStar New Homes
5. Residential Home Lighting

C&I Compressed Air: Research Methods

Primary Research Objectives	Participant Survey (n=14)	Near-Participant Interviews (n=2)	Trade Ally Interviews (n=6)	Peer Utility Interviews (n=8)
Collect feedback on trade partner and customer experiences with the compressed air efficiency study and rebate processes.	X	X	X	
Understand customer decision-making and barriers to participating in air studies and installing compressed air measures.	X	X	X	
Explore ways to grow the compressed air market.	X		X	X
Understand peer utilities' program practices.				X
Estimate an overall NTG ratio including the major drivers of free ridership, spillover, and market effects.	X	X	X	

C&I Compressed Air : Key Findings

- Increased communications from Xcel Energy would motivate additional participation and increase satisfaction with the product.
- Trade partners value continuity and experienced challenges due to product staffing changes.
- Trade partners provide primary communication to customers about the Compressed Air product.
- Participating customers and trade partners both reported high satisfaction with rebate levels, however market actors also reported rebates being too low:
 - Trade partners reported past rebate levels as more impactful.
 - Non-participating customers echoed that higher rebate levels would increase the likelihood of their participation.
- Product awareness among near-participants was low and many did not know they were eligible for an updated study.

C&I Compressed Air: Recommendations

- Increase the frequency of communications with trade partners about product updates, provide project updates, and remind them of Xcel Energy contacts.
- Maintain high-touch relationships with trade partners by documenting internal product materials and, when possible, hosting trainings, lunches, and other in-person meetings.
- Provide trade partners with updated customer-facing marketing materials that highlight the cost and energy savings achievable by high-efficiency equipment.
- Consider direct marketing to end-users of compressed air equipment to drive customers to qualified trade partners.
- Monitor incremental prescriptive rebate amounts to determine whether there may be opportunity to increase prescriptive rebate amounts.
- Encourage account managers to actively engage customers eligible for an updated study.

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C&I New Construction: Methods

Primary Research Objectives	Staff Interviews (n=5)	Participating Customer Surveys (n=12)	Participating Trade Partner Interviews (n=14)	Non-Participating Trade Partner Interviews (n=10)	Peer Utility Benchmarking Interviews (n=5)
Inform evaluation plan	X				
Collect feedback on the product experience		X	X		X
Identify barriers to participation	X	X	X	X	
Gauge interest in and understanding of jurisdictional goals (e.g., electrification)		X	X	X	X
Estimate an overall NTG ratio including the major drivers of free-ridership, spillover, and market effects		X	X	X	

C&I New Construction: Key Findings

- Participants and trade partners expressed satisfaction with the product and found most activities easy, however some participants found contacting Xcel Energy and selecting energy-efficient equipment within EEB somewhat difficult.
- Rebates and client interest in energy efficiency were major drivers of trade partner participation.
- Modelers reported challenges with the EDAPT portal and OpenStudio software.
- Participants had a favorable opinion of electrification and interest in electrification technologies, and trade partners noted that they received little pushback from clients on electrification opportunities.
- The evaluation team recommends a NTGR of 0.86, with free-ridership driven by environmental factors and standard practice.

C&I New Construction: Recommendations

- Strengthen relationships between product staff and strategic account managers.
- Work with EEB implementer to understand barriers to selecting energy-efficient equipment, and provide additional info as needed on rebates, specifications.
- Consider moving away from EDAPT and allowing modelers to choose from a pre-approved list of modeling software.
- Coordinate among product staff, account representatives, sales teams, and other relevant Xcel Energy staff to define opportunities to educate customers about electrification building practices and opportunities.
- Offer training on electrification technologies and practices for design teams.
- Explore additional channels to identify and engage with customers and trade partners, such as direct outreach to market actors, construction aggregation service subscriptions, and/or economic development newsletters in key markets.

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Residential AC & Heat Pumps: Research Methods



Primary Research Objectives	Staff Interviews (n=4)	Participant Surveys (n=100)	Participant Interviews (n=8)	Non-Participant Surveys (n=70)	Participating Trade Partner Interviews (n=18)	Non-Participating Trade Partner Interview (n=13)	Peer Utility Benchmarking Interviews (n=6)
Estimate an overall NTG ratio including the major drivers of free-ridership, spillover, and market effects		X	X	X	X	X	X
Collect feedback on the rebate experiences	X	X	X		X	X	X
Identify barriers to participation	X	X	X	X	X	X	
Explore ways to grow the heat pump market		X	X	X	X	X	X

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Residential EnergyStar New Homes: Research Methods



Primary Research Objectives	Staff Interviews (n=4)	Participating Builder Surveys (n=14)	Participating Builder Surveys – Small Volume (n=6)	Non-Participating Builder Interviews (n=8)	Homeowner Surveys (n=85)	Trade Partner (HERS Rater) Interviews (n=7)	Peer Utility Benchmarking Interviews (n=4)
Assess perceptions and awareness of energy-efficient technologies or awareness of the product	X	X	X	X	X	X	
Identify motivations and barriers to participation in product or purchase of energy-efficient homes	X	X	X	X	X	X	
Assess product experience and satisfaction		X	X		X	X	
Identify opportunities for smart home technologies or to support jurisdictional goals (e.g., electrification)		X	X	X	X	X	X
Estimate an overall NTG ratio including the major drivers of free ridership, spillover, and market effects		X		X		X	X

Residential EnergyStar New Homes: Key Findings

- Overall, participating builders and HERS raters were satisfied with their experience.
- HERS raters reported administrative requirements to be challenging.
- Participating and non-participating builders identified cost as the biggest barrier to exceeding code.
- Comfort was the most important factor to homeowners when purchasing an energy-efficient home. Homeowners reported to have little familiarity with smart home technologies.
- Participating builders, non-participating builders, and HERS raters were all hesitant about pursuing electrification in cold climates and homeowners preferred gas for space and water heating.
- The evaluation team estimated a retrospective NTGR of 0.63. Major drivers of free-ridership included meeting code, ENERGY STAR certification, and customer preference.

Residential EnergyStar New Homes: Recommendations

- The evaluation team recommends a prospective NTGR of 0.73 if recommendations are implemented: provide targeted trainings and outreach to large-volume builders and target non-participating builders and scale HERS rater incentives with savings to encourage participation from higher savings projects.
- Collaborate with the product implementer to explore pain points in administrative requirements, including clarifying HouseRater documentation as applicable.
- Develop targeted marketing materials for homeowners including documentation of non-energy benefits and builder leave behinds describing EE features.
- Consider creating an alternative offering based on high-performance building certifications to improve influence among participating builders.
- Consider expanding prescriptive new construction rebate offerings, including measures to support jurisdictions in achieving their electrification goals.

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Residential Home Lighting: Research Methods

Primary Research Objectives	Staff Interviews (n=4)	Corporate Partner Interviews (n=5)	Residential Customer DSCOUT Campaigns and Digital Ethnography (n=10)	Sales Data Analysis	Peer Utility Benchmarking Interviews (n=4-6)	Product Website Usability Testing (n=8)	Digital Marketplace Usability Testing (n=6)	GIS Opportunity Mapping
Product influence, major drivers, market effects, and peer utility NTGR		X		X	X			
Feedback and barriers for customers using Product tools			X			X	X	X
Insight from stakeholders and peer utilities on what may take place of home lighting if EISA Tier 2 standards are implemented		X			X			
Opportunities to increase cost effectiveness	X	X	X	X	X	X	X	X

Residential Home Lighting : Key Findings

- LED market share in non-program areas was increasing, varies by bulb type.
- Feedback on product website:
 - Barriers to using product website included finding the site and limited awareness of the product.
 - Customers would like a radius map of stores near them, with the closest stores being an option.
 - Some customers did not have a store near them that sold Xcel Energy discounted bulbs and some customers were surprised about Dollar Tree/Goodwill being store options.
- Feedback on Digital Marketplace:
 - Customers had trouble finding the digital marketplace and were unaware of the product.
 - Customers faced some challenges with log-in process, making an account, and shipping fees.
- There is an opportunity in southern Colorado to identify and sign-up additional stores that sell Xcel Energy discounted bulbs, especially areas of lower and middle incomes.
- Corporate partners identified additional niche lighting measures to consider for inclusion in the product.

Residential Home Lighting: Recommendations

- Phase out reflector rebates as planned or sooner while considering impact on trade partners.
- Calculate future NTG based on share of each lamp type:
$$2022 \text{ NTGR} = (47.9\% \times \text{kWh from A-lamp} + 31.9\% \times \text{kWh from specialty} + 14.8\% \times \text{kWh from reflectors} + \text{Business Midstream NTG} \times \text{kWh from TLEDs, PL, Mogul, Retrofit Kits}) / \text{total kWh}$$
- Look to multiple other programs to fill the gap for Home Lighting as needed, continue to monitor the opportunity for new lighting products.
- When making future updates to the Product website, consider making recommended changes identified in the evaluation report.
- Consider finding new program stores for areas with customers but no participating stores and, when possible, increase product training to participating retailers to help with staff turnover.

Thank You

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