Innovations in Low Income Energy Efficiency Programs

National Energy & Utility Affordability Coalition (NEUAC) Conference

June 26-28, 2017
Today’s Topics

- About CenterPoint Energy
- Conservation Improvement Programs (CIP) Overview
- Minnesota Low Income Programs
- Low Income Rental Efficiency (LIRE) Program
- Non-Profit Affordable Housing (NPAH) Program
Introduction

• Overview

• Change headers on slides as needed; embed co-branded items, Xcel unique items

• CIP History

• Growth (Next Gen Act of 2007…)

• Budget, energy savings, participation increases

• Current programs: residential, low income, commercial/industrial

• Specific low income programs

• LIRE

• LIW – brief

• Others – Emma, Xcel

We are CenterPoint Energy

Striving to be America’s leading energy delivery company…and more.
About CenterPoint Energy

• **Third-largest** combined electricity and natural gas delivery company in the U.S.

• **Electricity** transmission and distribution – greater Houston area

• **Natural gas** distribution – Arkansas, Louisiana, Minnesota, Mississippi, Oklahoma and Texas
  • Serving more than five million metered customers

• **Unregulated** commercial and industrial natural gas products and services in 33 states
About CenterPoint Energy

Minnesota natural gas operations

- Headquartered in Minneapolis
- Established in 1870
- Largest natural gas distribution company in Minnesota
Minnesota CIP Programs

- Energy utilities in MN are required to offer, promote and deliver energy efficiency programs for their customers (State legislation)

- Regulated by MN Department of Commerce, Division of Energy Resources, overseen by MN Public Utilities Commission to ensure:
  - Ratepayer dollars are used effectively
  - Annual energy savings and spending are reported accurately

- MN – national leader in energy efficiency
  - Consistently ranked among top ten most energy-efficient states in America for many years by American Council for an Energy-Efficient Economy (ACEEE)
CenterPoint Energy’s natural gas energy efficiency programs began in 1992 with a budget of $3.4 M.

Programs grew slowly over the next 15 years.

Next Generation Energy Act of 2007:
- Dramatically increased energy savings goals, budgets.

<table>
<thead>
<tr>
<th>Year</th>
<th>Budget</th>
<th>Energy Savings Goal (Dth/MCF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>$3.4 Million</td>
<td>207,612</td>
</tr>
<tr>
<td>2009</td>
<td>$10 Million</td>
<td>849,950</td>
</tr>
<tr>
<td>2017</td>
<td>$32.7 Million</td>
<td>1,680,436</td>
</tr>
</tbody>
</table>

Current MN CIP is a large, comprehensive EE program serving all customer segments.
Our comprehensive Natural Gas Energy Efficiency Programs, or Conservation Improvement Programs (CIP), help customers reduce energy use and operating costs.

- **Minnesota**: 1992
- **Arkansas**: 2007
- **Oklahoma**: 2011
- **Mississippi**: 2014
In Minnesota, 2016 was a record-breaking year – 2,006,014 Dth saved – the highest in our history!

<table>
<thead>
<tr>
<th>Dth (MCF) Saved</th>
<th>CO2 Removed (Metric Tons)</th>
<th># Cars Removed from Road Annual Equivalent</th>
<th># of Homes Annual Equivalent</th>
<th>Customer Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>22,822,810</td>
<td>1,219,983</td>
<td>203,330</td>
<td>261,563</td>
<td>$138,942,810</td>
</tr>
</tbody>
</table>
MINNESOTA CIP PROGRAMS

RESIDENTIAL PROGRAMS
- Home Efficiency Rebates
- Air Sealing and Insulation Rebates
- DIY Home Efficiency
- Home Energy Reports (HER)
- Home Energy Squad (Incl. Home Energy Audits)
- High Efficiency Home (Builder New Construction)

COMMERCIAL PROGRAMS
- Commercial/Industrial Rebates
- Engineering Assistance
- Natural Gas Energy Analysis (Audit)
- Recommissioning
- Energy Design Assistance
- Process Efficiency Projects
- Multi-Family Building Efficiency
- Industrial Steam Trap Audits

LOW INCOME PROGRAMS
- Low Income Weatherization
- Low Income Rental Efficiency
- Low Income Free Heating System Tune-ups
- Non-Profit Affordable Housing Rebates
- Low Income Multi-Family Housing Rebates
Minnesota Low Income Programs

Why are income-qualified programs so important?

Minnesota poverty statistics*

- Overall poverty rate – 10.2%
- More than 546,000 citizens with family incomes below official poverty level
  - ~ $24,300, family of four
  - Includes 165,000 children under age 18
- Poverty remains highest among minority populations

Utilities required by MN Statute to spend a minimum of 0.4% of three-year average residential natural gas GOR for dedicated low income programs

- CenterPoint Energy substantially exceeds this minimum each year

*Source: 2015 American Community Survey

CenterPoint Energy has an enduring legacy of support for the low income community

- **Responsibility** for helping customers use our product safely and efficiently
- **Dedication** to helping customers control energy use and costs to live comfortably and affordably
- **Commitment** to providing program, product and service solutions that help reduce energy cost burden for those in need

Source: Legal Services of Greater Miami, legalservicesmiami.org, 2017.
Minnesota Low Income Programs

- Low Income Weatherization
- Low Income Rental Efficiency
- Low Income Free Heating System Tune-ups
- Non-Profit Affordable Housing Rebates
- Low Income Multi-Family Housing Rebates

Dedicated Low Income Spending in Mainstream Programs:

- Home Energy Squad
- Multi-Family Building Efficiency

Source: University of Wollongong, Australia, News Release “Power to the people,” July 15, 2015
Low Income Weatherization

• Covers full cost of energy audit and necessary weatherization (air sealing and insulation) measures to improve energy efficiency and reduce utility bills for income-eligible customers in residential 1 to 4-unit properties.
  • CIP LIW funding leverages DOE WAP funding

• Emergency or as-needed replacement of heating and/or water heating systems with high efficiency natural gas systems, and related measures.

• Services provided by area Community Action Partnership (CAP) agencies on behalf of CenterPoint Energy.

Source: Connecticut Association for Human Services, News Blog, December 30, 2015

Eligible customers qualify for Low Income Home Energy Assistance Program (LIHEAP) and U.S. Department of Energy Weatherization Assistance Program (WAP)*.

*50% of state median income or 200% of federal poverty, whichever is greater.
Low Income Free Heating System Tune-ups

- **Free** furnace or boiler tune-ups for income-qualified customers.
- “Red tag” unsafe or beyond-repair heating systems.
  - Connect customers to alternate resources or programs that will help with system replacement.
- Offered in select MN areas through participating Community Action Partnership agencies.
- Delivered by CenterPoint Energy’s expert Home Service Plus® technicians.
Low Income Multi-Family Housing Rebates

- 25% bonus rebate for qualifying commercial measures installed in multi-family affordable housing buildings
- Helps offset initial cost to purchase and install new or replacement high efficiency natural gas equipment
- Eligible facilities must have five or more housing units; 66 percent or more occupied by income-eligible households
Spotlight Programs: LIRE and NPAH

Low Income Rental Efficiency (LIRE)
and
Non-Profit Affordable Housing (NPAH)

• Program Basics
• Challenges
• Successes

Source: ClipartPanda.com, 2017
Low Income Rental Efficiency (LIRE)

Source: University of Wollongong, Australia, News Release “Power to the People,” July 15, 2015
Low Income Rental Efficiency: Program Basics

- Offers financial assistance for property owners to improve energy efficiency, reduce utility bills and enhance safety for income-eligible tenants in 1 to 4-unit residential rental properties.

- Shared-cost model: CenterPoint Energy pays full cost of energy audit, and splits costs of qualifying installed measures with owners.
  - Weatherization (air sealing and insulation)
  - High efficiency natural gas heating system
  - High efficiency natural gas water heater
  - Programmable thermostat
  - Related health and safety measures

- Services coordinated by local non-profit agency on behalf of CenterPoint Energy.

Eligible properties are occupied by at least 50% of renters who qualify for Low Income Home Energy Assistance Program (LIHEAP) and U.S. Department of Energy Weatherization Assistance Program (WAP)*.

*50% of state median income or 200% of federal poverty, whichever is greater.
Low Income Rental Efficiency: Program Basics

- **2010** Initiated Pilot project
  - Focused effort to engage property owners
  - No requirement to contribute toward installed measures

- **2013** Formal modification
  - Added modified program to CIP Portfolio

- **2014** Launched new program
  - Shared cost model
  - Energy savings methodology based on whole building (using energy modeling software) vs. deemed values for installed measures
    - Especially helpful for multi-unit dwellings

Low Income Rental Efficiency: Persevering through Challenges

- Small in stature – low volume, modest participation goals
- High maintenance – labor-intensive, long onboarding process, considerable hand-holding at every stage
  - Multiple players, multiple participation forms
  - Multiple units, multiple touch points
  - Income verification complexities, privacy/data sharing constraints
- High cost per Dth saved – everyone works VERY HARD for every Dth of savings!
- Complex data tracking and reporting
  - Software and database limitations – incl. multi-unit tracking and reporting challenges
- Redundancies with other low income program services – different focus, technical methodology

Source: marksanborn.com, Four Challenges Leaders Always Face, 2017
Low Income Rental Efficiency: Persevering through Challenges

- Rules of engagement
  - Owner outreach more productive, but hard to get their attention
  - Renters not the decision-makers
  - Owner/tenant dynamics not always ideal
- Outreach doesn’t always…reach
  - Neighborhood events, newspapers & web sites
  - Section 8, other affordable housing outreach
  - Targeted mailing/contact lists
  - Direct mail to CNP system-designated landlords/owners
  - CNP now bringing our administrative and marketing expertise to bear…

Source: www.mngreenexpo.org, 2017
Low Income Rental Efficiency: Partnering for Success

Room to grow!

Program adoption slower than expected, but results prove its worth:

- Property owners appreciate financial support for property improvements
  - Repeat customers!
  - More measures per property installed!
- Tenants appreciate reduced energy bills, enhanced equipment safety and reliability, increased comfort and improved potential for rental costs to remain affordable
- Local governments and affordable housing advocates are strong supporters

Low Income Rental Efficiency: Partnering for Success

Room to grow!

- Higher utility energy savings using whole building vs. prescriptive methodology
  - Avg. energy savings/building > 30 Dth
  - Avg. energy savings/unit ~ 20 Dth
- Strategically and politically important program
- Strong partnerships with delivery agents
  - Worked through significant early challenges in the Pilot phase and transforming to a mainstream program

Non-Profit Affordable Housing (NPAH)

Non-Profit Affordable Housing: Program Basics

• Partnership between CenterPoint Energy and eligible IRS 501(c)3 affordable housing organizations to provide energy-efficient, affordable housing for the low income community.

• Promotes energy-efficient construction and high efficiency, energy-saving measures in 1 to 4-unit residential new construction or renovation projects of participating agencies.

• Rebates full incremental cost for qualifying high efficiency natural gas space heating and water heating, air sealing, insulation, water-saving, laundry and related measures.

• Reduces energy cost burden to help maintain home affordability for owners or renters.
Non-Profit Affordable Housing: Program Basics

Homeowners Guide and Calendar – key to helping first-time homeowners understand how to safely operate and maintain an energy efficient home.
Non-Profit Affordable Housing: Program Basics

• 2001 Program launched
  - Rebates ~ full incremental cost differential between standard and high efficiency equipment
    - Cost-neutral for resource-stretched agencies

• 2013 Qualifying measures expanded
  - Air sealing/insulation rebates
  - Rental properties (agency-owned/operated)
  - Increased rebates – up to $2,710/project
  - Additional participating agencies

• 2017 Qualifying measures expanded
  - Adopted MN TRM 2.0 energy-saving methodologies
  - Tiered rebates based on measure efficiency
  - Substantially increased rebates – more than $9,000/project
    - More than tripled rebate potential for agencies!
Non-Profit Affordable Housing: Persevering through Challenges

- Modest participation goals, but occasional challenges reaching them
  - Fluctuations in partner productivity: construction budgets, property acquisition, geographic build areas (not all served by CNP), etc.
  - Small-volume partners in outstate areas
- Many players! Outreach and communication challenges, esp. outstate
- Multi-measure, complex data reporting
  - Data templates for larger agencies
- Complexities in MN TRM 2.0 (beg. 2017)
  - Differences in qualifying measures, rebates, energy savings for rehab vs. new construction
  - Expanded data requirements and supplemental spreadsheet for weatherization measures deemed calculated savings

Source: whatsupusana.com; USANA Health Sciences, January 8, 2014
Impact of MN TRM 2.0

2017-2019 Qualifying Measures

- Differences in rehab/retrofit projects and new construction
- Rebate tiers based on measure type and efficiency
- Additional complex data reporting

<table>
<thead>
<tr>
<th>RECONSTRUCTION/REHAB PROJECTS</th>
<th>NEW CONSTRUCTION PROJECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weatherization Measures</td>
<td>Weatherization Measures</td>
</tr>
<tr>
<td>Dth Saved</td>
<td>Dth Saved</td>
</tr>
<tr>
<td>CNP Rebate</td>
<td>CNP Rebate</td>
</tr>
<tr>
<td>Air Sealing</td>
<td>Air Sealing (above code)</td>
</tr>
<tr>
<td>Deemed Calculated*</td>
<td>Deemed Calculated*</td>
</tr>
<tr>
<td>$5,500</td>
<td>$5,500</td>
</tr>
<tr>
<td>Attic Insulation</td>
<td>Attic insulation (above code)</td>
</tr>
<tr>
<td>Deemed Calculated*</td>
<td>Deemed Calculated*</td>
</tr>
<tr>
<td>$350</td>
<td>$350</td>
</tr>
<tr>
<td>Wall Insulation</td>
<td>Wall insulation (above code)</td>
</tr>
<tr>
<td>Deemed Calculated*</td>
<td>Deemed Calculated*</td>
</tr>
<tr>
<td>$2,500</td>
<td>$2,500</td>
</tr>
<tr>
<td>Rim Joint/ sill Plate Insulation</td>
<td>Deemed Calculated*</td>
</tr>
<tr>
<td></td>
<td>$200</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Equipment Measures</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>High Efficiency Natural Gas Furnace</td>
<td></td>
</tr>
<tr>
<td>92.0%-93.9% AFUE</td>
<td>14.5</td>
</tr>
<tr>
<td>$800</td>
<td></td>
</tr>
<tr>
<td>91.0%-94.9% AFUE</td>
<td>17.1</td>
</tr>
<tr>
<td>$1,480</td>
<td></td>
</tr>
<tr>
<td>90.0%-92.9% AFUE</td>
<td>19.9</td>
</tr>
<tr>
<td>$1,430</td>
<td></td>
</tr>
<tr>
<td>High Efficiency Natural Gas Boiler</td>
<td></td>
</tr>
<tr>
<td>85.1%-90.9% AFUE</td>
<td>8.8</td>
</tr>
<tr>
<td>$590</td>
<td></td>
</tr>
<tr>
<td>91.0%-94.9% AFUE</td>
<td>21.5</td>
</tr>
<tr>
<td>$1,480</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Programmable Thermostat</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1-Basic</td>
<td>2.5</td>
</tr>
<tr>
<td>$30</td>
<td></td>
</tr>
<tr>
<td>Tier 2-WiFi</td>
<td>3.7</td>
</tr>
<tr>
<td>$110</td>
<td></td>
</tr>
<tr>
<td>Tier 3-Learning</td>
<td>6.1</td>
</tr>
<tr>
<td>$200</td>
<td></td>
</tr>
</tbody>
</table>

| High Efficiency Natural Gas Water Heater |                |
| 87°F Tank - Atmospheric        | 1.9            |
| $200                            |                |
| 87°F Tank - Power Vent         | 1.0            |
| $160                            |                |
| 90°F Tankless                   | 1.2            |
| $400                            |                |
| Indirect Water Heater*         | 2.0            |
| $770                            |                |

| Heat/Energy Recovery Ventilator (HRV/ERV) |                |
| Low Flow Showerhead             | 1.4 gpm         |
| 1.6 gpm                        | $10             |
| Low Flow Kitchen Aerator       | 1.5 gpm         |
| 0.5 gpm                        | $5              |
| Low Flow Bathroom Aerator      | 1.0 gpm         |
| 0.3 gpm                        | $5              |

| Clothes Washer                 | ENERGY STAR     |
| 0.4*                           | $65             |

| Natural Gas Clothes Dryer      | ENERGY STAR     |
| 0.4*                           | $150            |

BONUS REBATE: All potential measures.
Non-Profit Affordable Housing: Partnering for Success

Building momentum

• Growing program awareness, participation – More partners! More projects!
• More qualifying measures in each property
  • More $$ for agencies!
  • More energy savings for CIP!

Changing the game

• Rebate incentives encouraged non-profit partners to make the high efficiency choice
• Over the years, many affordable housing agencies have moved to the forefront of innovative, energy efficient, sustainable housing practices

Solid foundations

• NPAH rebates are supporting agencies’ mission to help first-time homeowners live efficiently, comfortably and affordably
Special research projects initiated in 2016 – NPAH is helping fund the effort

U.S. Department of Energy, University of Minnesota, Twin Cities Habitat for Humanity, CenterPoint Energy and others are working to compare several innovative home construction techniques against base home, monitoring performance for energy efficiency, other factors.
Non-Profit Affordable Housing: Partnering for Success

Special event November 2015 – celebrating NPAH milestone

- $1 million in rebates
- More than 1,100 affordable, energy efficient new homes!
Our low income energy efficiency programs allow us to:

- Better serve customers in need
- Achieve important program goals
- Extend public resources
- Conserve energy and reduce costs
- Make energy more affordable for all
M. Sarah Schaffer  
Sr. Administrator  
Energy Efficiency Programs  
CenterPoint Energy  
612-321-4849  
m.sarah.schaffer@centerpointenergy.com  

Thank you!
Thank You!