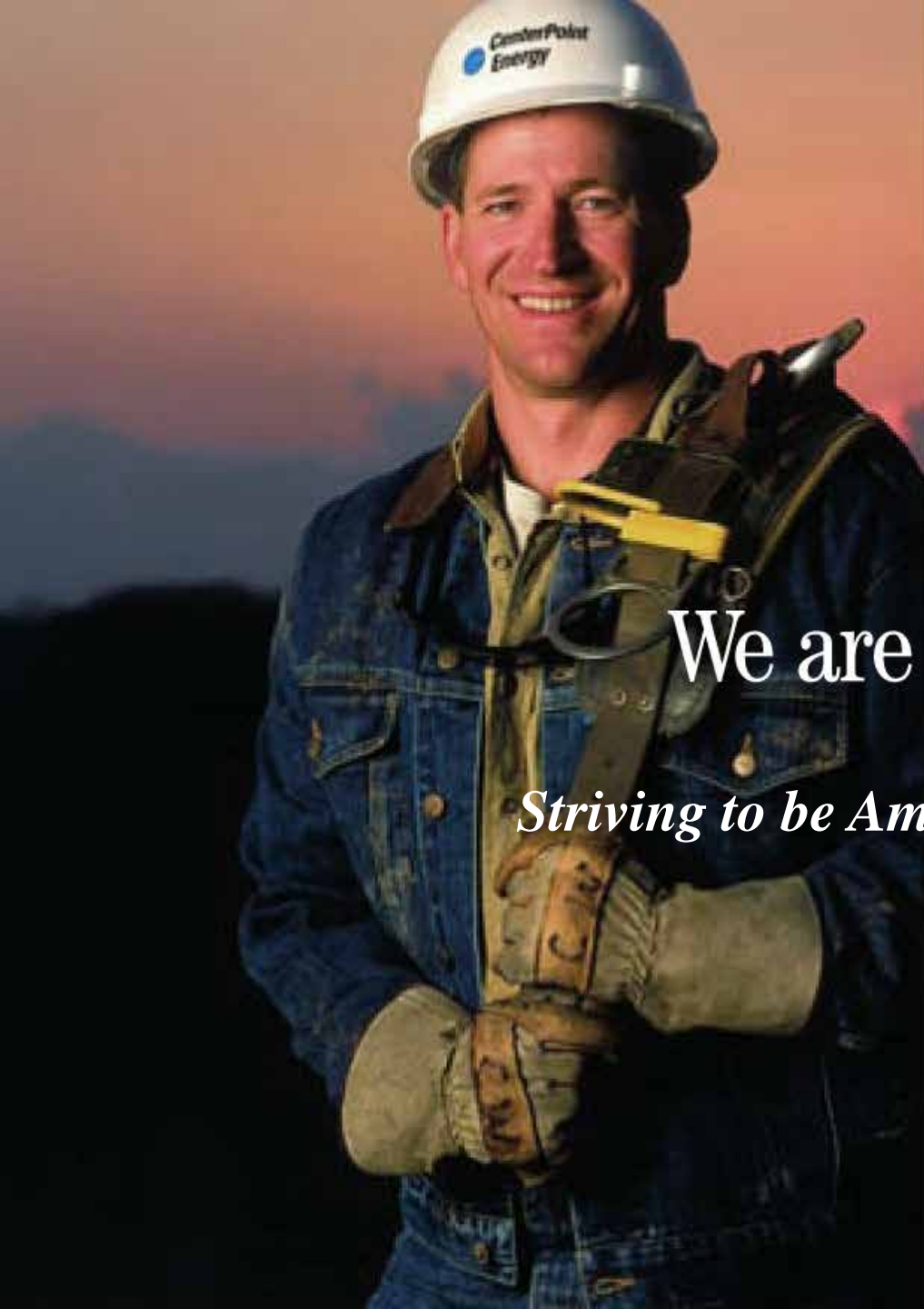


# Innovations in Low Income Energy Efficiency Programs

National Energy & Utility Affordability Coalition  
(NEUAC) Conference

June 26-28, 2017

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



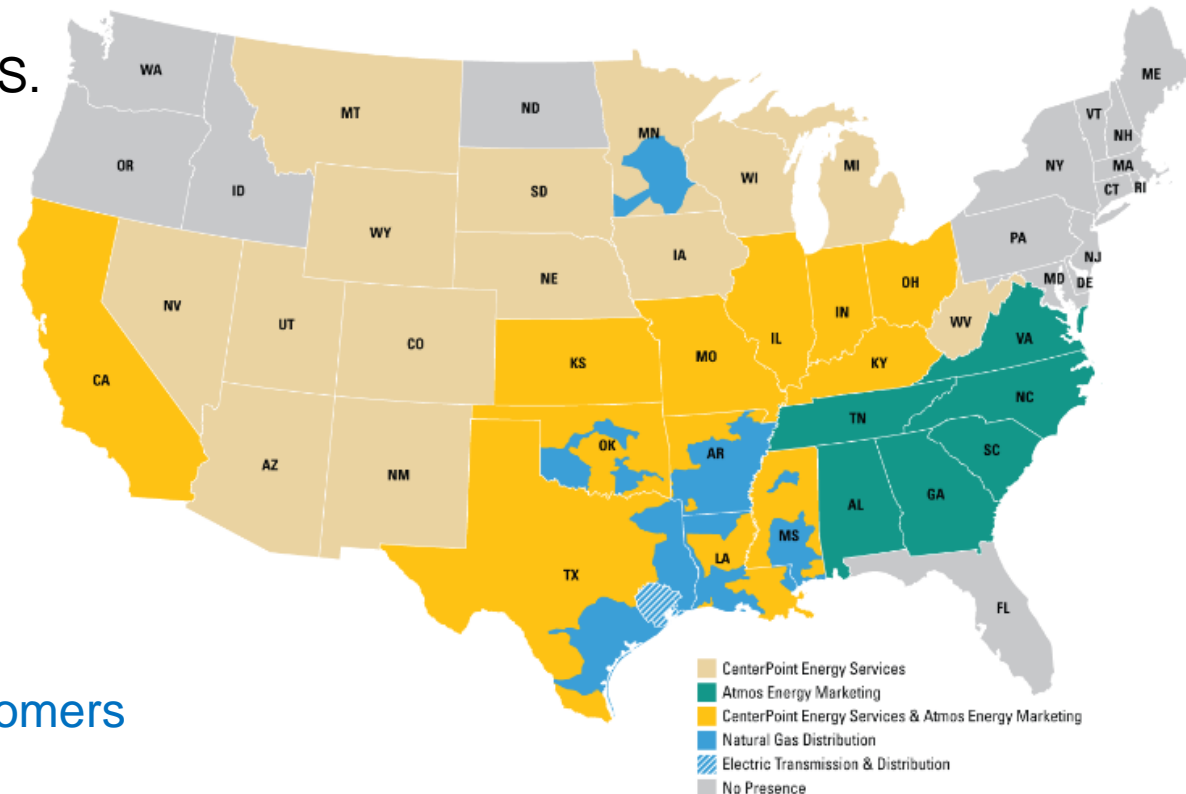
We are **CenterPoint Energy**

*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



## 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)



# Minnesota CIP Programs



- CenterPoint Energy's natural gas energy efficiency programs began in 1992 with a budget of \$3.4 M
- Programs grew slowly over next 15 years
- Next Generation Energy Act of 2007
  - Dramatically increased energy savings goals, budgets

Year	Budget	Energy Savings Goal (Dth/MCF)
1992	\$3.4 Million	207,612
2009	\$10 Million	849,950
2017	\$32.7 Million	1,680,436



- Current MN CIP is a large, comprehensive EE program serving all customer segments

# Natural Gas Efficiency Programs



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





# Natural Gas Efficiency Programs



## Comprehensive Program Results – MN, AR, OK, MS 1992–2016

Dth (MCF) Saved	CO2 Removed (Metric Tons)	# Cars Removed from Road Annual Equivalent	# of Homes Annual Equivalent	Customer Savings
22,822,810	1,219,983	203,330	261,563	\$138,942,810

**In Minnesota, 2016 was a record-breaking year – 2,006,014 Dth saved – the highest in our history!**

## 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)

## LOW INCOME PROGRAMS

- Low Income Weatherization
- Low Income Rental Efficiency

## 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 Free Heating System Tune-ups
- Non-Profit Affordable Housing Rebates
- Low Income Multi-Family Housing Rebates



## Why are income-qualified programs so important?



Source: Volunteers of America-Florida, [www.voafloida.org](http://www.voafloida.org), 2016.

## 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

# Minnesota Low Income Programs



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](http://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

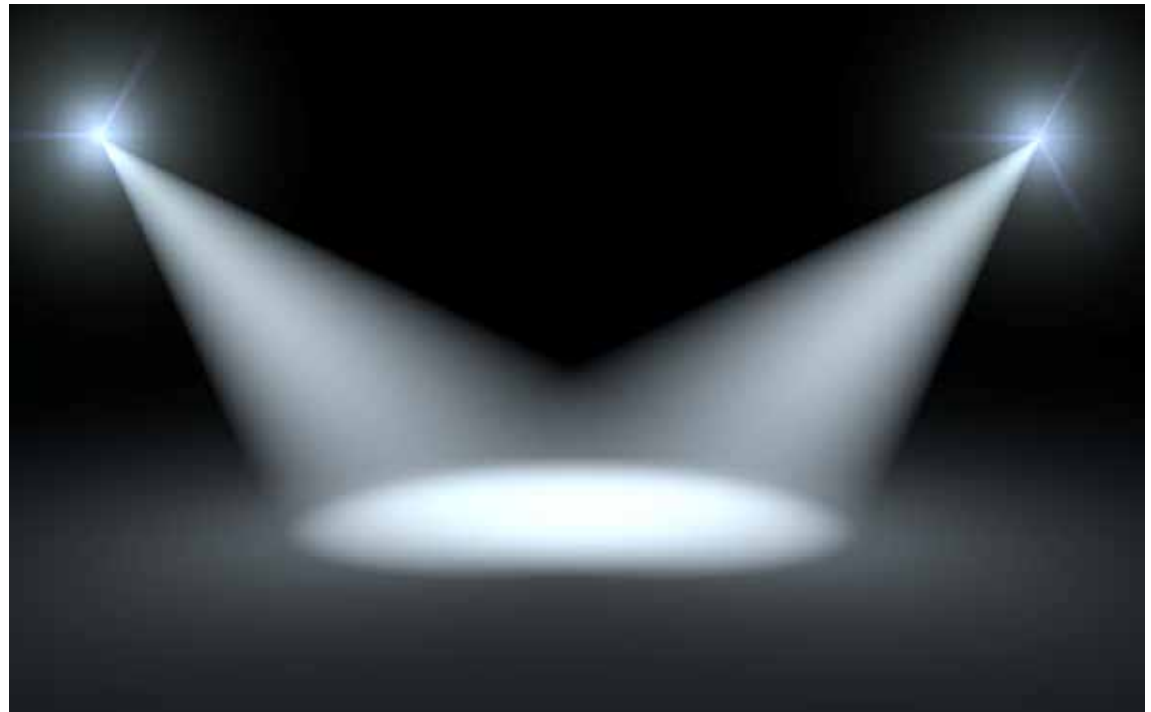


Low Income Rental Efficiency (LIRE)

and

Non-Profit Affordable Housing (NPAH)

- Program Basics
- Challenges
- Successes



Source: [ClipartPanda.com](http://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.



Source: University of Wollongong, Australia, News Release  
"Power to the People," July 15, 2015

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



*Source: verticalresponse.com, 3 Small Business Challenges and How to Overcome Them, December 4, 2013*

# Low Income Rental Efficiency: Persevering through Challenges



Source: [marksanborn.com](http://marksanborn.com), *Four Challenges Leaders Always Face*, 2017

- 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

# 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



**CenterPoint Energy**

CenterPoint Energy's Low Income Rental Efficiency Program  
for one-to-four Unit Rental Properties

CenterPoint Energy pays for 90% of the costs of energy conservation measures in qualifying rental properties.

CenterPoint Energy (CNP) offers an energy conservation program for property owners owning 6 low income rentals in one building and building. The program is administered by Energy Connection (EC) and their partner, Neighborhood Energy Connection (NEC). Together, EC and NEC have administered energy conservation services for more than 20 years.

A FREE, no obligation energy audit is offered through the program (see 2014-2015). The audit determines if incentive funds are available and if mechanical systems are sufficient. If property owners want to act on the auditor's recommendations, the program requires them to contribute 10% of all costs for any additional insulation or for new, energy efficient HVAC systems, water heaters, water equipment.

In order for property owners to qualify for the program, all tenants in a single-family rental home and/or 50% of the tenants in 2-4 unit rental homes must be income eligible (qualifies below).

Proof of tenant income is required unless tenants received a grant from the Energy Conservation Program within the last two years, had a Section 8 voucher or live in a Section 8 unit.

Household Size	Annual	Monthly
1	\$10,000	\$833
2	\$12,000	\$1,000
3	\$14,000	\$1,167
4	\$16,000	\$1,333
5	\$18,000	\$1,500
6	\$20,000	\$1,667
7	\$22,000	\$1,833
8	\$24,000	\$2,000

If you own a qualifying property (1 to 4 units) and are interested in applying for the program, please fill out the form on the back of this page. After EC receives the enclosed application, EC will contact property owners with additional program information and tenant applications.

Please return the enclosed application by mail, email or fax to:  
 Energy Connection • 400 E 1<sup>st</sup> St • St. Paul, MN 55102  
 Attention: Energy Programs  
 email: [tronda@energycents.com](mailto:tronda@energycents.com)  
 612-901-0100 / Fax at 651-774-0445

Points for this program are not earned or awarded as either a bonus or multiple bonus.

**CenterPoint Energy**

Property Owner APPLICATION  
CenterPoint Energy Low Income Rental Efficiency Program

1. Property Owner Information

State	
Street Address	
Phone	
City	
Best Way to Contact	

2. Rental Property Information: Please provide the following information for each of your rental properties. Please indicate if any of the properties are Section 8 eligible.

Street Address/Unit	Section 8 Eligible	Number of Units	Year Built	Package Applied	Water Meter Applied	Completed in last 10 years? (Y/N)

3. Additional Eligibility Information

Do you use the CenterPoint Energy natural gas bill for any of your rental properties? (Y/N)

Do you have any other rental properties? (Y/N)

Do you reside in any of your rental properties? (Y/N)

Do you have a vehicle? (Y/N)

Signature \_\_\_\_\_ Date \_\_\_\_\_

Printed Name: \_\_\_\_\_

email: [tronda@energycents.com](mailto:tronda@energycents.com)

# 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



Source: *What The Flicka?* ; [whattheflicka.com/success](http://whattheflicka.com/success), 2016.

# 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



Source: *What The Flicka?* ; [whattheflicka.com/success](http://whattheflicka.com/success), 2016.



# Non-Profit Affordable Housing (NPAH)



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

# Non-Profit Affordable Housing: Program Basics



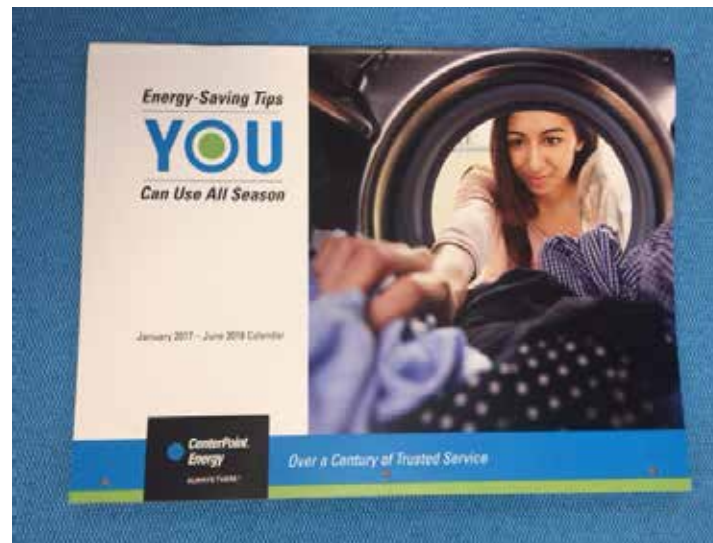
- Partnership between CenterPoint Energy and [eligible IRS 501\(c\)3 affordable housing organizations](#) to provide energy-efficient, affordable housing for the low income community.
- Promotes energy-efficient construction and high efficiency, energy-saving measures in [1 to 4-unit residential new 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!



Source: [www.Bang2Write.com](http://www.Bang2Write.com)

# Non-Profit Affordable Housing: Persevering through Challenges



Source: [whatsupusana.com](http://whatsupusana.com); USANA Health Sciences, January 8, 2014

- 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

# Non-Profit Affordable Housing: Program Basics



## 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

Non-Profit Affordable Housing Program 2017-2019 Rebates and Energy Savings Tables							
RECONSTRUCTION/REHAB PROJECTS				NEW CONSTRUCTION PROJECTS			
Weatherization Measures	Dth Saved		CNP Rebate	Weatherization Measures	Dth Saved		CNP Rebate
Air Sealing	Deemed Calculated*		\$1,800	Air Sealing (above code)	Deemed Calculated*		\$1,800
Attic Insulation	Deemed Calculated*		\$600	Attic Insulation (above code)	Deemed Calculated*		\$630
Wall Insulation	Deemed Calculated*		\$2,500	Wall Insulation (above code)	Deemed Calculated*		\$2,150
Rim Joist/Sill Plate Insulation	Deemed Calculated*		\$300				
Related Weatherization (with pre-authorization, as part of approved measures above)	Deemed Calculated*		TBD	Related Weatherization (with pre-authorization, as part of approved measures above)	Deemed Calculated*		TBD
Equipment Measures	Tier/Description	Dth Saved	CNP Rebate	Equipment Measures	Tier/Description	Dth Saved	CNP Rebate
High Efficiency Natural Gas Furnace	92.0%-93.9% AFUE	14.5	\$800	High Efficiency Natural Gas Furnace	92.0%-94.9% AFUE	1.1	\$170
	94.0%-95.9% AFUE	17.2	\$1,430		95.0%+ AFUE	5.1	\$800
	96.0%+ AFUE	19.9	\$1,430				
High Efficiency Natural Gas Boiler	83.5%-90.9% AFUE	6.8	\$930	High Efficiency Natural Gas Boiler	83.5%-90.9% AFUE	6.8	\$930
	91.0%+ AFUE	21.5	\$1,480		91.0%+ AFUE	21.5	\$1,480
Programmable Thermostat	Tier 1-Basic	2.5	\$30	Programmable Thermostat	Tier 2-Wi-fi	1.2	\$80
	Tier 2-Wi-fi	3.7	\$110		Tier 3-Learning	3.7	\$170
	Tier 3-Learning	6.1	\$200				
High Efficiency Natural Gas Water Heater	.67 EF Tank-Atmospheric	1.9*	\$200	High Efficiency Natural Gas Water Heater	.67 EF Tank - Atmospheric	1.9*	\$200
	.67 Tank-Power Vent	1.9	\$540		.67 Tank-Power Vent	1.9	\$540
	.90 Tankless	1.2*	\$400		.90 Tankless	1.2*	\$400
	Indirect Water Heater*	2.0	\$770		Indirect Water Heater*	2.0	\$770
Heat/Energy Recovery Ventilator (HRV/ERV)		10.4*	\$850	Heat/Energy Recovery Ventilator (HRV/ERV)		10.4*	\$850
Low Flow Showerhead	1.5 gpm	1.6	\$10	Low Flow Showerhead	1.5 gpm	1.6	\$10
Low Flow Kitchen Aerator	1.5 gpm	0.5	\$5	Low Flow Kitchen Aerator	1.5 gpm	0.5	\$5
Low Flow Bathroom Aerator	1.0 gpm	0.3	\$5	Low Flow Bathroom Aerator	1.0 gpm	0.3	\$5
Clothes Washer	ENERGY STAR	0.4*	\$65	Clothes Washer	ENERGY STAR	0.4*	\$65
Natural Gas Clothes Dryer	ENERGY STAR	0.4*	\$150	Natural Gas Clothes Dryer	ENERGY STAR	0.4*	\$150
<b>BONUS REBATE</b>	All potential measures		\$500	<b>BONUS REBATE</b>	All potential measures		\$500

\*All designated measures above use alternative deemed inputs or savings methodologies than the Minnesota TRM 2.0, and were approved as filed by the Minnesota Department of Commerce, Division of Energy Resources. Data required for calculating weatherization energy savings for each project will be submitted by agencies via separate designated spreadsheet.

# Non-Profit Affordable Housing: Partnering for Success



## Building momentum

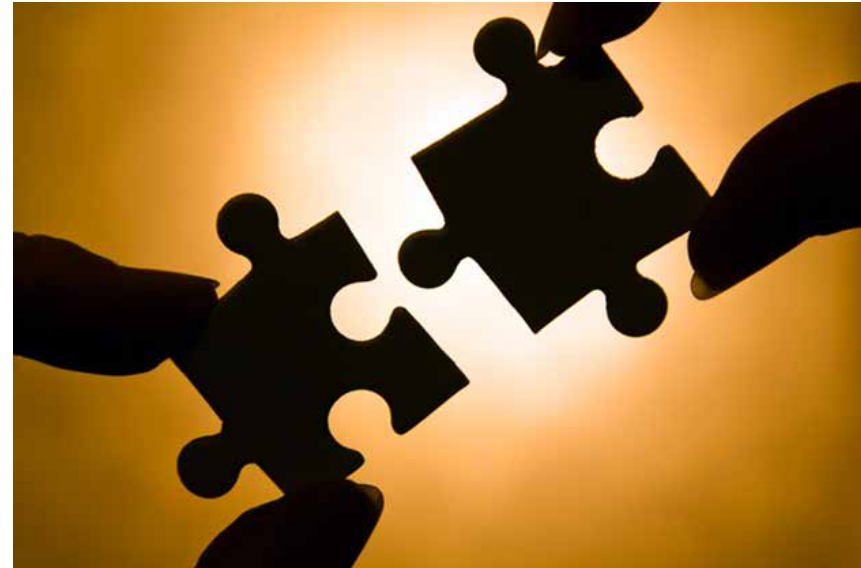
- Growing program awareness, participation – More partners! More projects!
- More qualifying measures in each property
  - More \$\$ for agencies!
  - More energy savings for CIP!

## 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



Source: [tweakyourbiz.com](http://tweakyourbiz.com); 2017

# Non-Profit Affordable Housing: Partnering for Success



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



Questions?





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Sr. Administrator

Energy Efficiency Programs

CenterPoint Energy

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***Thank you!***



***Thank You!***