

Multi-Family Building Efficiency Two energy companies. One program. Save time and energy.

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Agenda

- Program Development, Design, Launch
- How the Program Works
- Case Studies
- Challenges, Future Considerations







How MN Utility CIP Programs Work

- Conservation Improvement Programs (CIP)
 - Next Generation Energy Act of 2007 established energy savings goals
 - all natural gas and electric utilities operating in MN
 - 1.5% of average retail sales, both electric and natural gas sales
 - Oversight by MN Department of Commerce Division of Energy Resources (DER) to ensure:
 - 1. Ratepayer dollars are used effectively
 - 2. Energy savings are reported accurately
 - Program budgets and energy savings are reported annually





Multifamily Sector Background

- Moderate sector participation in prescriptive and custom rebates
- Hard to capture whole-building opportunities, especially for electric
- Increasing interest in multifamily sector beginning 2011
 - Mid-2013: CNP and Xcel Energy both participate in ACEEE Multifamily Utility Working Group
- 2013: Both utilities launch multifamily-specific offerings targeting low-income sector
- No multifamily-specific programs for market-rate





What Were We Trying To Accomplish?

Effectively serve the entire multifamily market with an **dedicated** energy efficiency program

Design a **customer-centric, performancebased** multifamily program that serves customer needs

Coordinate program design and delivery

Assess **achievable savings potential** as well as customer willingness to participate

Design a **cost-effective** product





Program Design Process

- Collaborative Development began 2014
- Closest collaborative EE effort to date between the utilities
- Consulted with others running multifamily programs
 - NYSERDA
 - Elevate Energy
 - CEE
- Technical support from ACEEE
- External stakeholder feedback
 - Building owners (affordable & market rate portfolios)
 - Advocates





ACEEE Best Practices

- Provide a one-stop shop for program services
- \checkmark 2. Integrate direct installation and rebate programs
- ✓ 3. Streamline rebates and incentivize in-unit measures to overcome split incentives
- ✓ 4. Coordinate or integrate programs across electric, gas, and water utilities
- **5**. Encourage deeper retrofits with escalating incentives for greater savings levels
- **6**. Serve both low-income and market-rate multifamily households
- Combine utility-customer-funded programs with public funding available at time of affordable housing refinance
- \checkmark 8. Partner with the local multifamily housing industry to market programs
- ✓ 9. Offer multiple pathways for participation to reach more buildings

 Kate Johnson, Apartment Hunters: Programs Searching for Energy Savings In Multifamily Buildings, American Council for an Energy Efficient Economy (Washington DC, 2013)

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Program Goals

- Drive deep whole-building savings
- Easy to access, easy to understand
- Broadly attractive multifamily market







Program Design Elements

- Drive deep savings
 - Focus on stakeholder with authority to make investments
 - Provide DI with assessment to demonstrate opportunity and immediate benefit
- Easy to access and understand
 - Create "one-stop" approach
 - Straightforward offering "if X then Y"
- Broadly attractive
 - Low/no initial risk; strong incentive for investment
 - Minimize specificity





Data Sources

- Utility Systems
- Census Data (ACS)
- Market Assessment (SeventhWave 2013)
- Other Implementers
- Simplifying Assumptions
- Cross-checks for reasonableness





Timeline

Q2 2014

begin collaborative development process

Q3 - Q4 2014

• continue development, stakeholder consultations

Feb 2015

• File program for regulatory approval

May 2015

Approved by regulators

June 2015

• Release RFP for program implementer





Xcel Program Development Process







CenterPoint Process







Preparation for Launch

- Coordination and integration in many areas
 - Processes
 - Systems
 - Branding
 - Source program implementer
 - Data





Multi-Family Building Efficiency Overview

Launched 2015, savings goals and budget increase
 50% each year

	2018
Combined Budget	\$2,200,996
Generator kWh Goal	2,500,180
Dth Goal	22,277
Participant Goal	225 Buildings







How the Program Works

Multi-Family Building Efficiency Program Process







Multi-Family Building Efficiency Program Focus

- Buildings with opportunities for deep / whole-building energy saving projects
 - Aimed at building owners, who have authority and capital to make decisions to invest in deep efficiency projects
 - Benefits building owners and residents
 - Energy efficiency educational materials for residents







Multi-Family Building Efficiency Eligibility / Participation Criteria

- Existing buildings only not available for new construction
- Buildings must have Xcel Energy electric service AND either Xcel Energy or CenterPoint Energy for natural gas service
- Buildings must have a common entrance, common areas and in-unit kitchens
 - Examples of buildings that would not qualify are townhomes with individual entrances, dormitory-style buildings





Multi-Family Building Efficiency Program Process







Multi-Family Building Efficiency Free Energy Audit and Direct Install

- Free whole-building audit
- Direct install measures include:
 - Screw-in LED lights in residents units and common areas
 - Energy efficient showerheads
 - Faucet aerators
 - Water heater blanket
 - LEDs in exit signs







Multi-Family Building Efficiency Program Process







Multi-Family Building Efficiency Program Basics

- Easy engagement for building owners/managers
 - One program to customers from two utilities
 - Single point of contact, provided by third-party implementer
 - Implementer is not a general contractor for projects but will help customers with consultation for contracts and bids
- Special Considerations
 - Baseline whole-building energy use
 - Whole-building projects must be completed within 2 years
 - Cannot cherry-pick programs or rebates





Multi-Family Building Efficiency Program Process







Multi-Family Building Efficiency Performance-Based Incentives

- Incentive level based on whole-building cost-effective energy savings achieved
- Incentive levels increase when higher savings levels achieved
- Direct-install measure savings are included towards achieving total building savings goal





Earn Incentives For Saving Energy

Escalating Incentive Structure:

Achievement Level	Whole-Building Energy Savings Achieved	Incentive Level
Tier 1	15%	25% of cost
Tier 2	20%	35% of cost
Tier 3	25%	40% of cost

Buildings meeting MN DOC criteria to qualify as low-income will be eligible for **double** the above incentives.







Case Studies

Case Study: Diamond Pointe

- Built in 1966
- 63 units
- Two boilers, original to building: Space heating and DHW







Case Study: Diamond Pointe

- <u>Measures Implemented:</u>
- High efficiency boiler/DHW
- Hot water temperature reduction 142°F down to 120°F
- Pipe insulation
- Weatherized two louvered window openings
- AC Covers on 45 through the-wall air conditioners
- LED bulbs apartment hall and stair areas
- Direct Install:
 - Screw-in LED lights in common areas
 - LED lights in resident units
 - Energy efficient showerheads
 - Energy efficient kitchen and bath faucet aerators







Case Study: Diamond Pointe – Customer Experience

Project Savings and Financial Snapshot	Result
Whole-building energy reduction	26%
Incentive received	\$25,000
Percentage of project cost covered by incentive	40%





Case Study: Diamond Pointe – Customer Experience

"We touched just about everything, we're now running about as efficiently as we can."

"I like how the two utilities worked together. They were very professional and easy to work with. It was also educational for me to get to know my building better."

"I'm doing three more buildings this year. The program lays out all of the information, costs and potential rebates so it makes it easy to follow the recommendations."

- Grant Hartley, Building Owner





Case Study: Granite Trails

- Three buildings
- 109 units







GRANITE TRAILS

Case Study: Granite Trails

- Measures Implemented:
- 6 new energy efficient boilers (2 per building)
- 3 water heaters
- Pipe insulation
- Insulated gaps around the interior of the windows
- Installed covers on all 109 through-the-wall air conditioners
- Replaced entry doors and sidelights
- Occupancy sensors in boiler rooms, storage locker rooms, laundry rooms and stairwells
- Direct Install:
 - Screw-in LED lights in common areas
 - LED lights in resident units
 - Energy efficient showerheads
 - Energy efficient kitchen and bath faucet aerators







Case Study: Granite Trails – Customer Experience

Project Savings and Financial Snapshot	Result
Whole-building energy reduction	18%
Incentive received	\$37,000
Percentage of project cost covered by incentive	25%





Case Study: Granite Trails – Customer Experience

"We put \$4 million into rehabbing this property so we want it to run efficiently and minimize problems, maintenance and additional capital improvements. This program fit the bill perfectly."

"We are already experiencing lower bills from these improvements, and we'll see reduced cost in maintenance which also affects our bottom line."

"A lot of the items that qualified for rebates were on my list, so it made sense to purchase high-efficiency models."

– Dennis Homel, Managing Owner





Multi-Family Building Efficiency Future Questions

- Improved Data
 - Assumption Validation
 - Conversion Rates
 - Participation
 - Affordable vs. market rate
 - Critical for cost-effectiveness
- Customer Opinion Participants & Non-Participants
- Program Performance
- Expansion Potential





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