

Delivering Energy Savings to Residents of Manufactured Homes

Presented by :

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- Rachel Krogman - Homes Program Manager

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Mission

WECC champions and delivers innovative energy initiatives that produce enduring economic and environmental benefits for all.

Working Toward a Common Goal

FINANCIAL SAVINGS:

\$85 million
in energy costs

TOTAL ENERGY SAVINGS:

16 million
therms of natural gas

630 million
kilowatt-hours of electricity

EQUIVALENT TO:

Eliminate
1.1 billion
POUNDS OF CO₂

Conserve
59.3 million
gallons of gasoline

Remove
110,296
cars from
the roads

Power
83,567
homes for one year

Who We Work With



powering lives



SOUTHERN MINNESOTA
MUNICIPAL POWER AGENCY



Manufactured Homes Overview

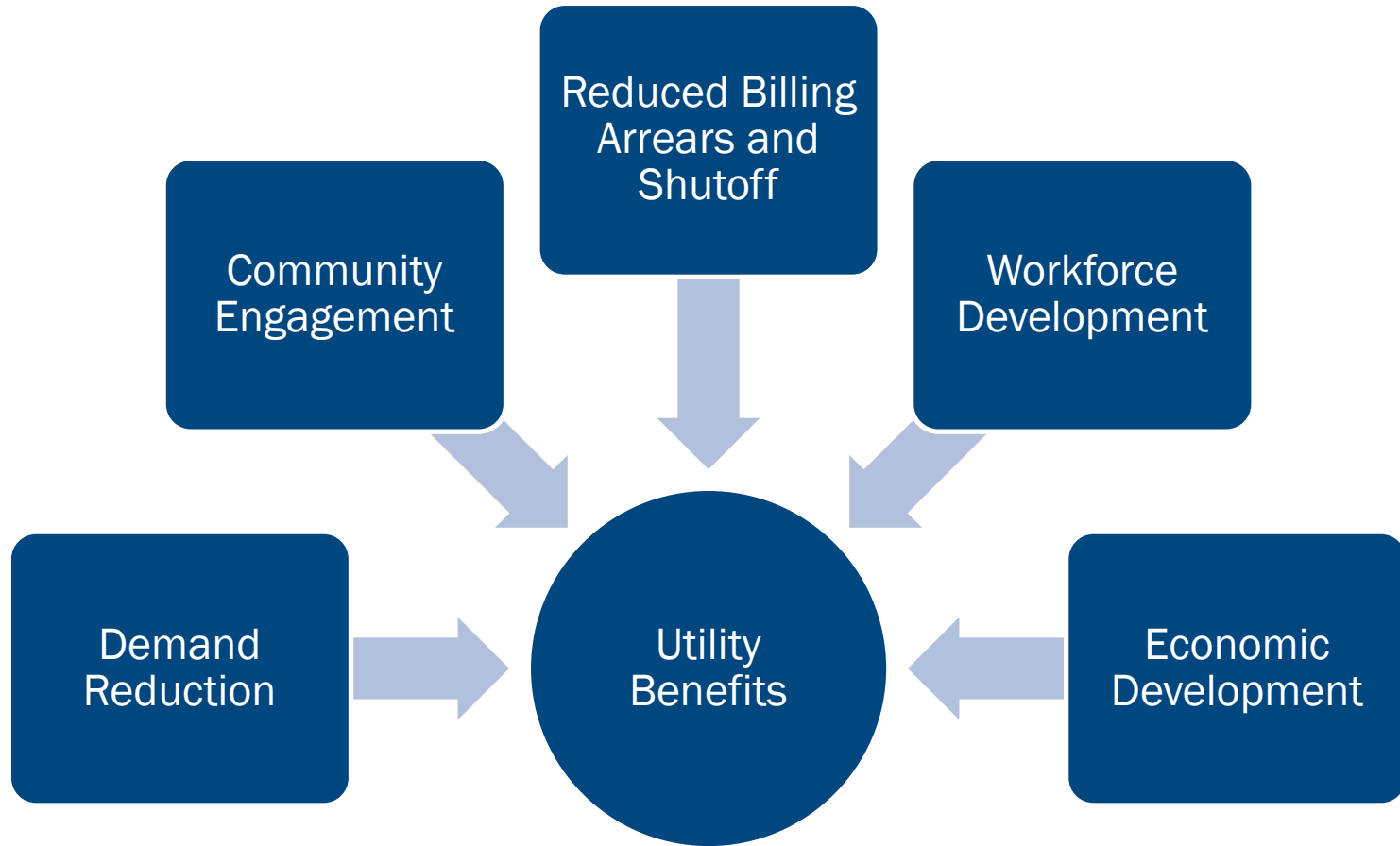
Definition: Single-story, constructed in a factory, wood-frame bolted to steel chassis, designed to be transported.



Why Target Manufactured Homes?



Benefits



Michigan Market Analysis

Regions	Total MH Homes	% MH Homes	Avg Age	Median MH Value	Average owner income	Average renter income
Eastern Upper and Northern Lower Michigan	39,910	10%	1978	\$43,450	\$42,983	\$23,586
Michiana Counties	13,088	8%	1972	\$33,700	\$50,010	\$26,456
Southeast Lower Michigan	98,274	4%	1982	\$28,300	\$52,569	\$32,829
Southwest Lower Michigan	87,713	7%	1979	\$39,700	\$48,059	\$26,679
Upper Central and Western Michigan	10,163	7%	1968	\$37,950	\$48,328	\$22,566
Statewide	249,148	5%	1980	\$35,900	\$49,729	\$29,090

Source: US Census Bureau American Community Survey State and Local Areas

Wisconsin Market Analysis

Regions	Total MH Homes	% MH Homes	Avg Age All Homes	Median MH Value	Median Owner Income All Homes	Median Renter Income All Homes
Southern Wisconsin	22,693	5%	1972	\$24,500	\$59,902	\$28,886
Southeastern Wisconsin	9,725	1%	1973	\$27,650	\$69,183	\$32,313
Northeastern Wisconsin	23,916	4%	1975	\$25,600	\$58,250	\$29,829
Northern Wisconsin	16,355	6%	1974	\$41,700	\$50,420	\$24,755
Western Wisconsin	23,305	6%	1975	\$29,500	\$58,085	\$28,518
Statewide	95,799	4%	1974	\$30,300	\$58,197	\$28,146

Source: US Census Bureau American Community Survey

Manufactured Homes Evolution

- **2015 Pilots**
 - Direct install with duct and air sealing
 - IOU and rural cooperative/muni utilities
 - Served both electric and gas providers

- **2016 – 2017 Program**
 - Production
 - Scalability



Direct Install Measures

- Interior lighting
- Low flow showerhead
- Kitchen aerator
- Bath aerator
- Water heater pipe wrap
- Duct sealing
- Belly insulation
- Exterior LED
- Water heater temperature adjustments
- ECM replacement
- Refrigerator replacement
- Air sealing

Marketing and Outreach



EFFICIENCY. SAVINGS. COMFORT.

SEMCO ENERGY Gas Company and Energy Optimization are joining together to offer a special Manufactured Homes Program at no cost to eligible customers.

A professional, trained contractor will come to your home to:

- Test and seal your home's heating and cooling system ductwork
- Install up to 10 Compact Fluorescent Light Bulbs
- Install water- and energy-saving items

Plus, provide valuable information on how to save energy along with energy-saving ideas. All work completed in a quality manner in one day or less, at no cost to you.

Act now! This offer is available for a limited time. Contact the Energy Optimization program to sign up for this special program. Call 877.296.4319 today.



CONGRATULATIONS!

WITH THE HELP OF FOCUS ON ENERGY'S MANUFACTURED HOMES EFFICIENCY PILOT PROGRAM, YOU WILL IMMEDIATELY BEGIN SAVING WATER AND ENERGY.

The following efficiency measures were completed in your home today:

WHOLE-HOME ENERGY AUDIT

We evaluated your home to assess how much energy it uses, and which measures will be most effective in making your home more energy efficient.

BLOWER DOOR AND DUCT LEAKAGE TESTING

Air leakage in your home can increase heating and cooling costs by more than 30 percent, and can contribute to comfort, health, and safety problems. We tested your home to evaluate the rate at which air leaks to the outside, as well as how much air leaks

INSTALLATION OF:

CARBON MONOXIDE DETECTOR

Carbon monoxide is a deadly gas which is without the use of an electronic detecting device. We installed a carbon monoxide detector to protect your family from this colorless, tasteless, odorless gas which can develop from sources such as gas water heaters, blocked chimneys, or open fireplaces. Please refer to the product manual for operating instructions.

CFL AND LED BULBS

The incandescent (traditional) light bulbs in your home were replaced with highly efficient compact fluorescent (CFL) and light-emitting diode (LED) bulbs. CFLs use about 70 percent less energy than incandescent bulbs and LEDs last up to 25 times longer than incandescent bulbs they replaced.

FAUCET AERATORS

We installed water-saving aerators on your faucets. Aerators limit the flow of water through the faucet while mixing the water with air, but don't worry—your water pressure will remain the same (or increase). Aerators use only 1.5 gallons of water per minute, 81 percent less water goes down the drain.

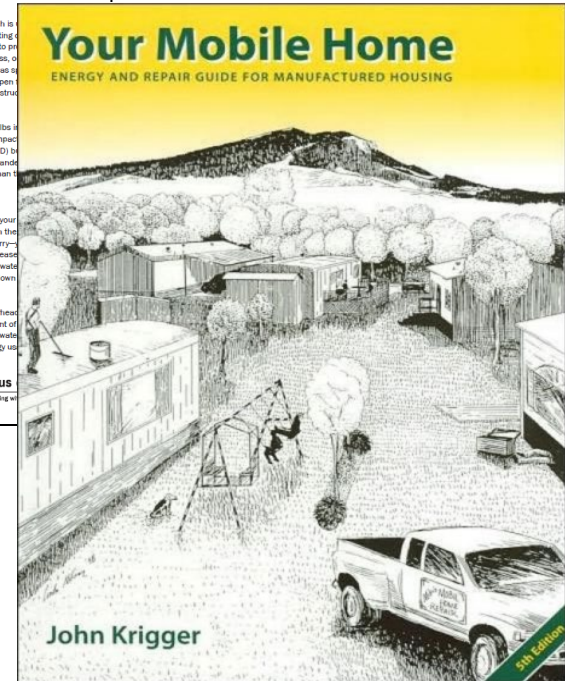
SHOWERHEAD

We installed a low-flow showerhead in your bathroom while limiting the amount of water used. Low-flow showerheads use only 1.5 gallons of water per minute, 81 percent less water goes down the drain—reducing your energy costs.



focus

Partnering with



EFFICIENCY. SAVINGS. COMFORT.

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ACT NOW! This offer is available for a limited time.

A professional, trained contractor will come to your home to:

- ✓ Test and seal your home's heating and cooling system ductwork
- ✓ Install up to 10 Compact Fluorescent Light Bulbs
- ✓ Install water- and energy-saving items

Contact the **Energy Optimization** program to sign up for this special program:

Call: 877.296.4319 Email: info@michigan-energy.org

OR provide contact information here:

Name: _____

Address: _____

City: _____

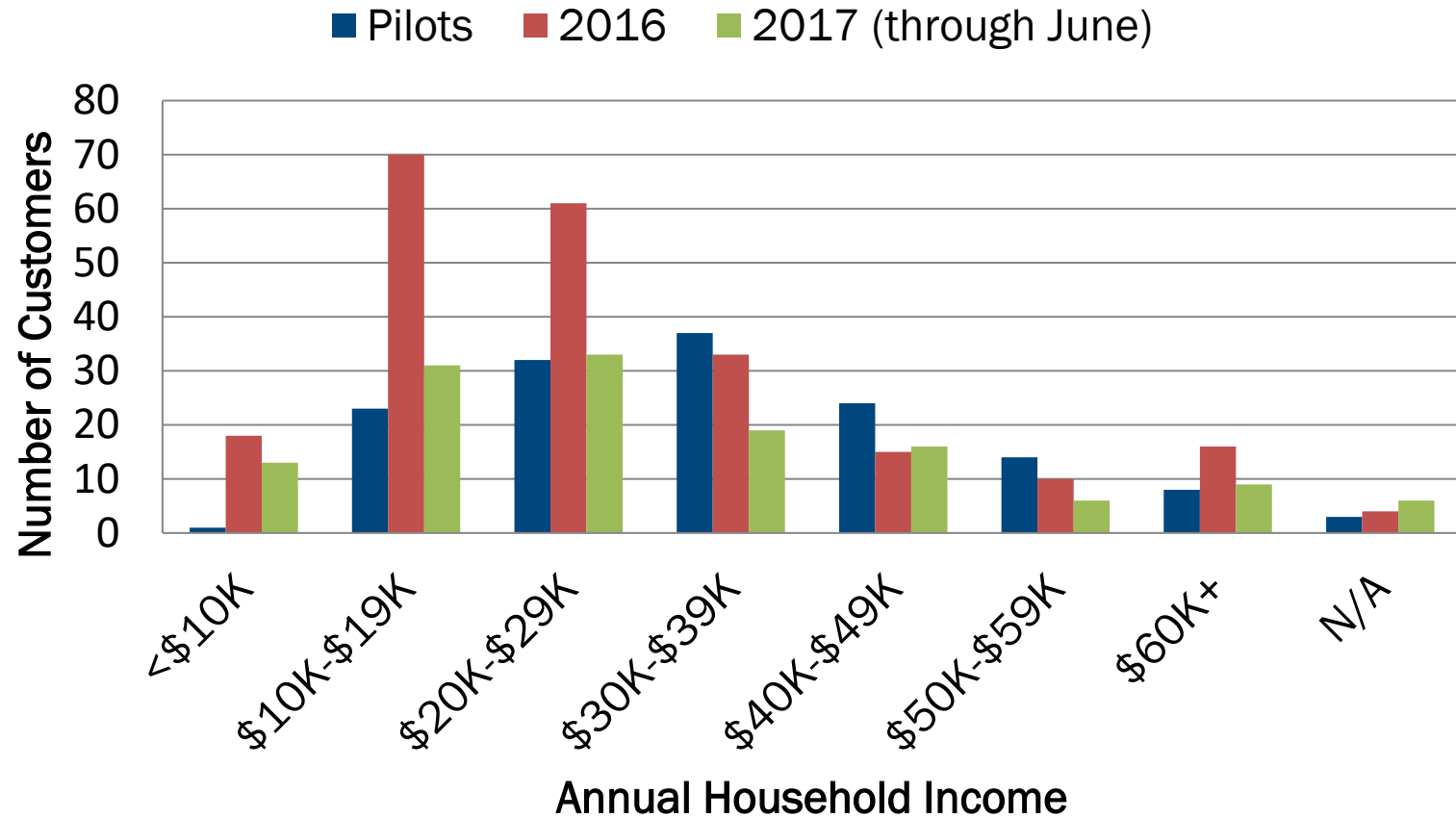
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Daytime Phone: _____

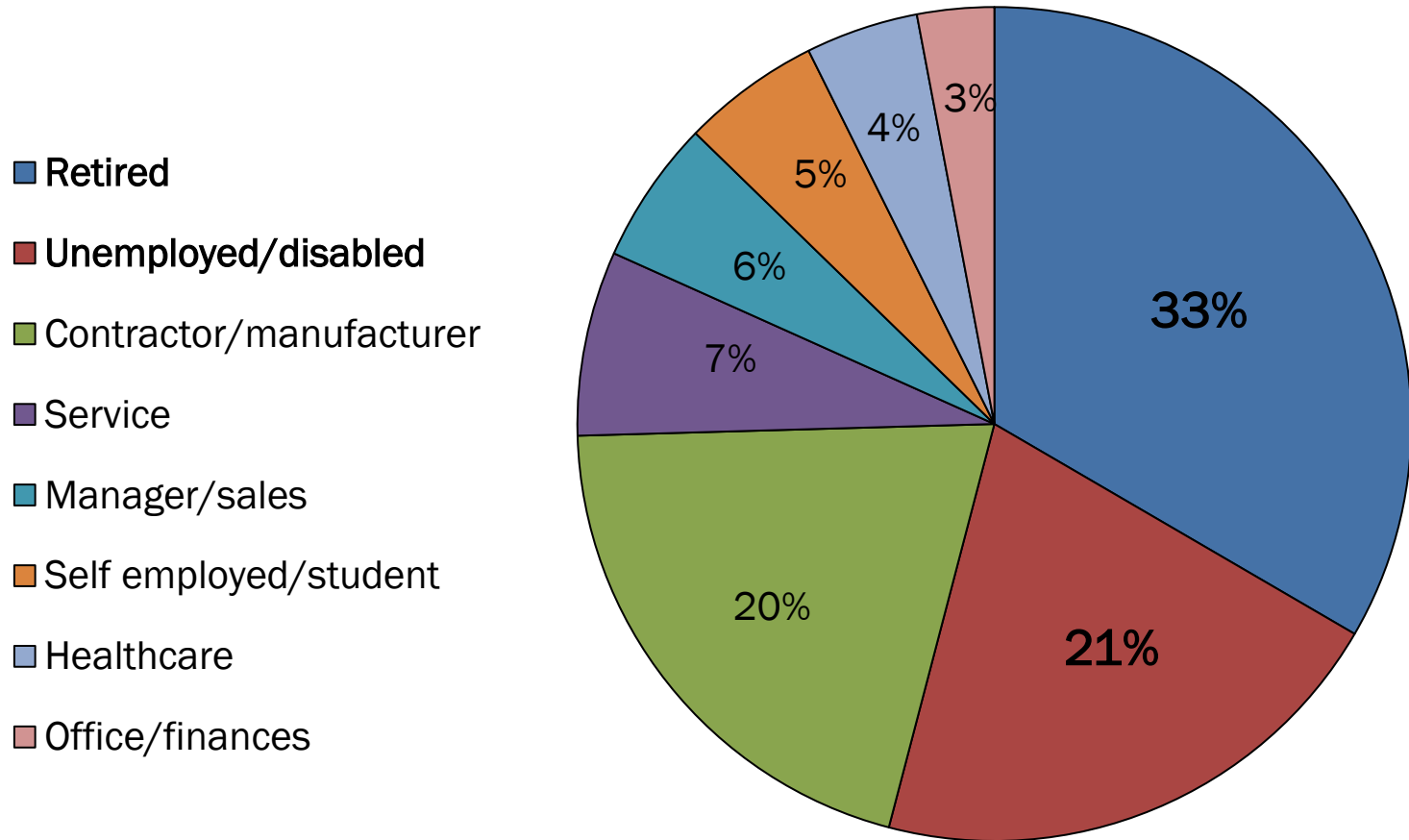
Email: _____



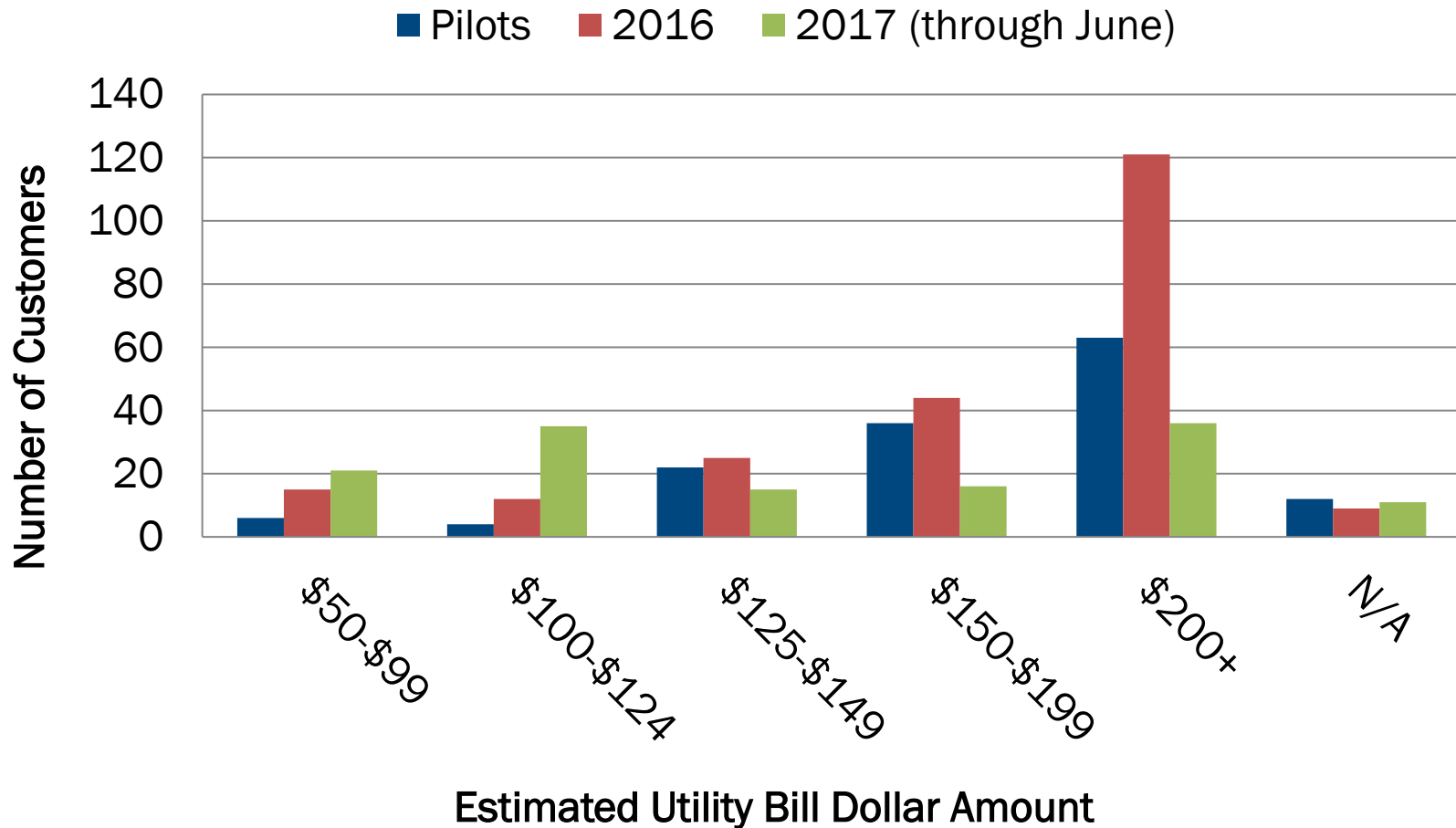
Low Income Customer Base



Head of Household Occupation

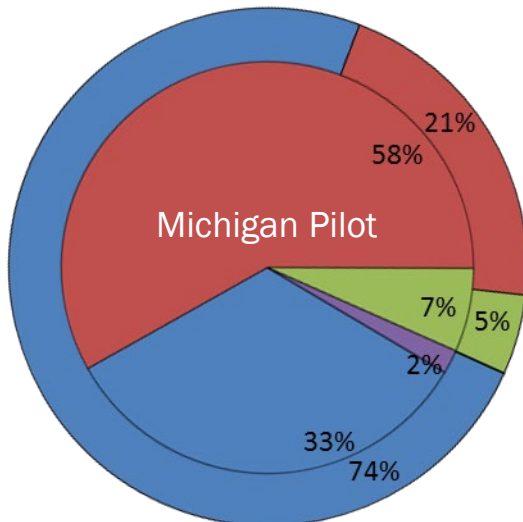


High Utility Bill Perceptions



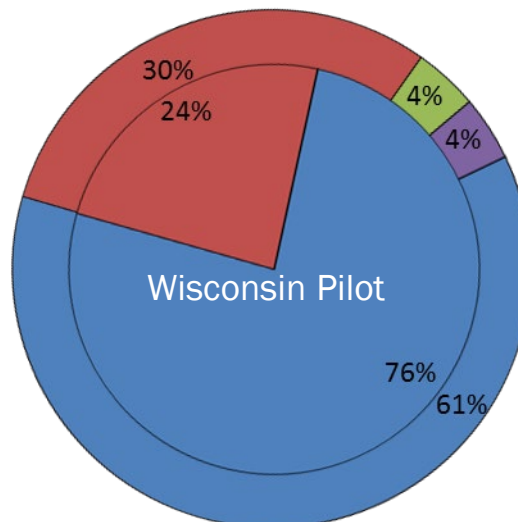
Water Heating

Michigan



RECS 2009, MI

Wisconsin



RECS 2013, WI

- Natural Gas
- Electric
- Propane
- Other

Contractor Training

Award-winning Services

Below are building performance-related awards WECC has recently been honored to receive:

- 2013 Energy Center of Wisconsin Educator of the Year Award (Robert Parkhurst)
- 2012 ENERGY STAR for Homes Leadership in Housing Award
- 2011 ENERGY STAR Sustained Excellence Award
- 2011 ENERGY STAR for Homes Leadership in Housing Award
- 2011 Energy Center of Wisconsin Educator of the Year Award (Bob Pfeiffer)
- 2011 U.S. Department of Energy National Weatherization Recognition Award
- 2009 U.S. Department of Energy National Weatherization Recognition Award



TEST CENTER



WECC has trained more than 5,000 energy professionals over the past five years.



Robust In-Field Testing



Pre-Work Images



Post-Work Images



Pre-work Images



Field Operations Assistant



Post-work Images

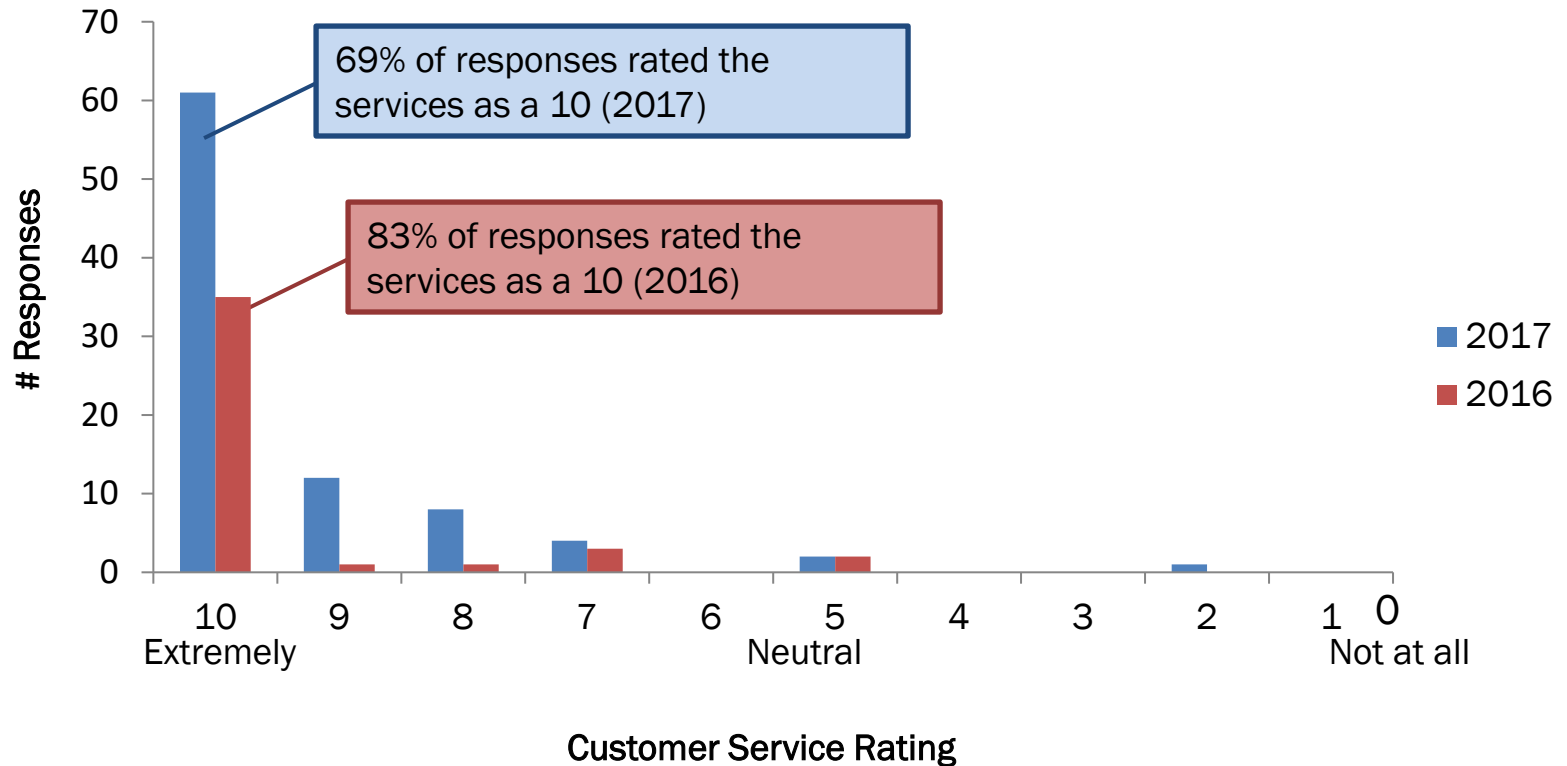


Post-work Images



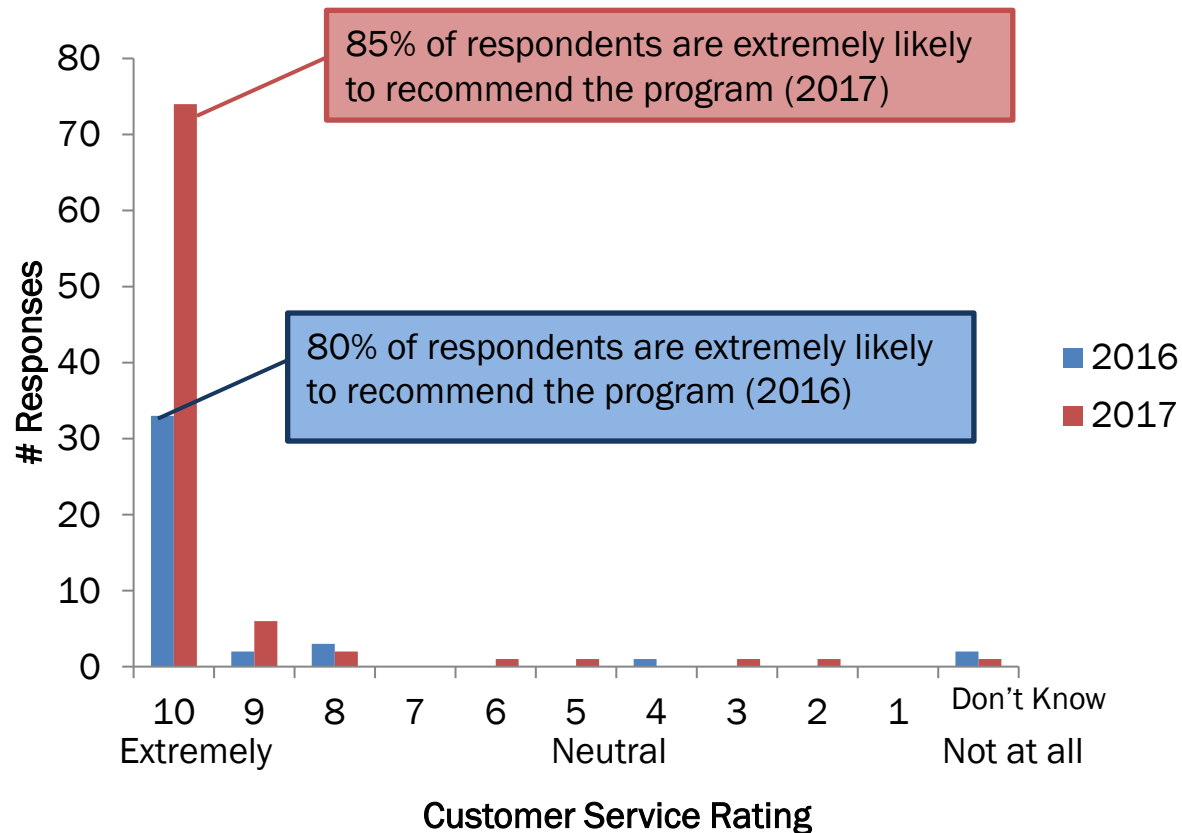
Overall Program Satisfaction

Question: Overall, how satisfied are you with the Manufactured Homes Program services?



Satisfaction: Recommend to Others

Question: How likely are you to recommend the Manufactured Homes Program to others?



2015 Pilot Customer Feedback

- “My furnace doesn’t run so much, and the heat seems to be more evenly spread out.”
- “I keep the heat set at 68 degrees and the house feels warmer.”
- “Instant relief from the dust and cold.”
- “Much warmer with the heat turned down.”
- “The new showerheads they put in are nice.”
- “Bills went down!”

94% Satisfied or Very Satisfied with the pilots!

2016 Program Responses on Satisfaction

"It was wonderful! I appreciate all the leaks and repairs that were fixed for free. Its so nice to be warm again. Before there was always draft & dampness."

"More than I ever thought it would be. Needed fridge, checking prices. Awesome :)"

*"This was very helpful and
THANK YOU MUCH. :)"*

"Just keep doing what your doing with your program, its greatly appreciated"

"They were friendly and we appreciate the new lights and shower heads and the energy savings we will experience."

"They were fast and efficient, did great work"

Sept 29, 2016

Hello my Name is Bernice Klingler
God Bless you People: I had to men come
to my home around 8:30 From Fremont Mich
Thank you and thank them for what they
did to my home for me. Please tell the
young man, I just loved him. God Bless you
son, you made my Day, I had my Grandson
home with me for the day - you were him and
God should me. David was ok and happy for
me to go on and I'll be home with him soon
I thank you son. We need more men like you
your Uncle is a good man to always
remember you are loved Keep up the Good
work, as for me Please give them a 10 for
me and tell them, Thank you again
for me.

Troy - Jake

These Boys are
from Fremont
Mich

Please Be sure
they can read this
letter. Thank
You.

God Bless you
all

Bernice Klingler
3162 W. Monroe Rd
LOT 53
Hart Mich 49420



2017 Program Responses on Satisfaction

"This program is an answer to prayer! Thank you for this service. The person who came out was very informative and respectful and efficient. She was someone who knew her job and did it well."

"Everything that was performed was explained professionally & precise. Extremely happy with all of the installations & tests performed. Your employee was very kind, polite and professional."

"They did everything allowed for the program, and I know that's going to help with my electric bill."

"I can't thank you enough for this wonderful service! I love the new showerhead, aerators, and bulbs. I really am glad for this service!"

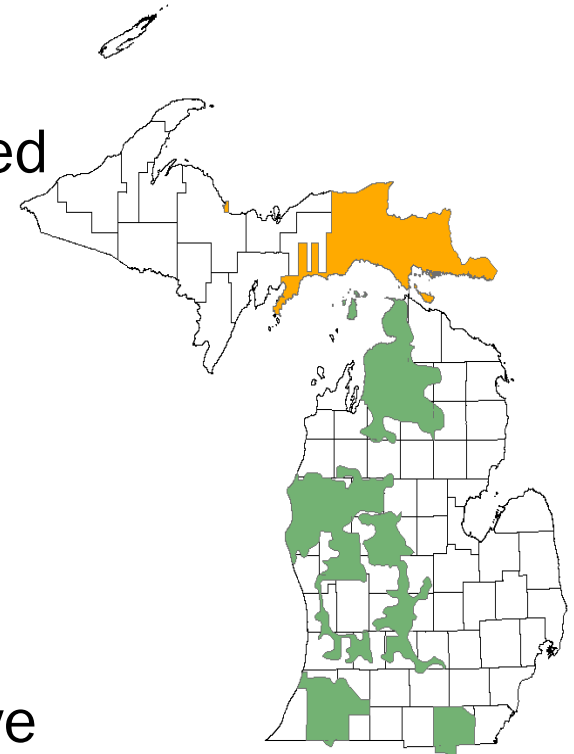
"I think this is a wonderful program, especially for people like me with low income."

Results

	Michigan Pilot	Wisconsin Pilot	Michigan Program (2016-June 2017)
Participants	63	79	364
No Duct Sealing	5	2	110
Avg. kWh/home	664 kWh	503 kWh	1,212 kWh
Avg. therms/home	152 therms	21 therms	67 therms

Michigan Production Program

- Lesson's learned/items adopted into program design:
 - Truly underserved market and great need
 - No income eligibility requirements
 - No cost to customer
 - Air sealing and duct sealing to reduce overall heating and cooling fuel consumption
 - The leakiness of ducts in these homes carries a huge potential for cost-effective energy savings



Current Manufactured Homes Program Approach

Customer-Focused Program



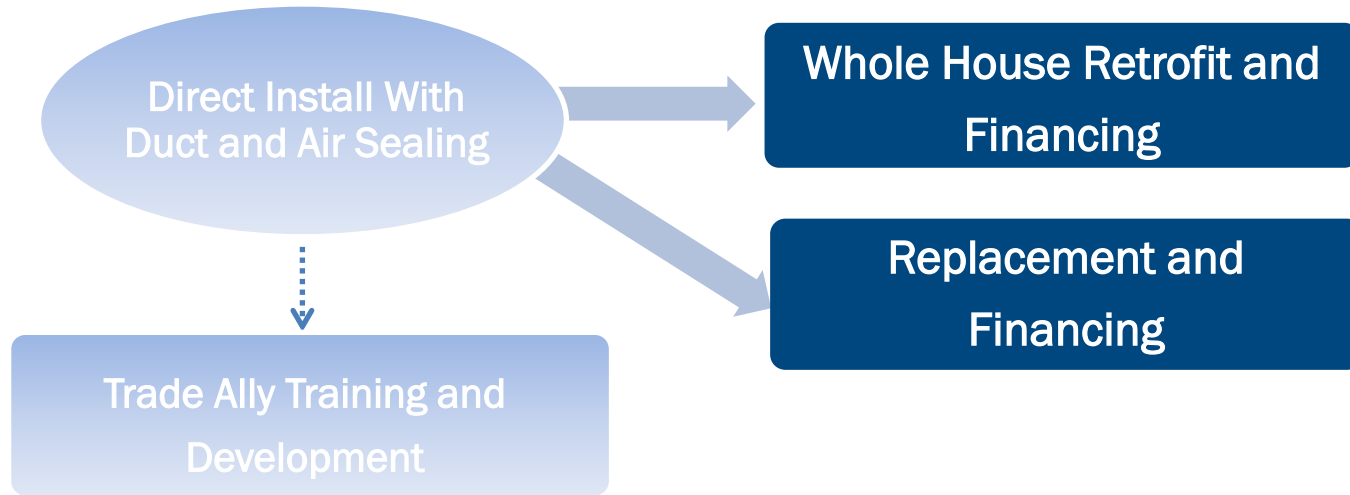
Direct Install With
Duct and Air Sealing

Trade Ally Training and
Development



Future MH Program Approach

Customer-Focused Program



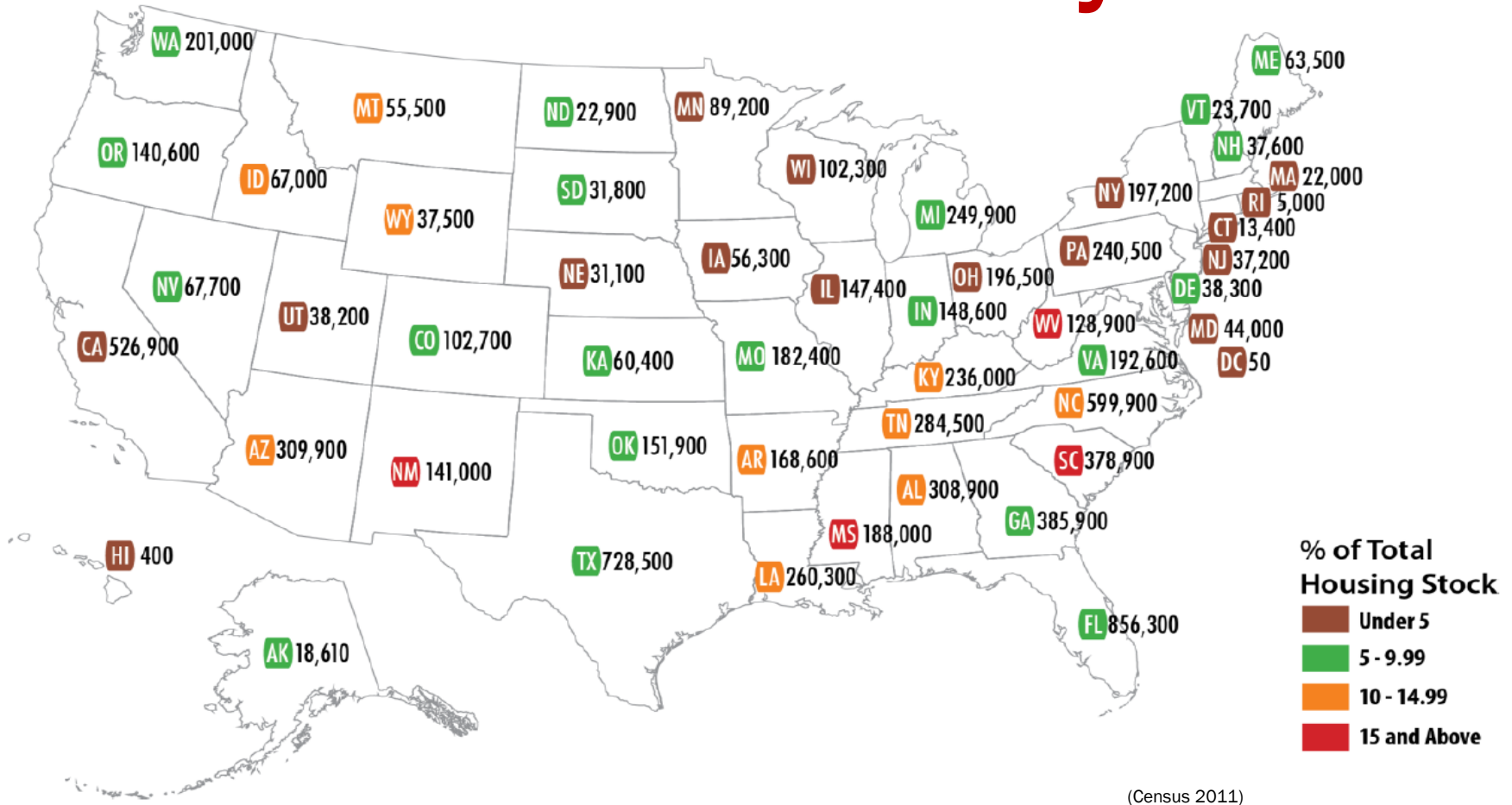
Retail/Wholesaler Program

Distributor Refurbishment

Program Design

- Customize program design to meet client/utility needs
- Target older homes and high energy users
- Electric & Gas partnership for full savings potential
- Contractor training & QA/QC very valuable
- Streamlined customer process
- Potential financing integration next phase

Manufactured Homes by State



Source: Moody's Economy.com

Questions?

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