



Trade Ally Forum  
April 13, 2017



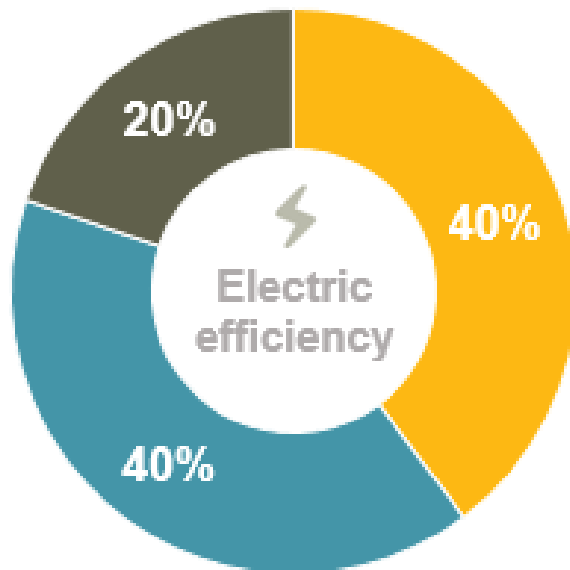
# 2016 in Review; Looking to 2017 and Beyond

Michael Colgrove  
Executive Director

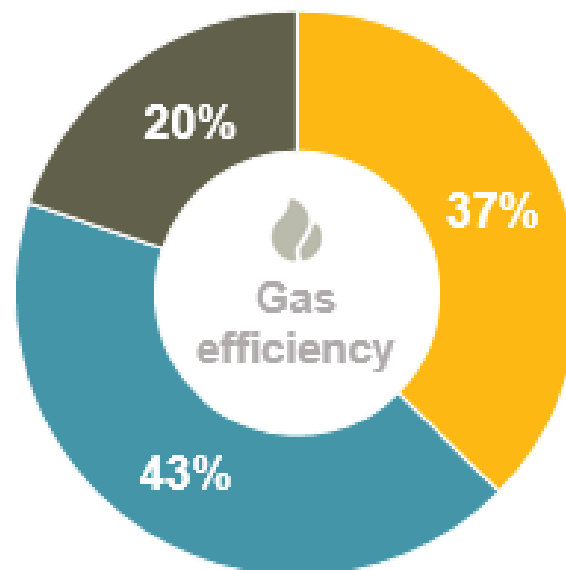


# 2016 Savings and Generation Results

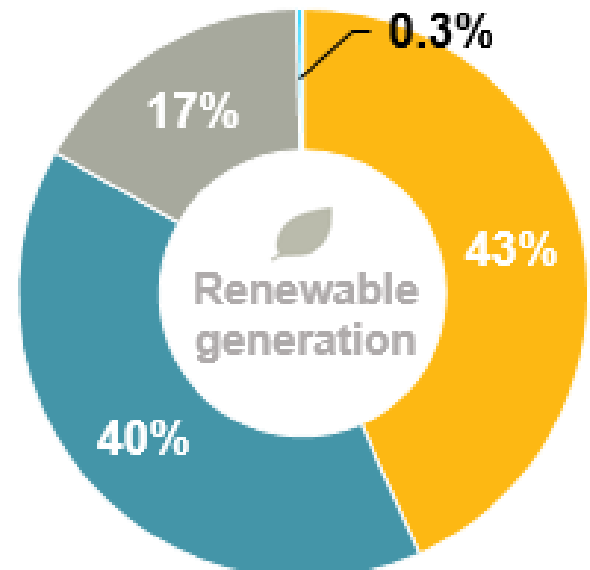
- ✓ Exceeded all 2016 savings goals
- ✓ Record 1,200 customer-owner residential solar systems



■ = Residential  
■ = Commercial  
■ = Industrial

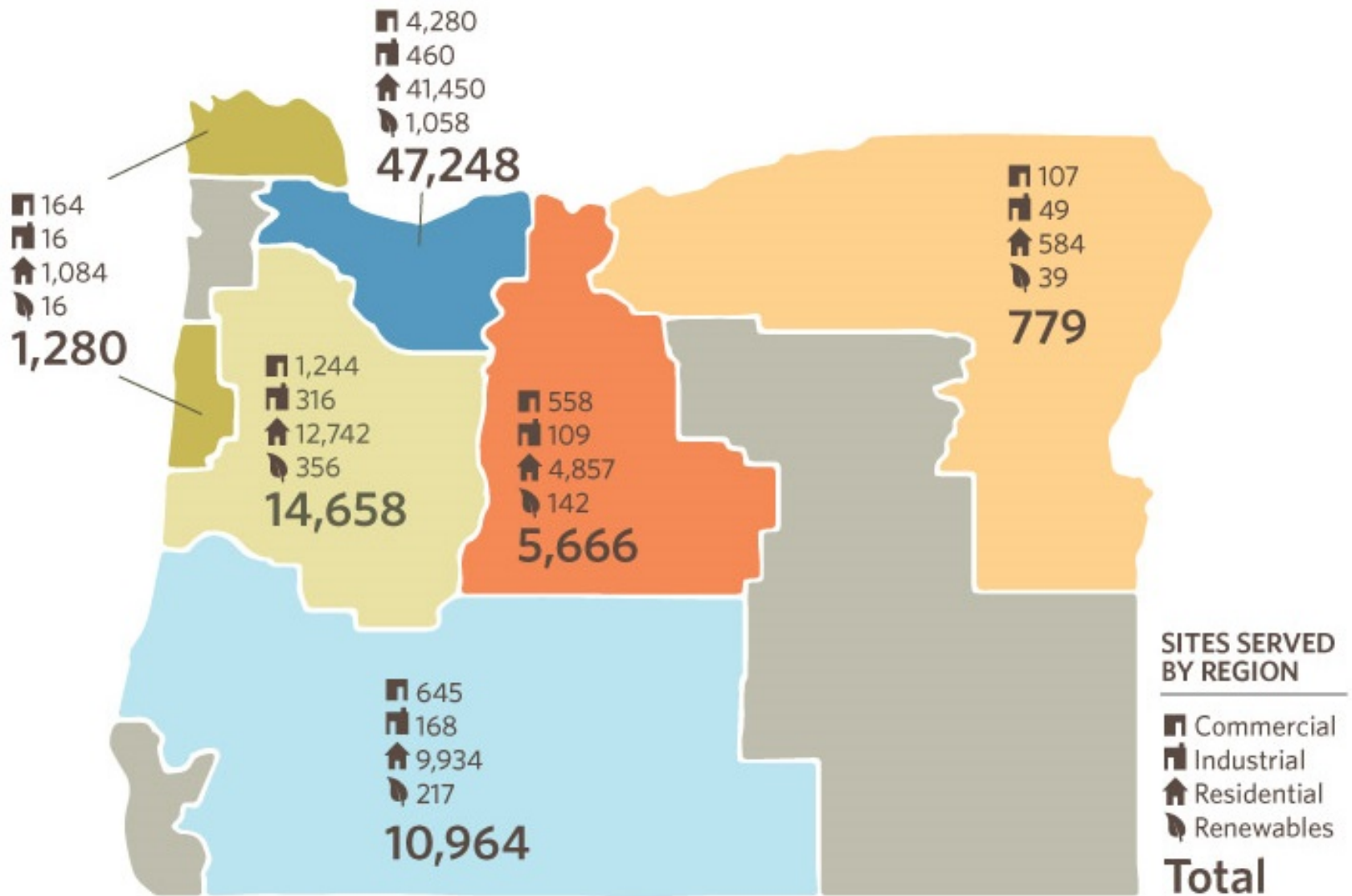


■ = Residential  
■ = Commercial  
■ = Industrial



■ = Residential solar  
■ = Commercial solar  
■ = Custom solar  
■ = Other renewables

# 2016 Sites Served







# Southern Oregon: 2016

- Approx. sites served:
  - 10,000 residential
  - 800 business
- \$9.6 million in cash incentives delivered
- \$3.7 million in customer bill savings from projects installed last year



# Strength of the Trade Ally Network

- Contractors employed and working on Energy Trust projects reached 12,400
- Trade allies bring in more projects, energy savings and generation
- Higher quality of work
- \$382,000 in business development funds delivered in 2016
- Connecting contractors with customers

# 15 Years of Affordable Energy

**600,000**

Sites transformed into energy efficient, healthy, comfortable and productive homes and businesses

**10,000**

Clean energy systems generating renewable power from the sun, wind, water, geothermal heat and biopower

**\$5.6  
billion**

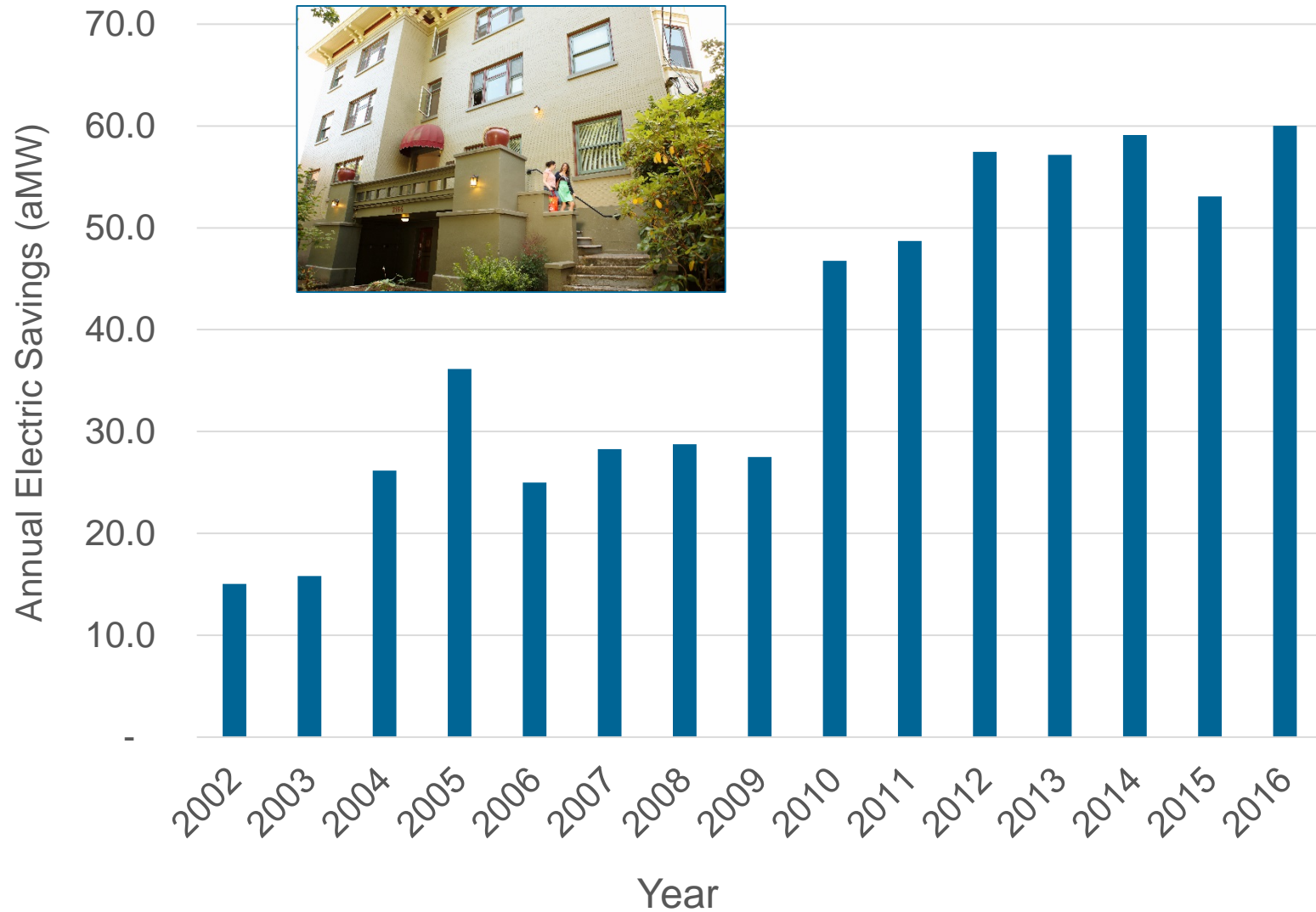
In savings over time on participant utility bills from their energy-efficiency and solar investments

**\$3**

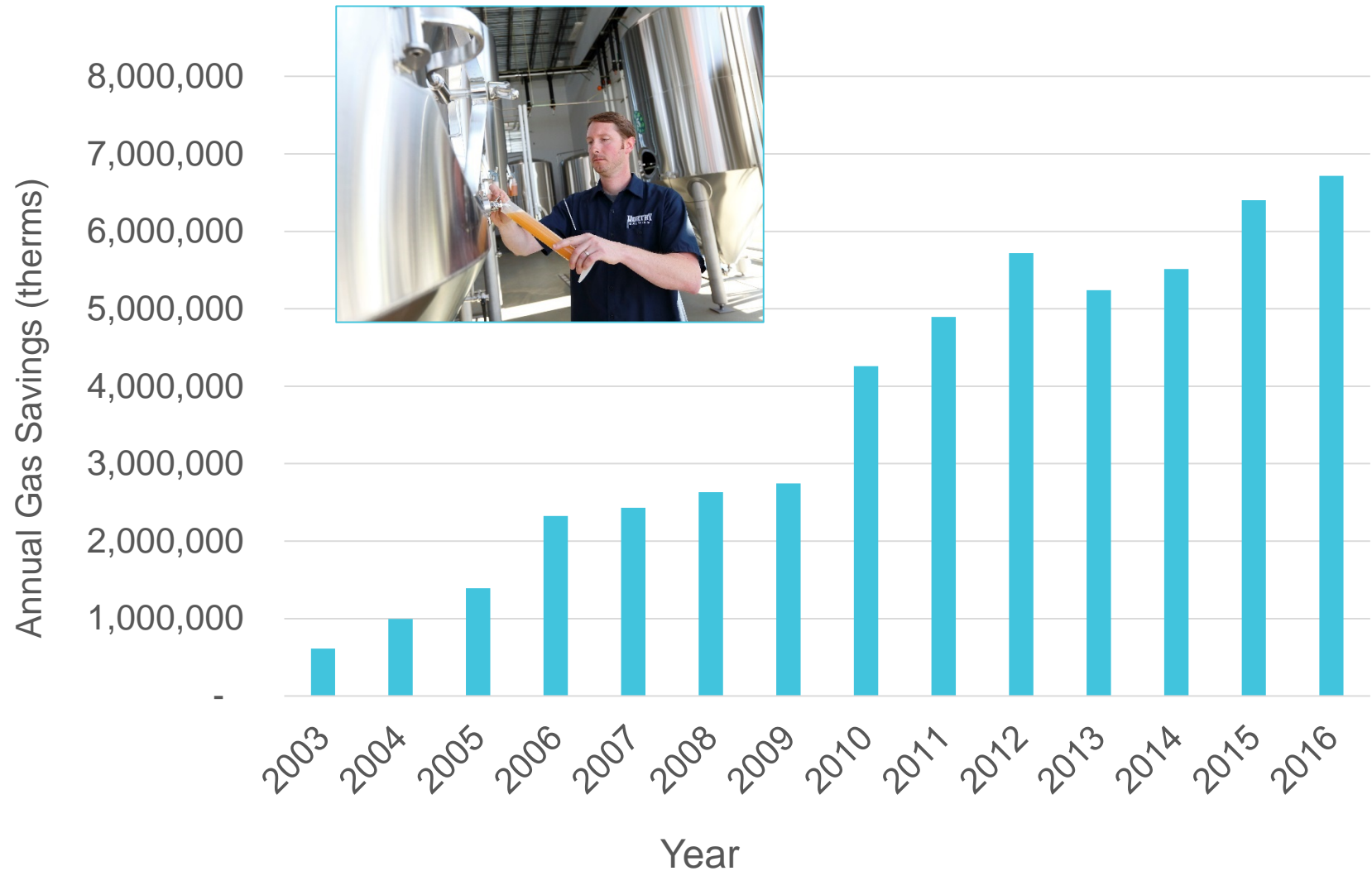
Saved by customers for every \$1 spent on efficiency by Energy Trust



# Energy Trust Annual Electric Savings (Net)

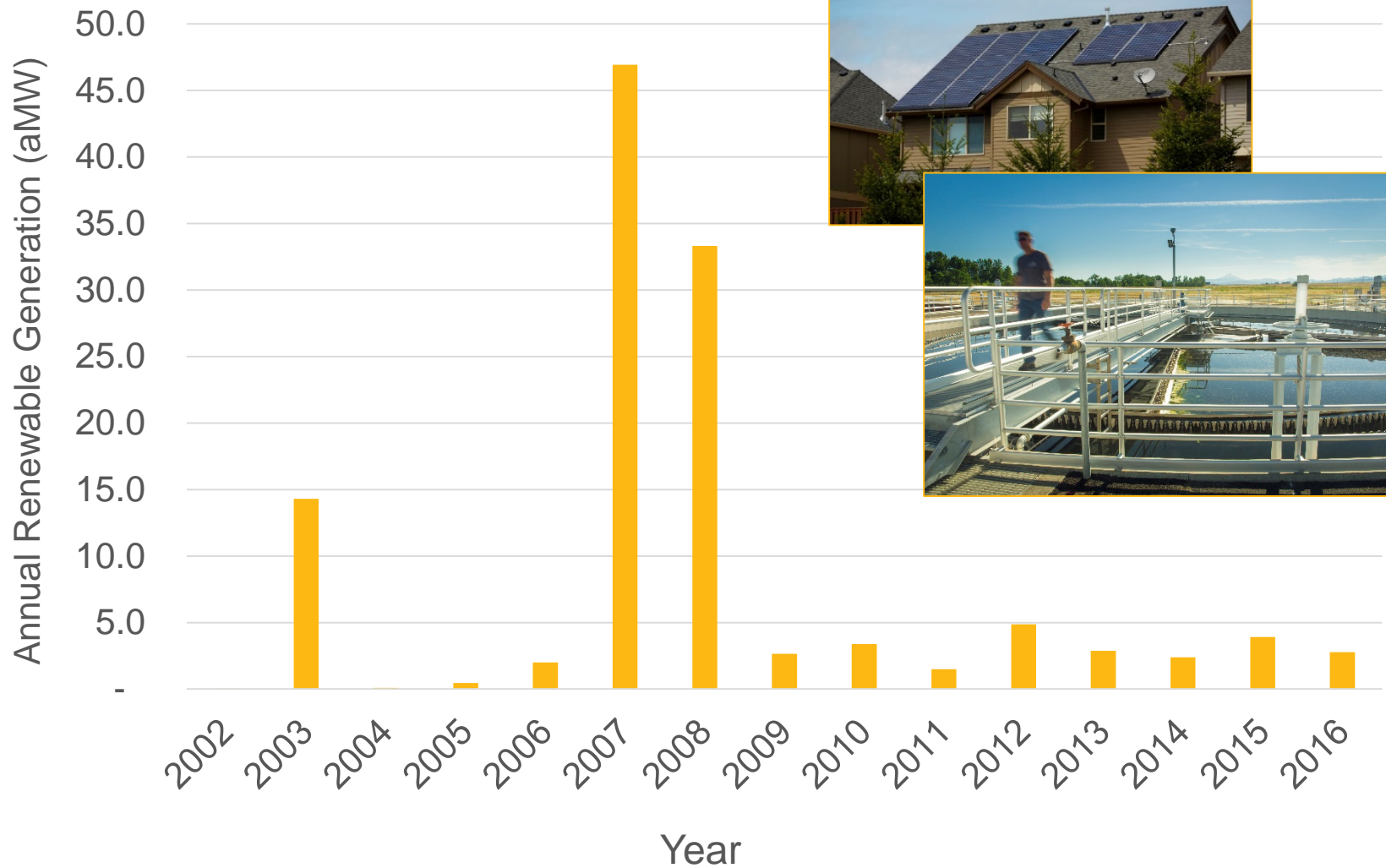


# Energy Trust Annual Gas Savings (Net)





# Energy Trust Annual Renewable Generation



# Opportunities Going Forward

# Vision for Energy Trust

## Flexible

able to provide value to  
multiple state and local efforts

## Reliable

recognized as a valuable  
asset to a greater variety  
of partners

## Diverse

representative of  
Oregon's population

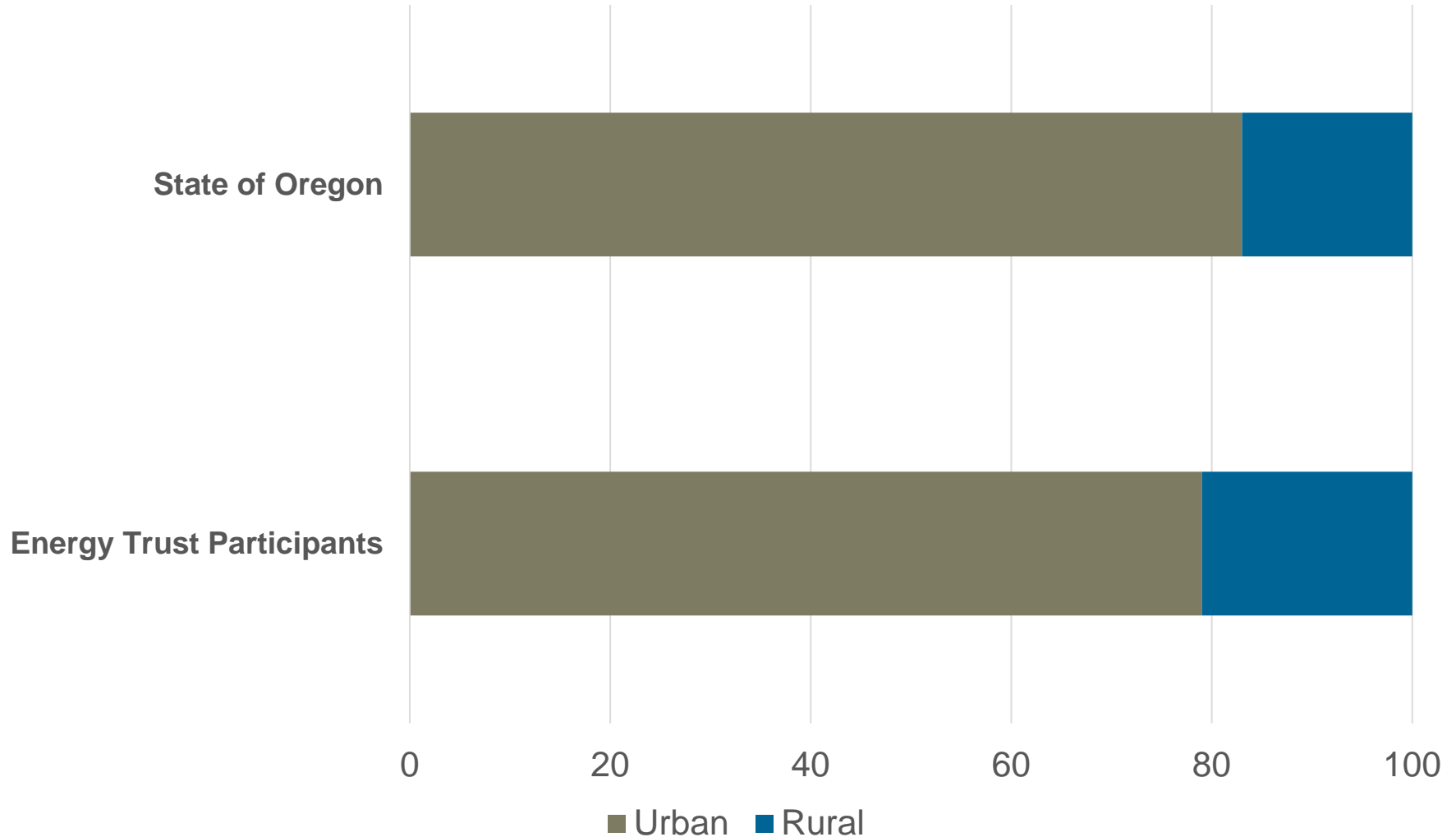
## Resilient

able to thrive with change

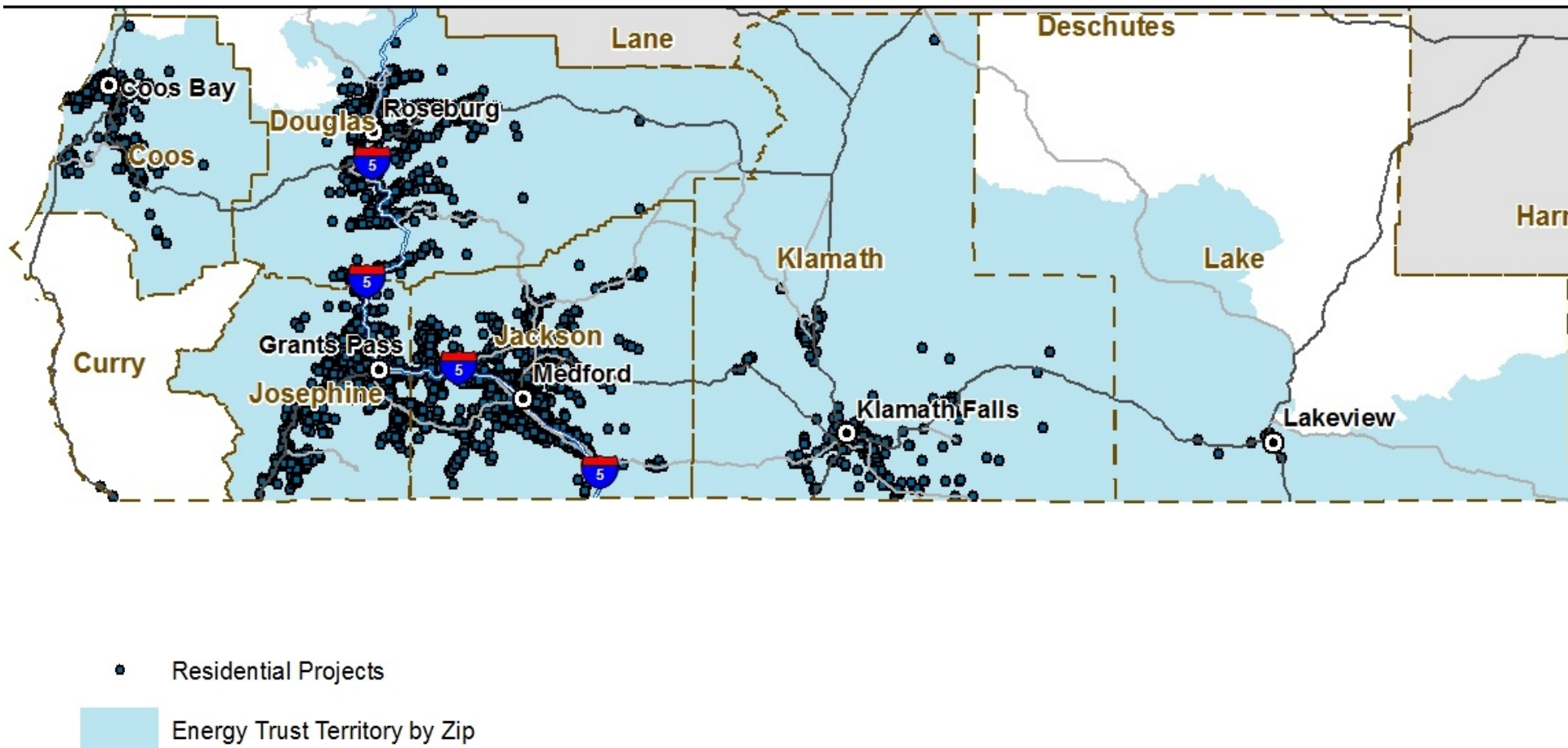


# Underserved Markets

## Urban vs. Rural Participant Comparison

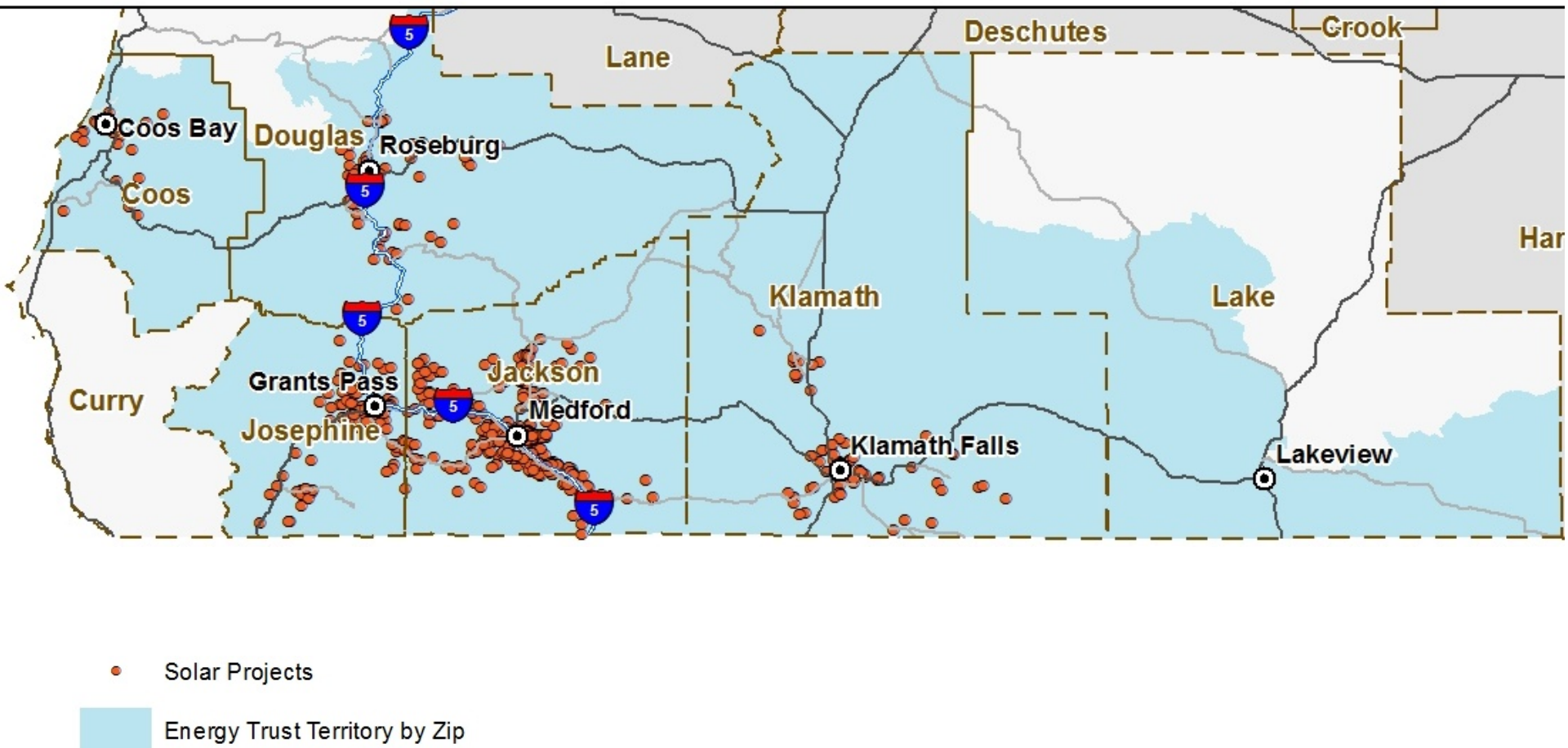


# Residential Projects 2012-2016

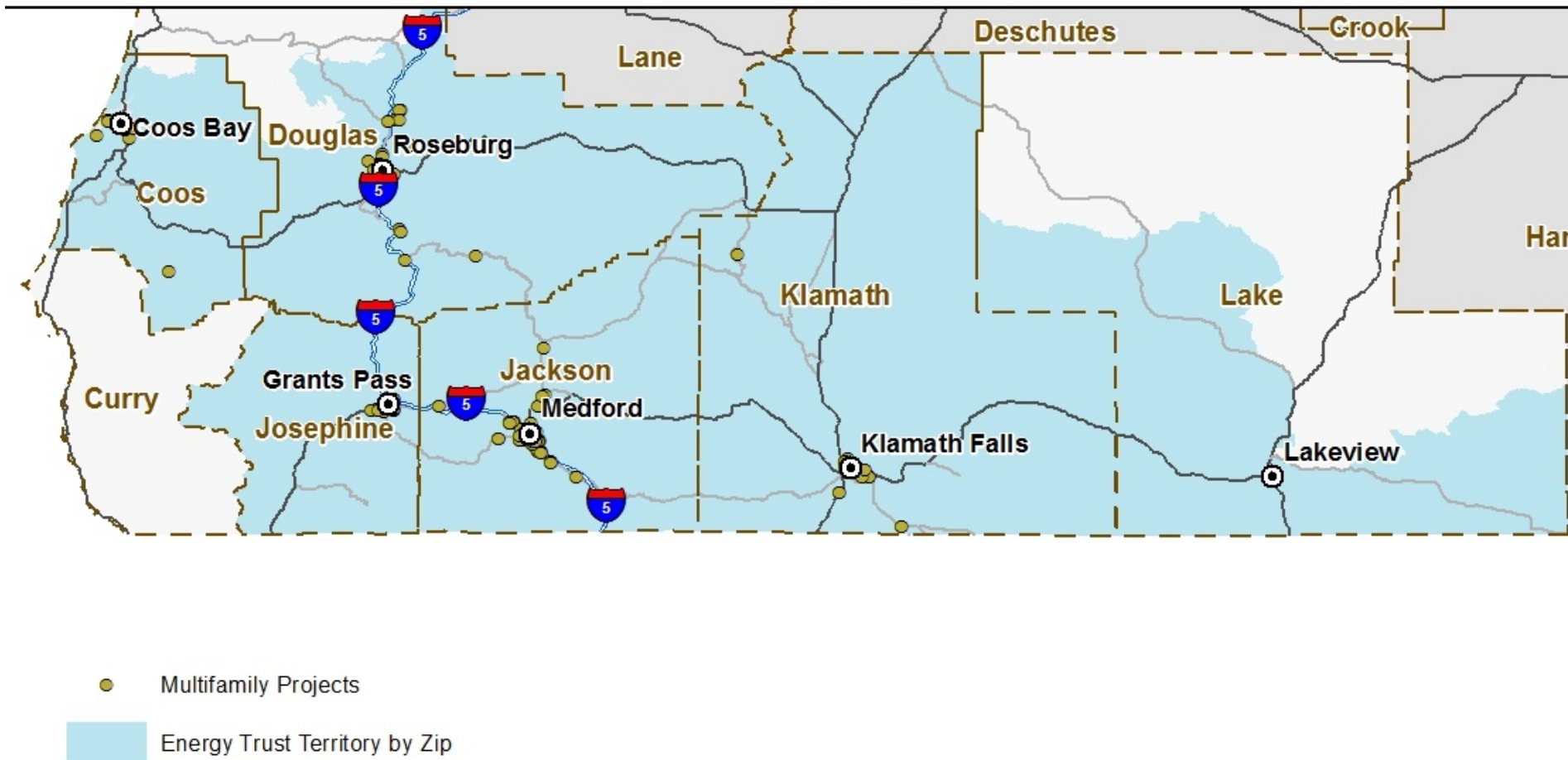




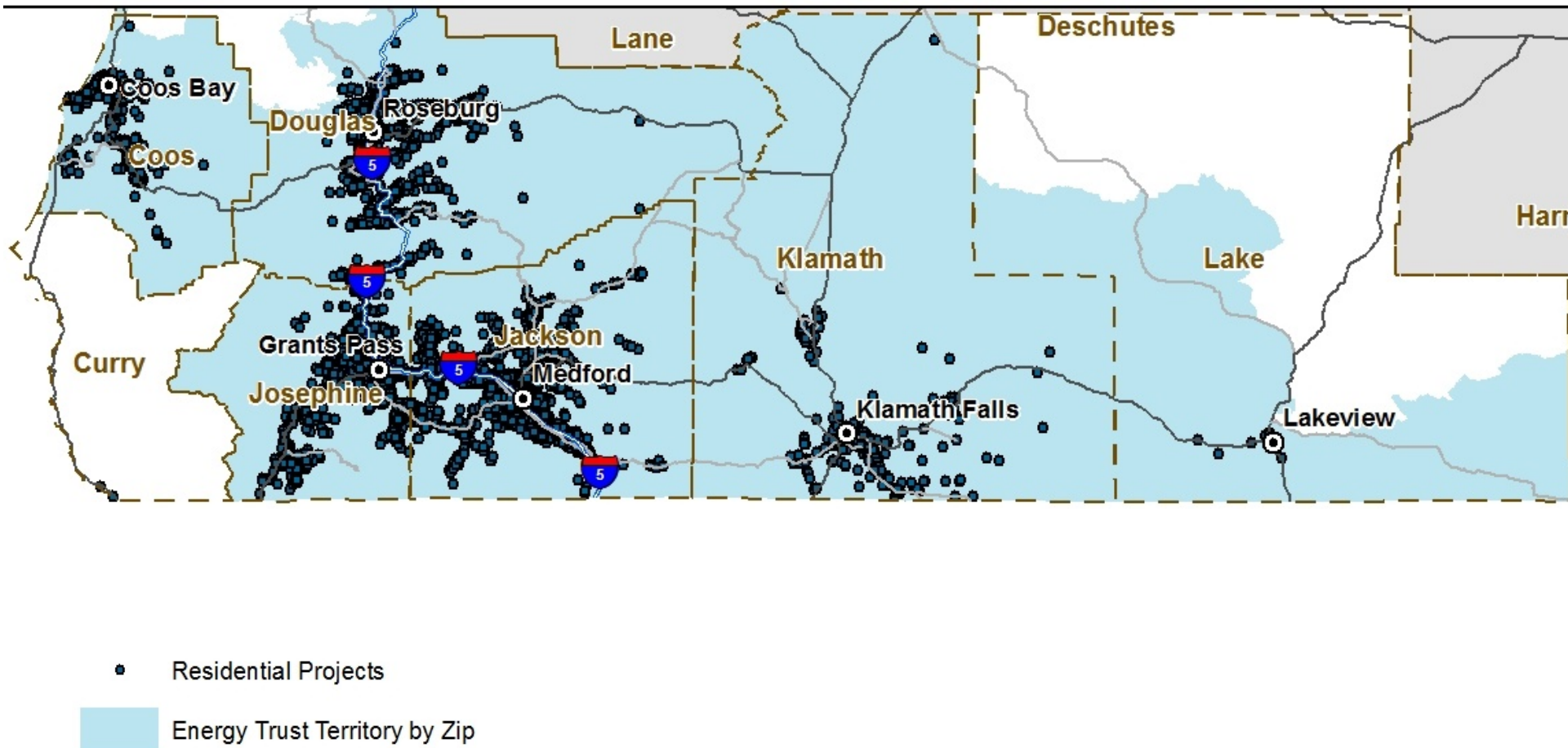
# Solar Projects 2012-2016



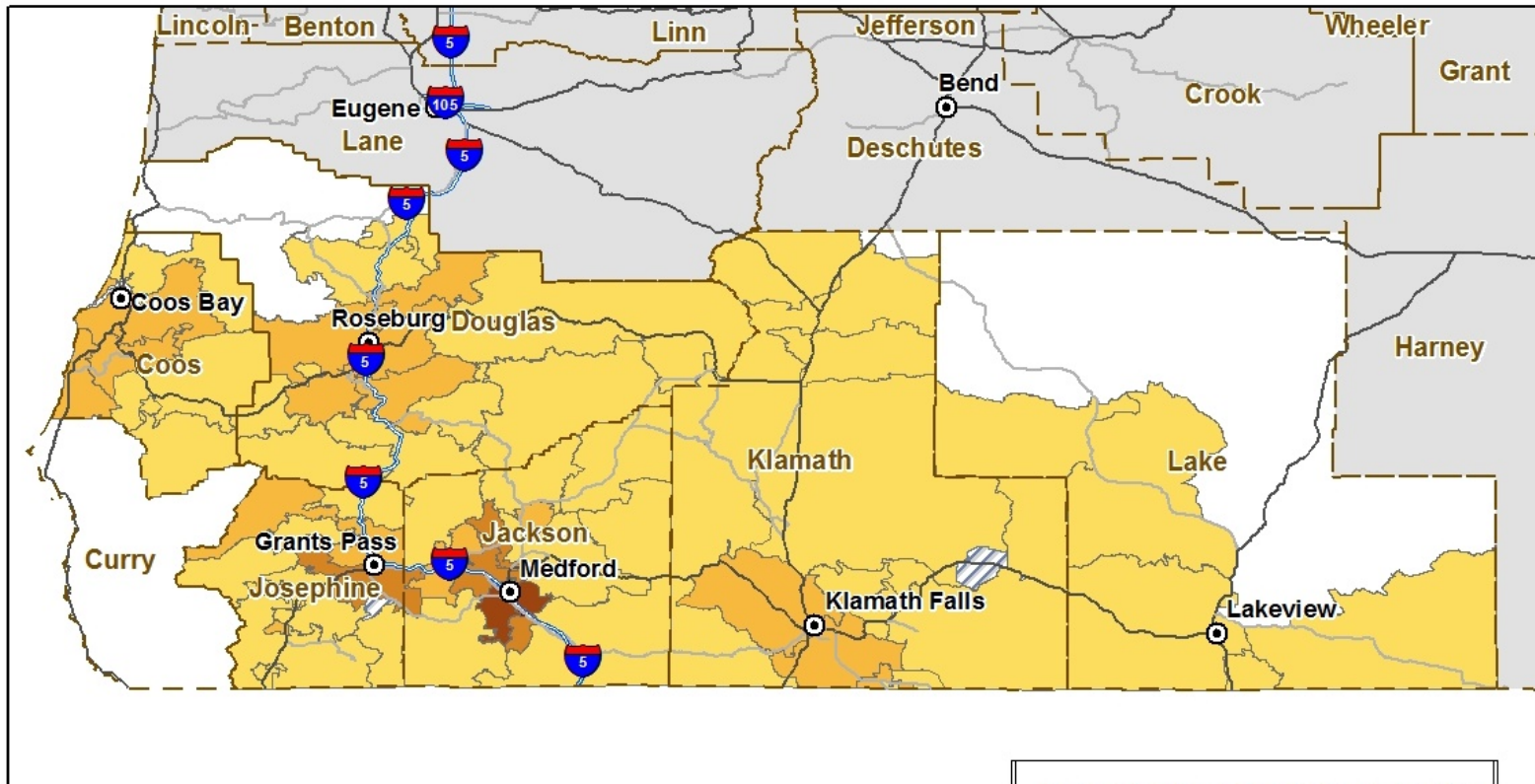
# Multifamily Projects 2012-2016



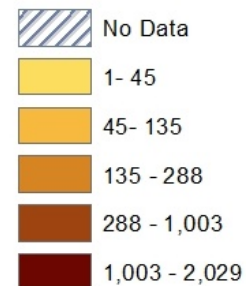
# Residential Projects 2012-2016



# Southern Oregon 2015 Population Density



## Population Density by Zip



Source: 2015 U.S. Census



# Residential Energy Efficiency Impacts

The following measures are expected to be impacted by the Residential Energy Tax Credit expiration:

- Direct-vent gas fireplace
- **Ductless heat pump**
- **Gas furnace**
- **Heat pump**
- Heat pump water heater
- **Tank gas water heater**

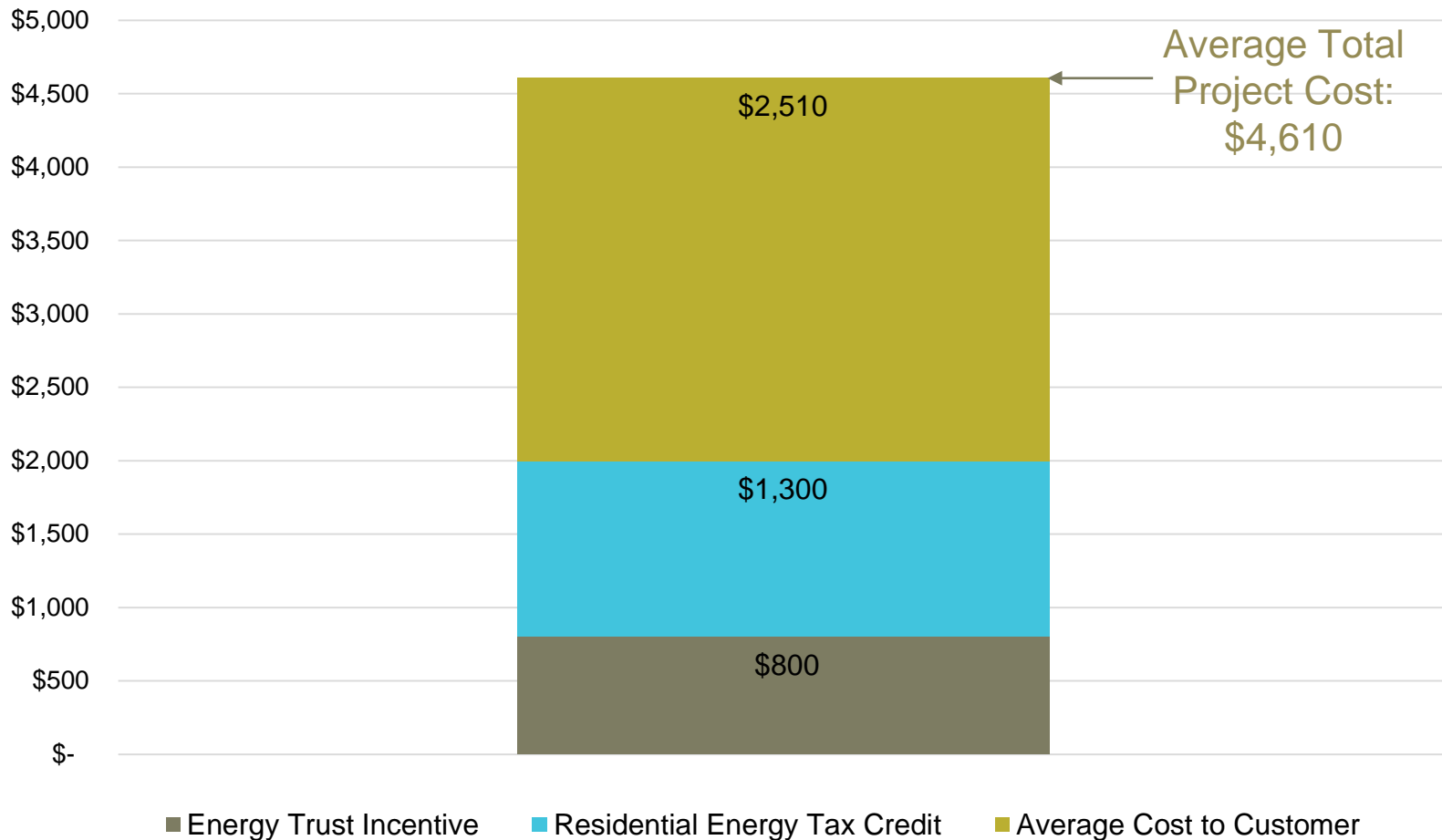
\* **Bold** denotes measures most impacted





# Example Project Cost

## Average Ductless Heat Pump Equipment and Installation Cost



# Thank You

Michael Colgrove, Executive Director  
[michael.colgrove@energytrust.org](mailto:michael.colgrove@energytrust.org)







**OREGON**  
DEPARTMENT OF  
**ENERGY**



# Residential Program Results and Trends

Eric Koch

# 2016 Program Results

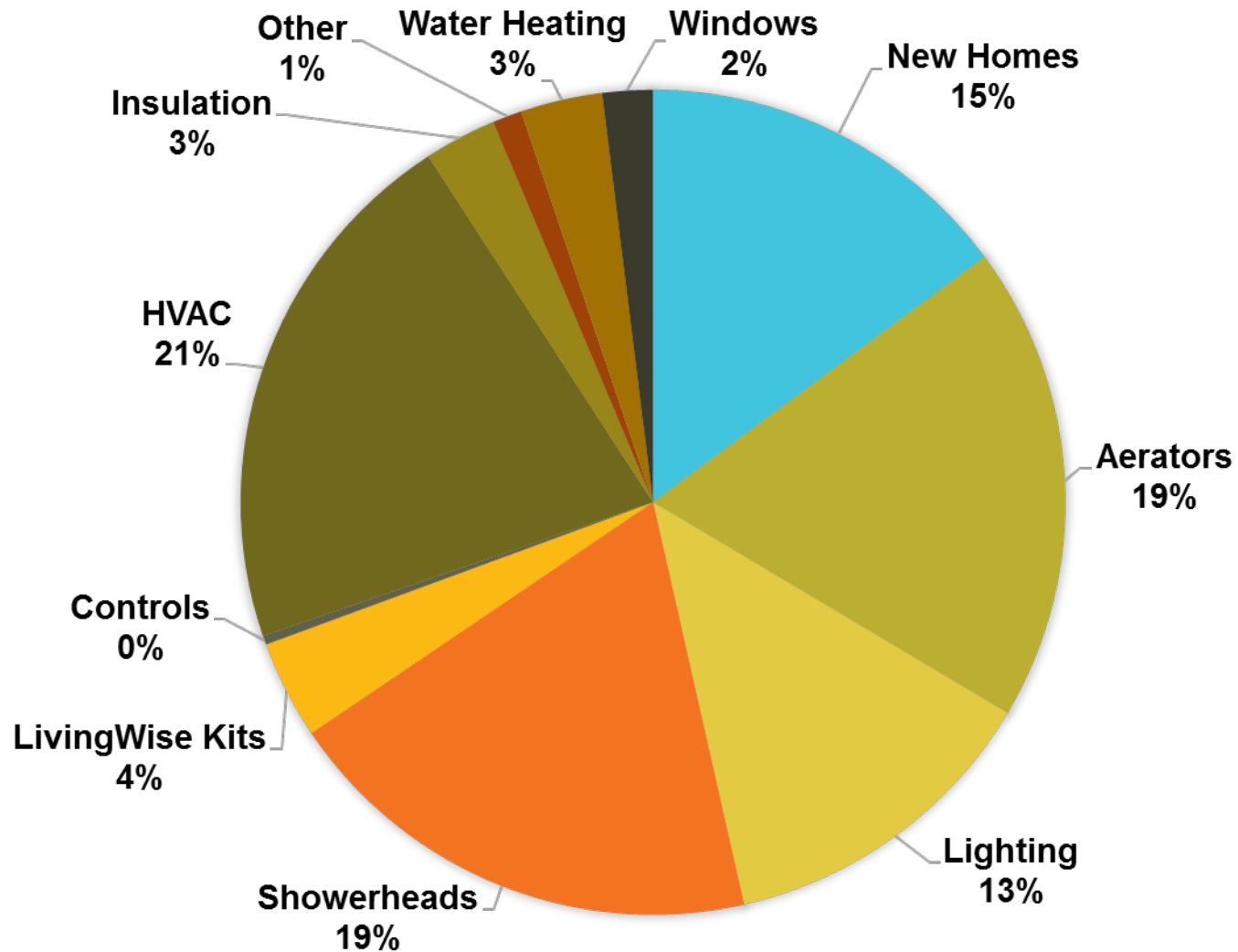
- Over 18,000 energy upgrades in existing single family homes
- 4,224 EPS new homes
- Energy savings
  - More than 42.5 million kWh saved
  - More than 2.3 million therms saved

Results are for New Homes and Existing Homes in Oregon & SW Washington



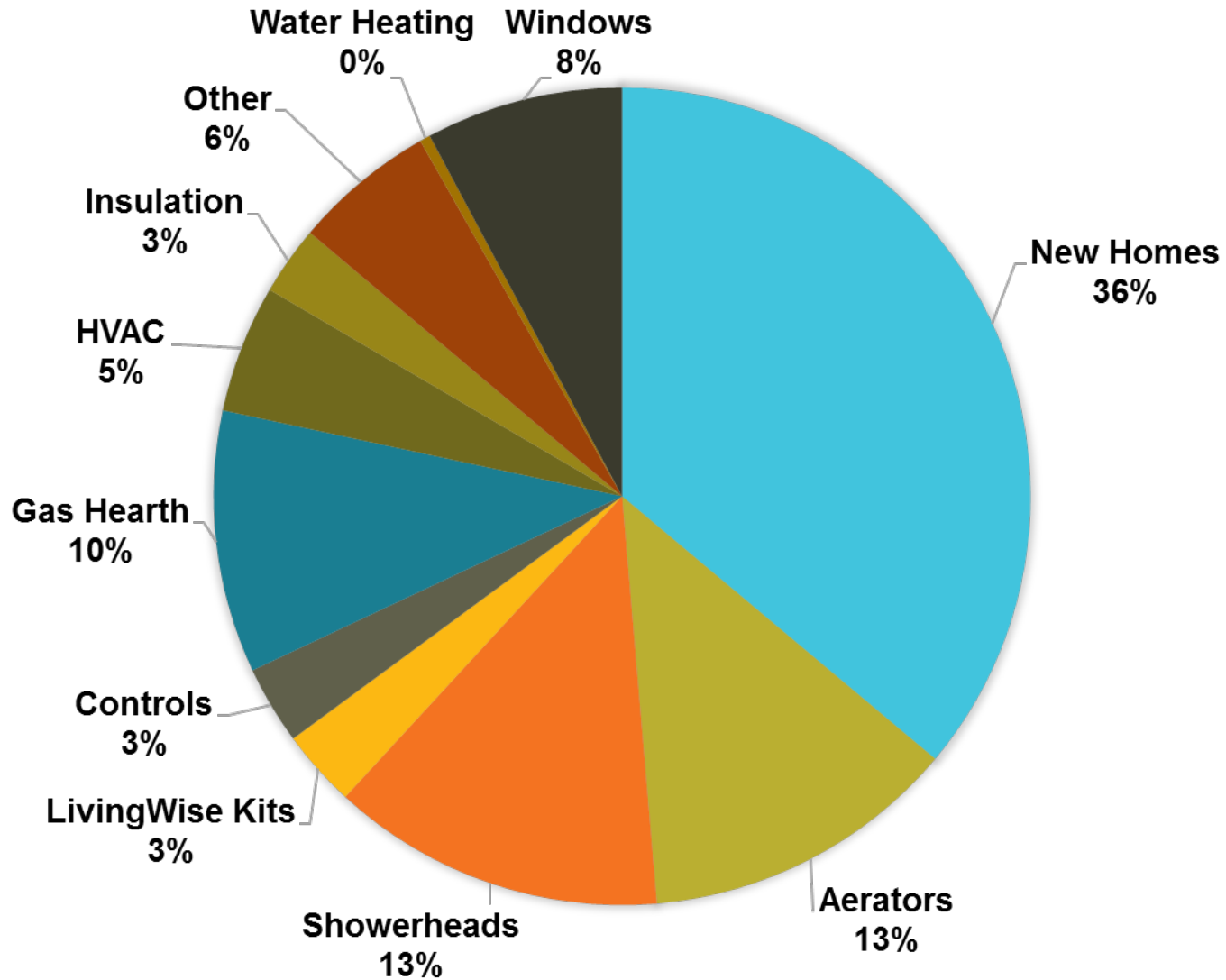


# Electric Savings—2016



Results are for New Homes and Existing Homes in Oregon & SW Washington

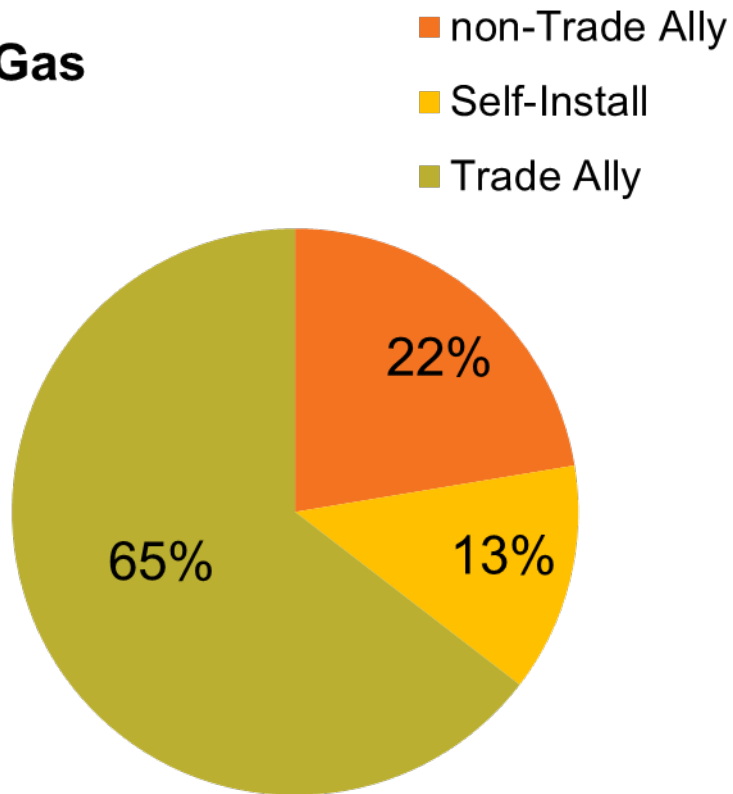
# Gas Savings—2016



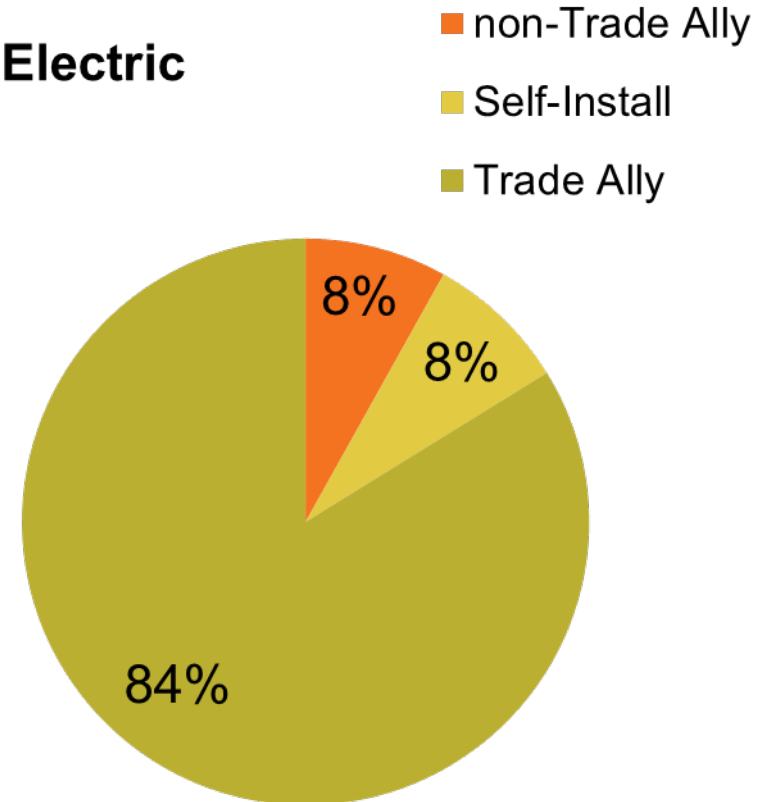
Results are for New Homes and Existing Homes in Oregon & SW Washington

# Existing Homes Project Installations

## Gas



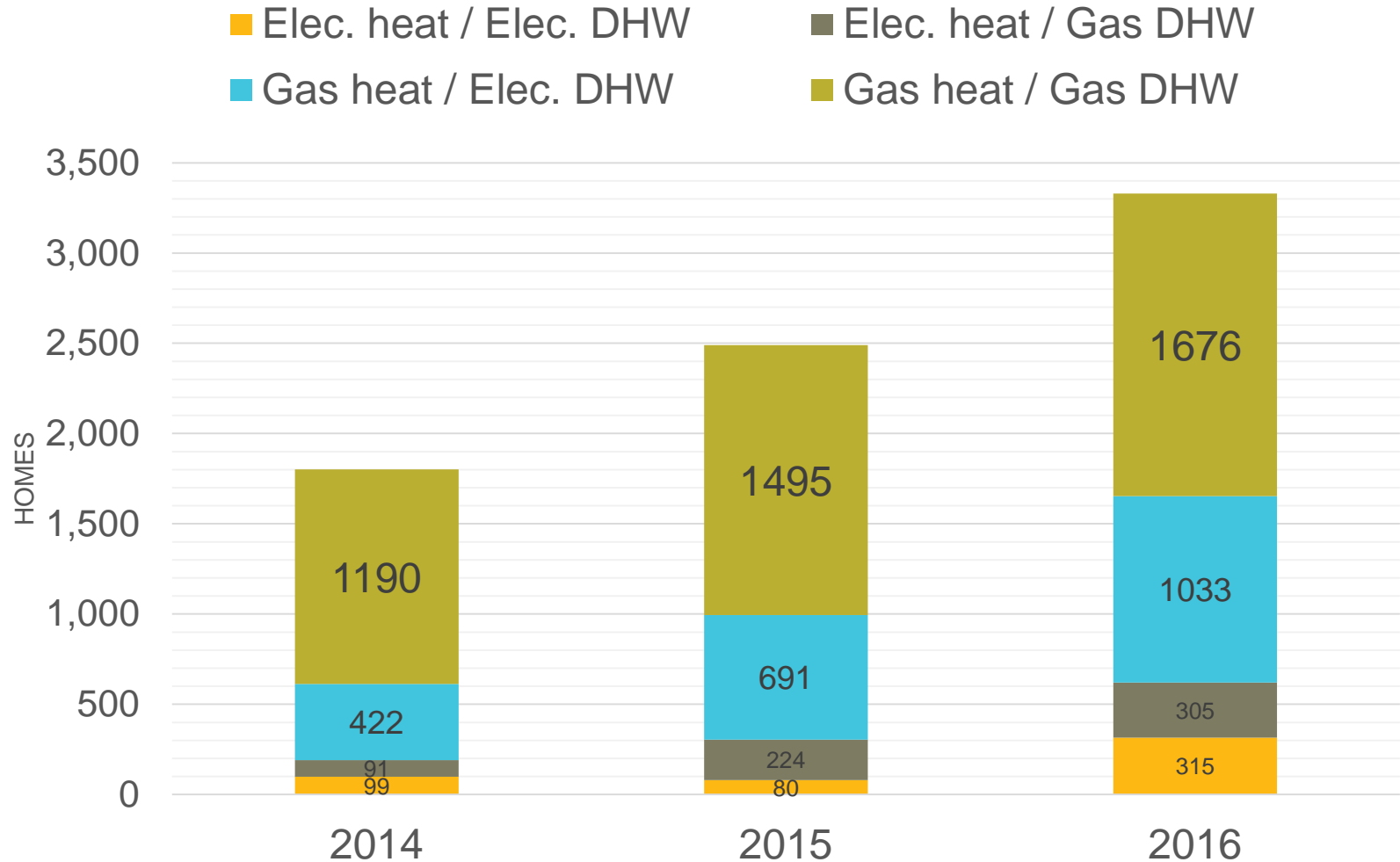
## Electric



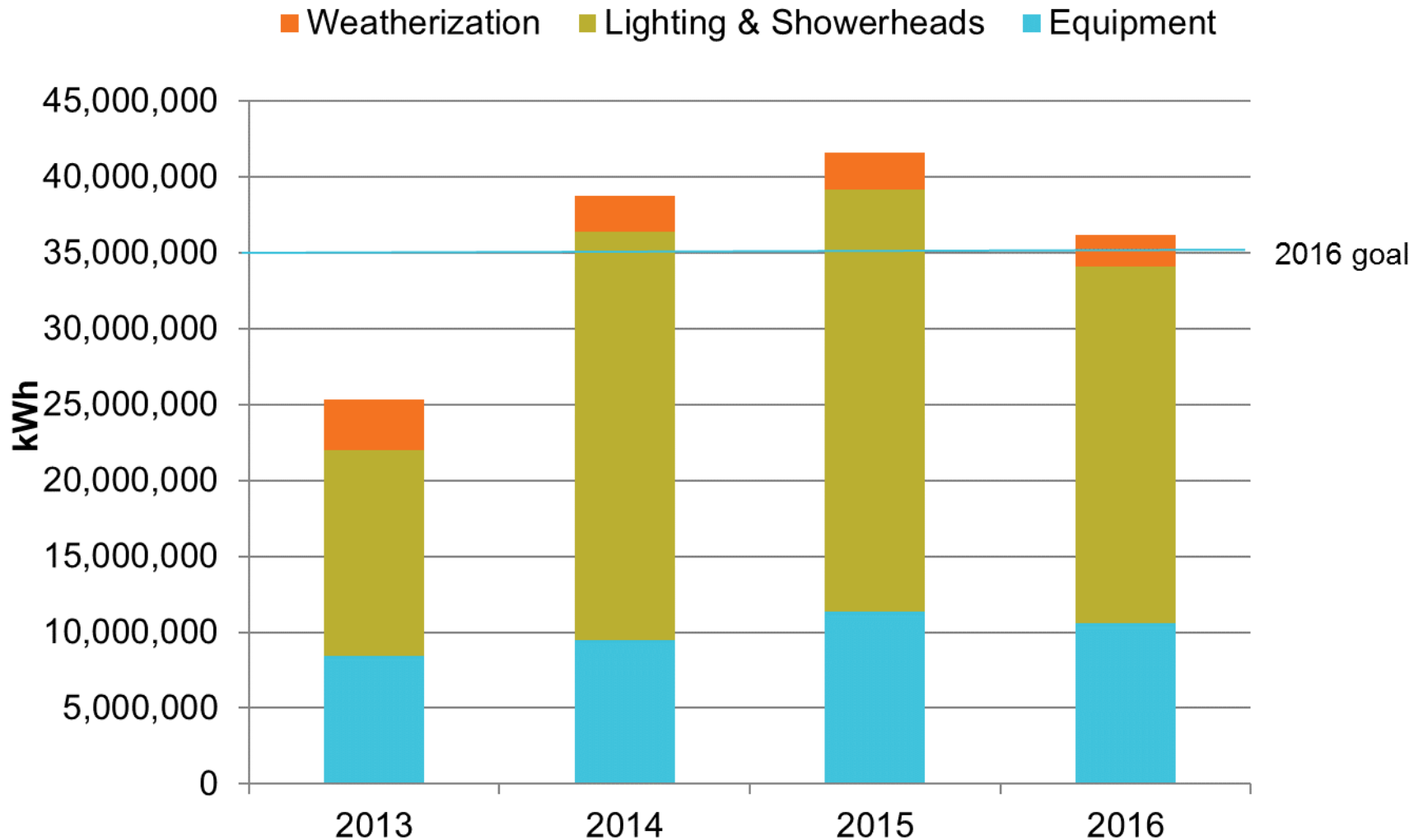
# 2016 Trends



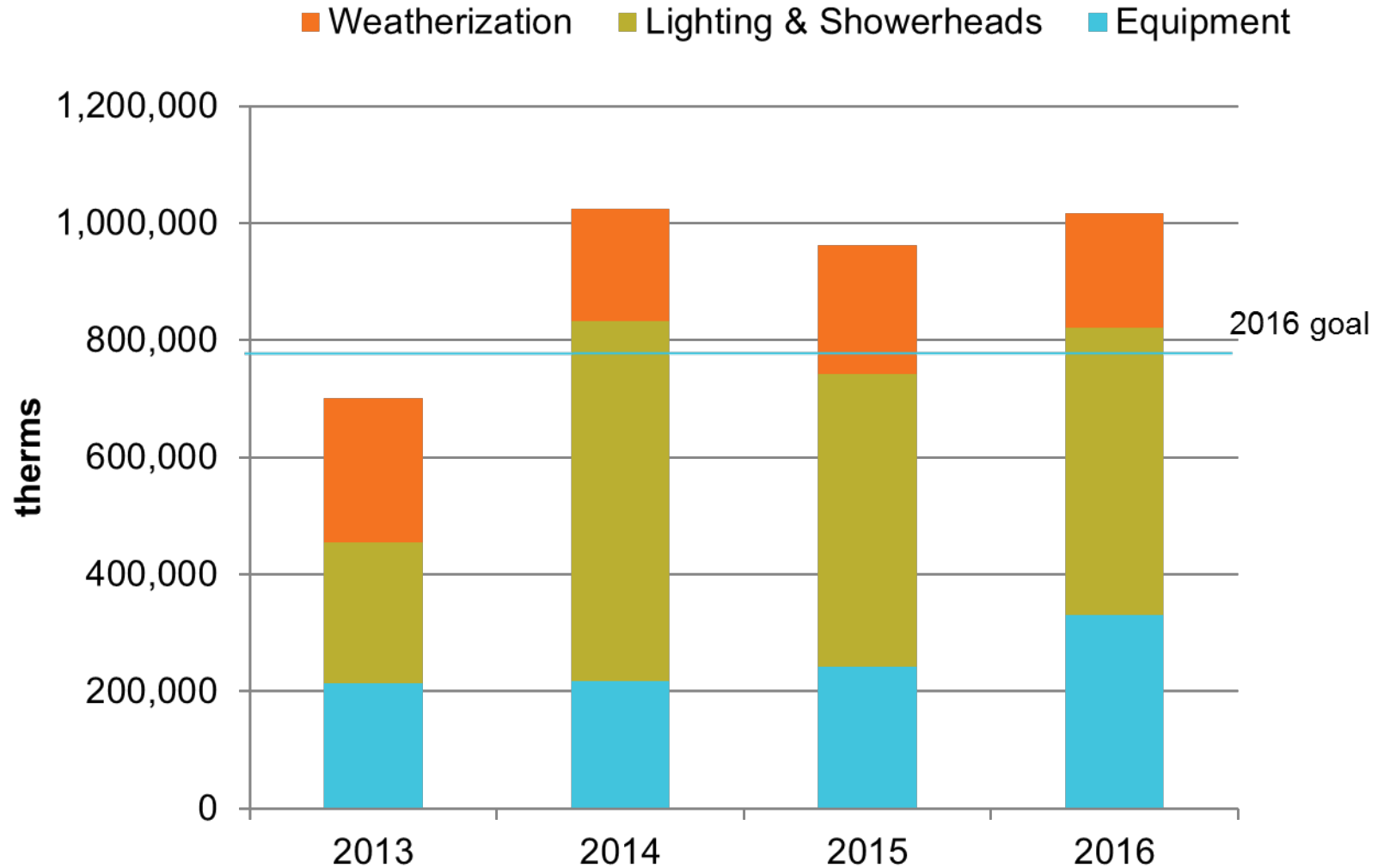
# EPS New Homes Trends



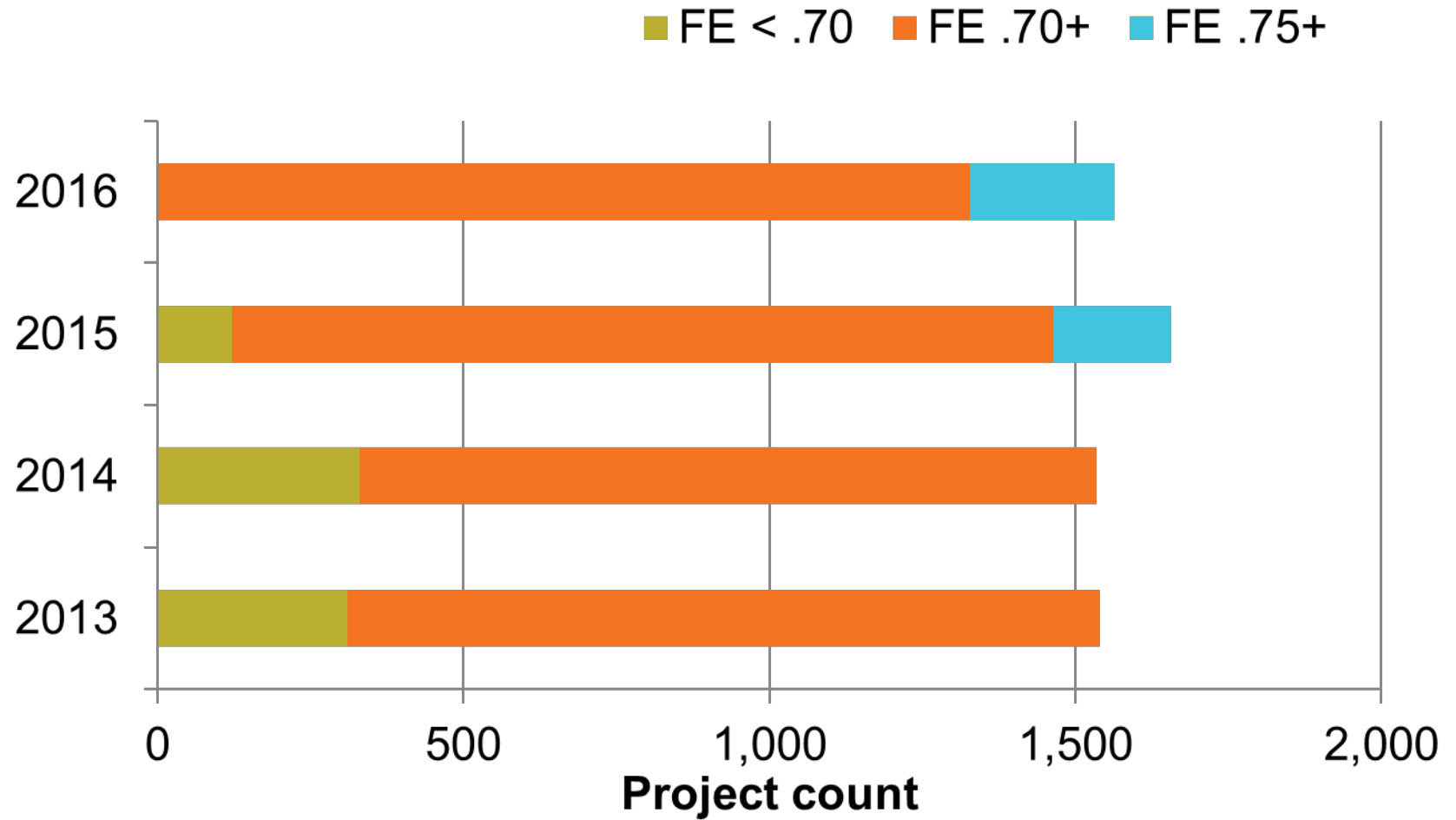
# Existing Homes Trends—Electric



# Existing Homes Trends—Gas

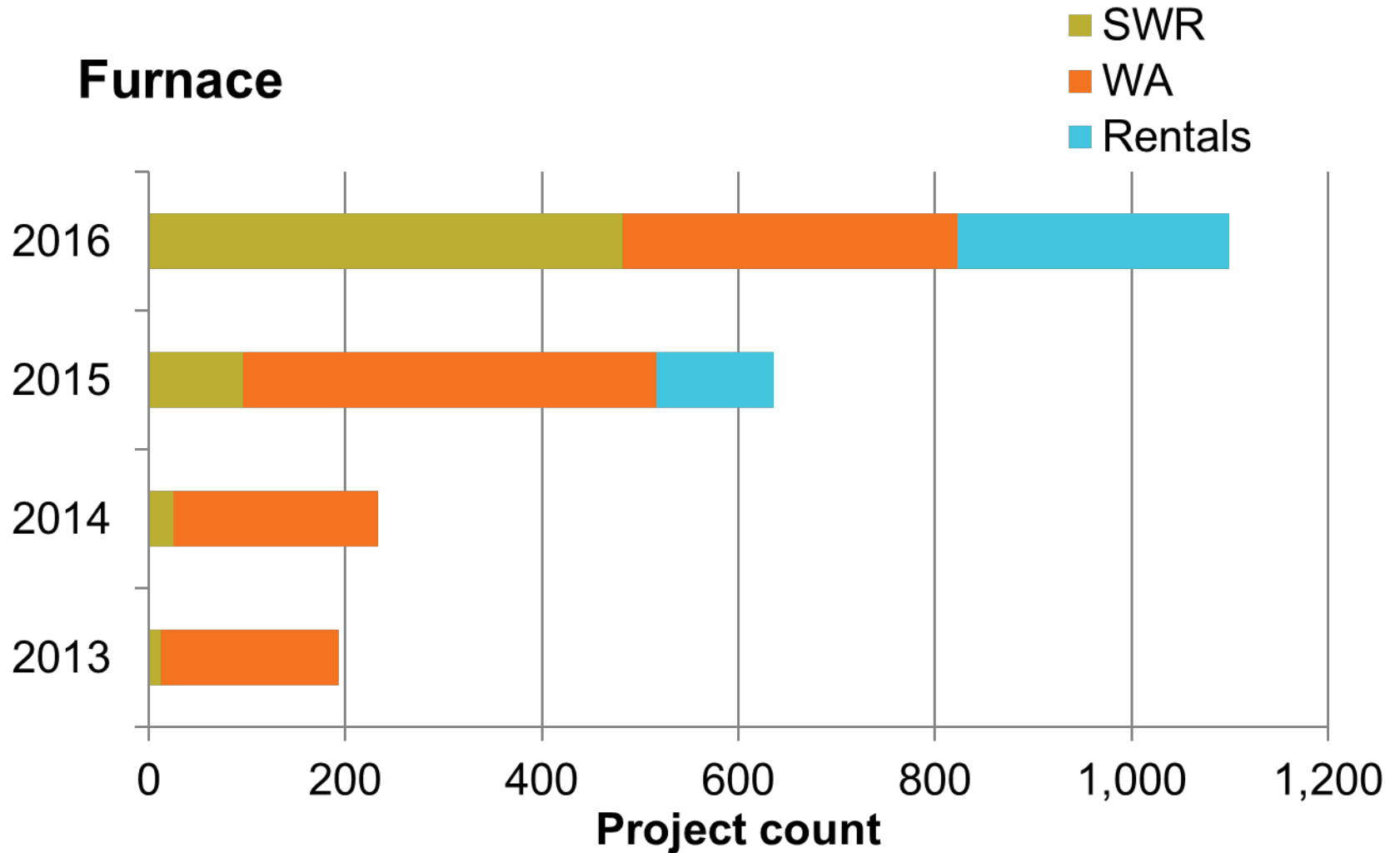


# Gas Hearth Trends

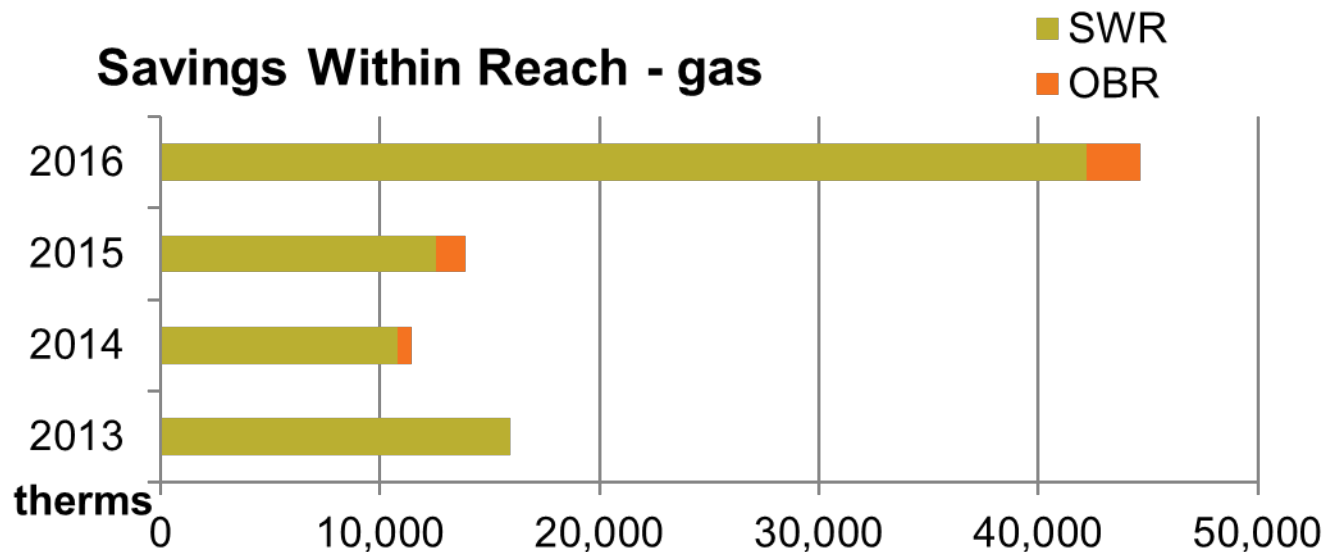
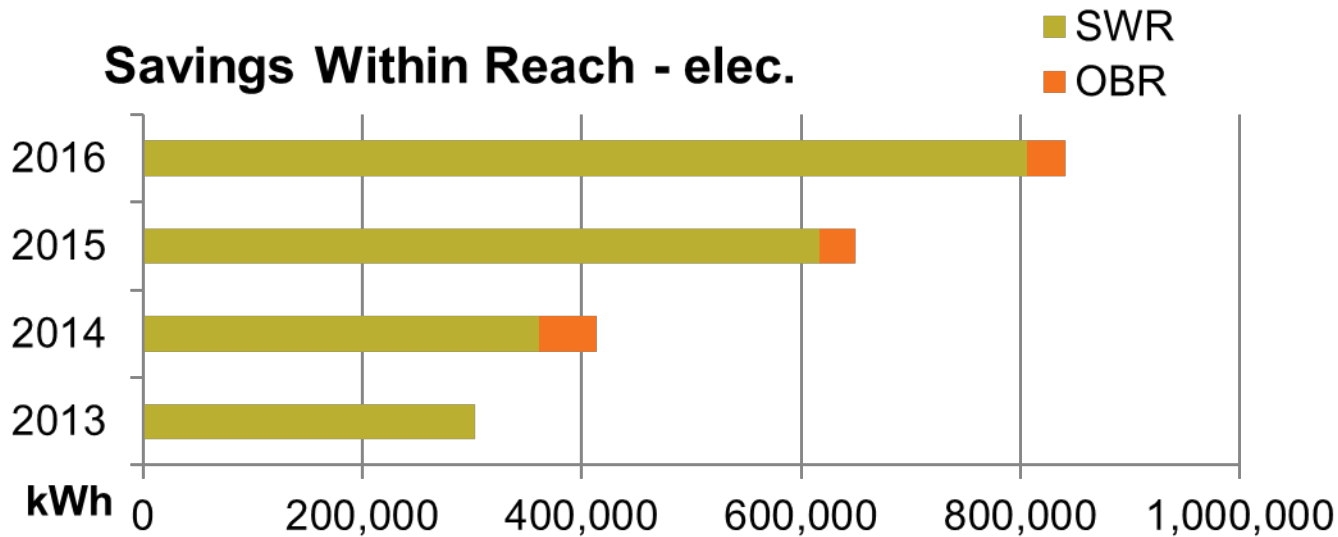




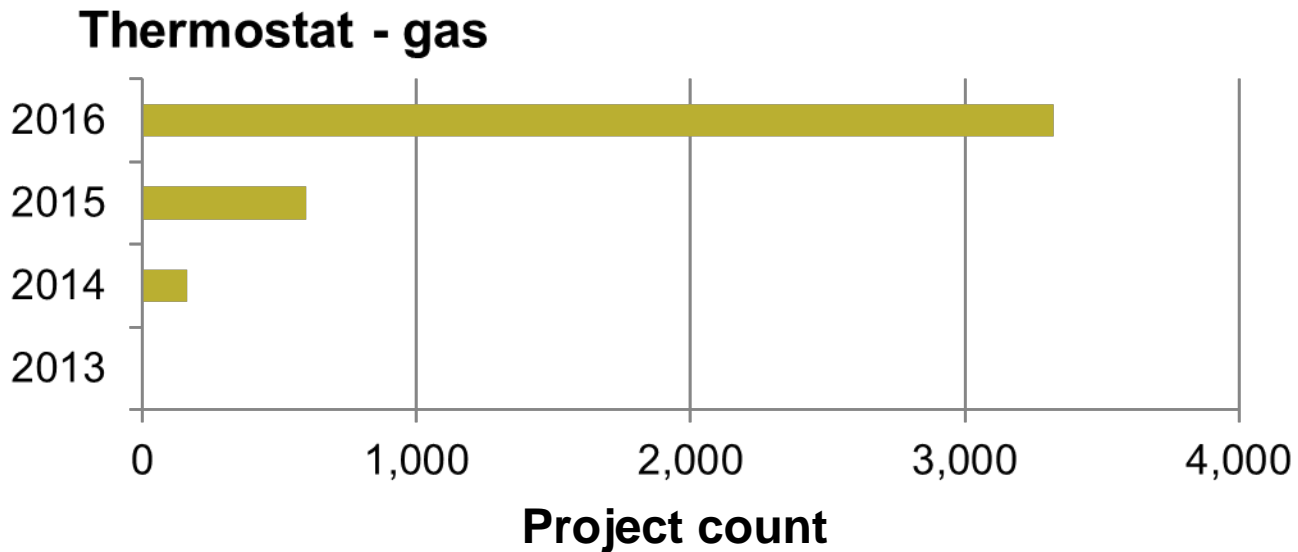
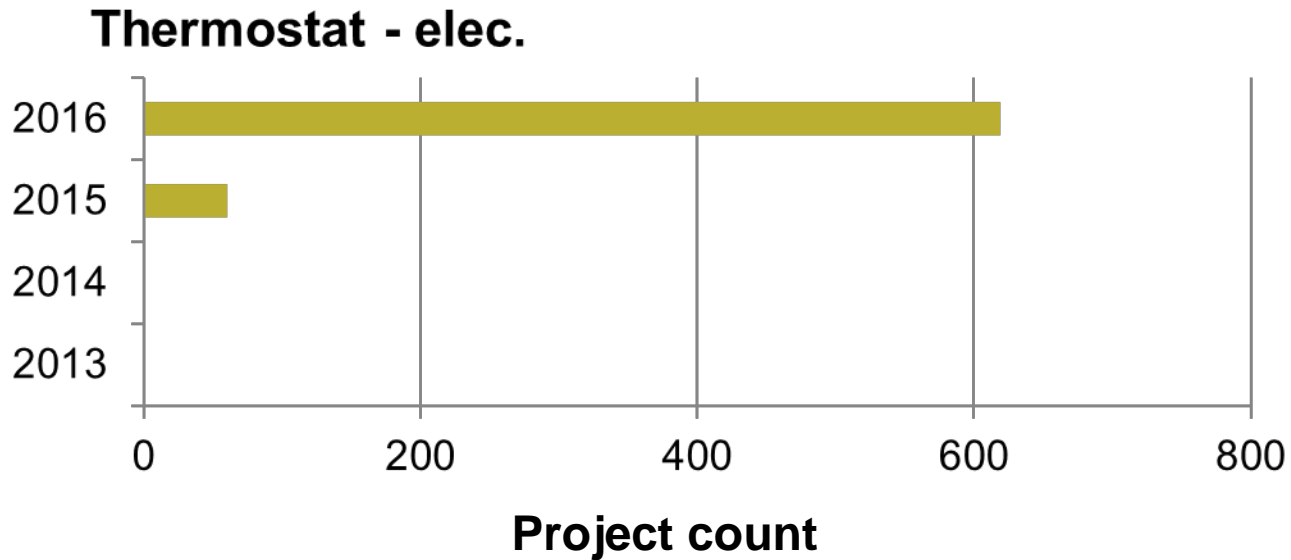
# Gas Furnace Trends



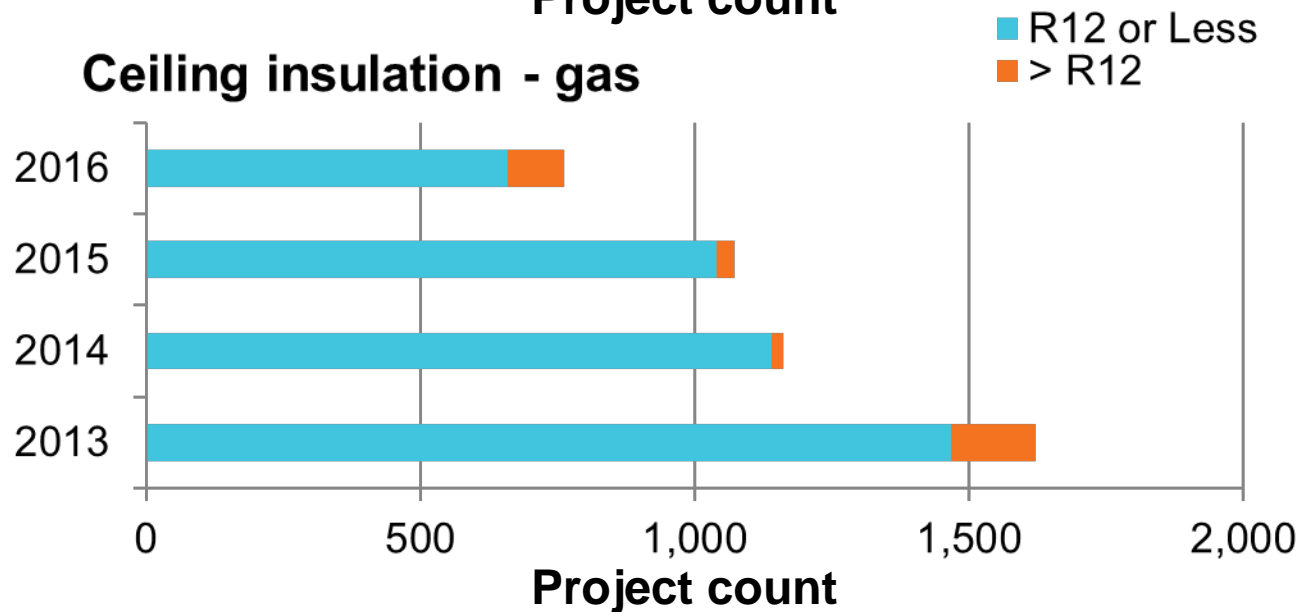
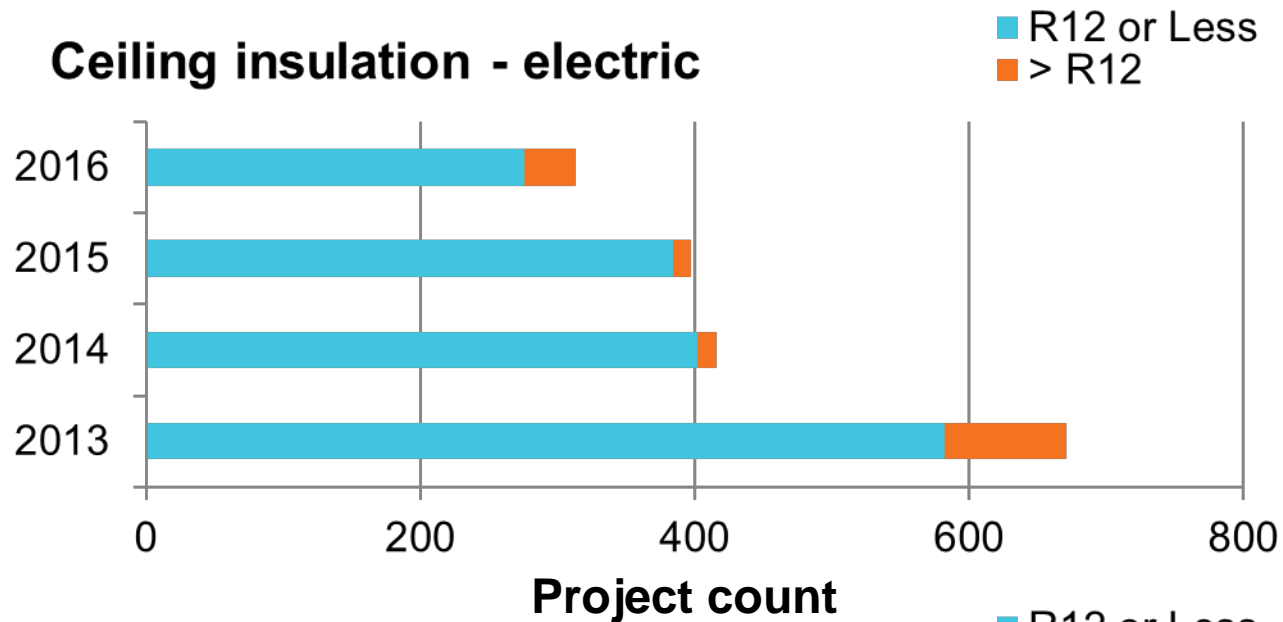
# Savings Within Reach Trends



# Thermostat Trends

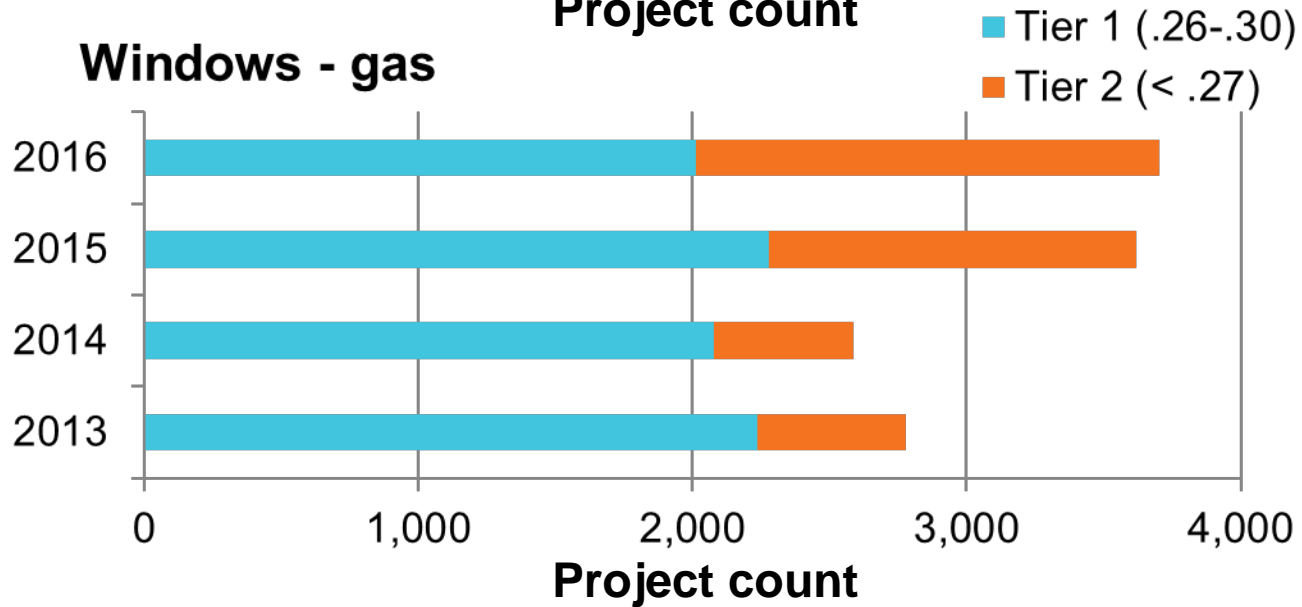
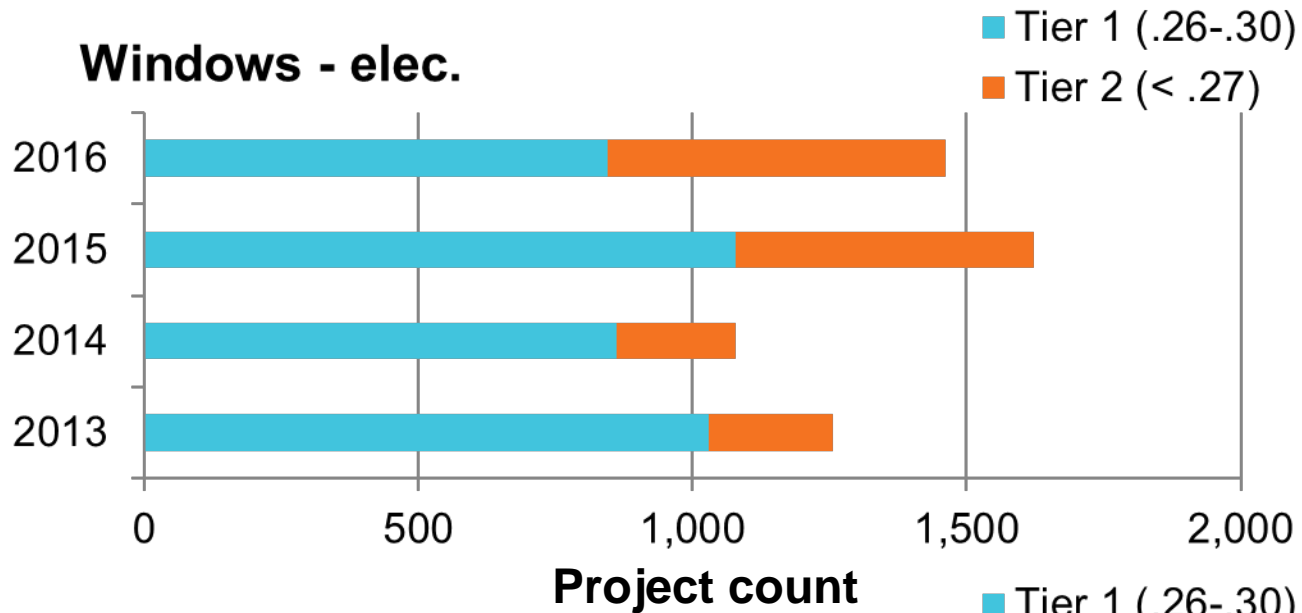


# Insulation Trends

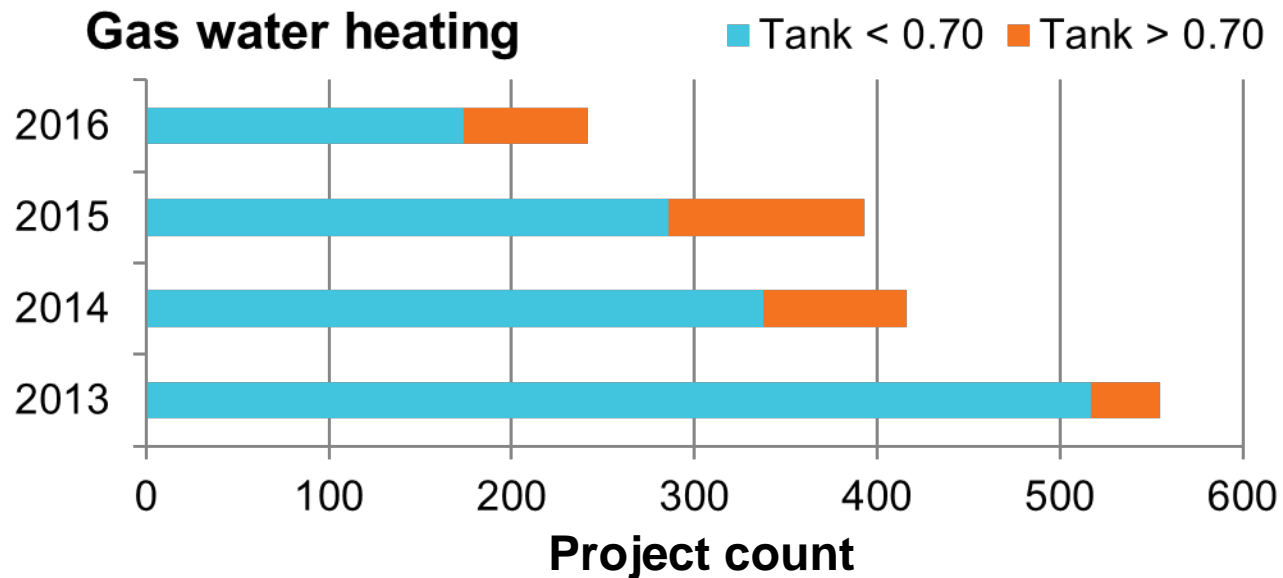
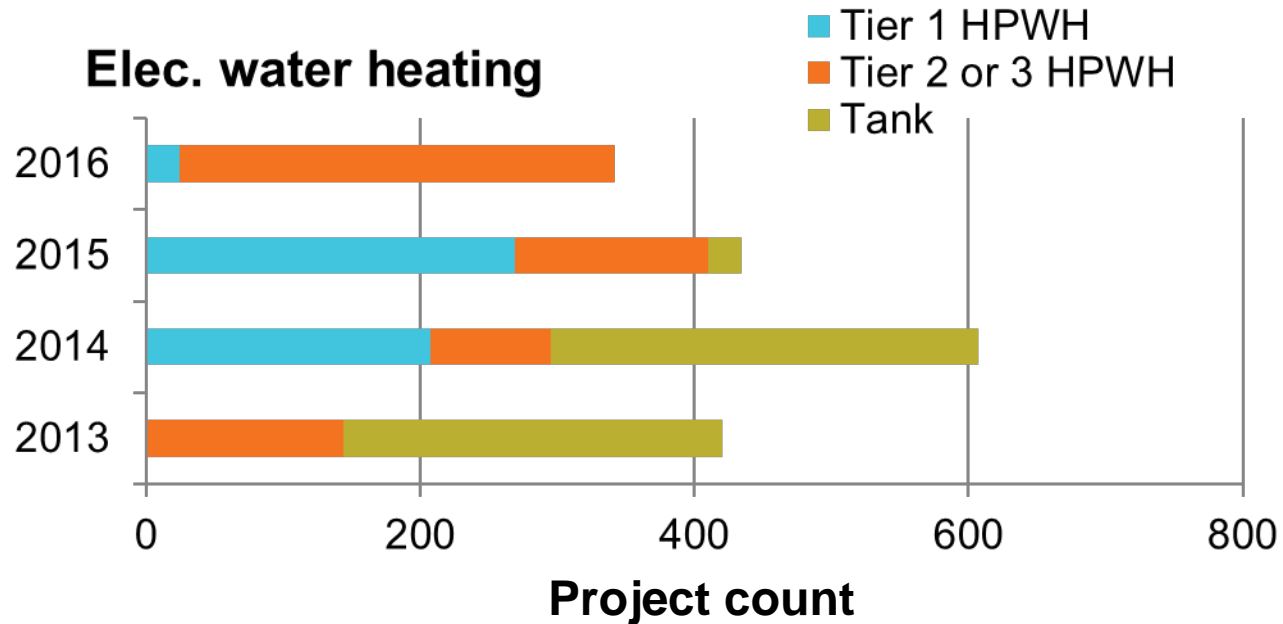




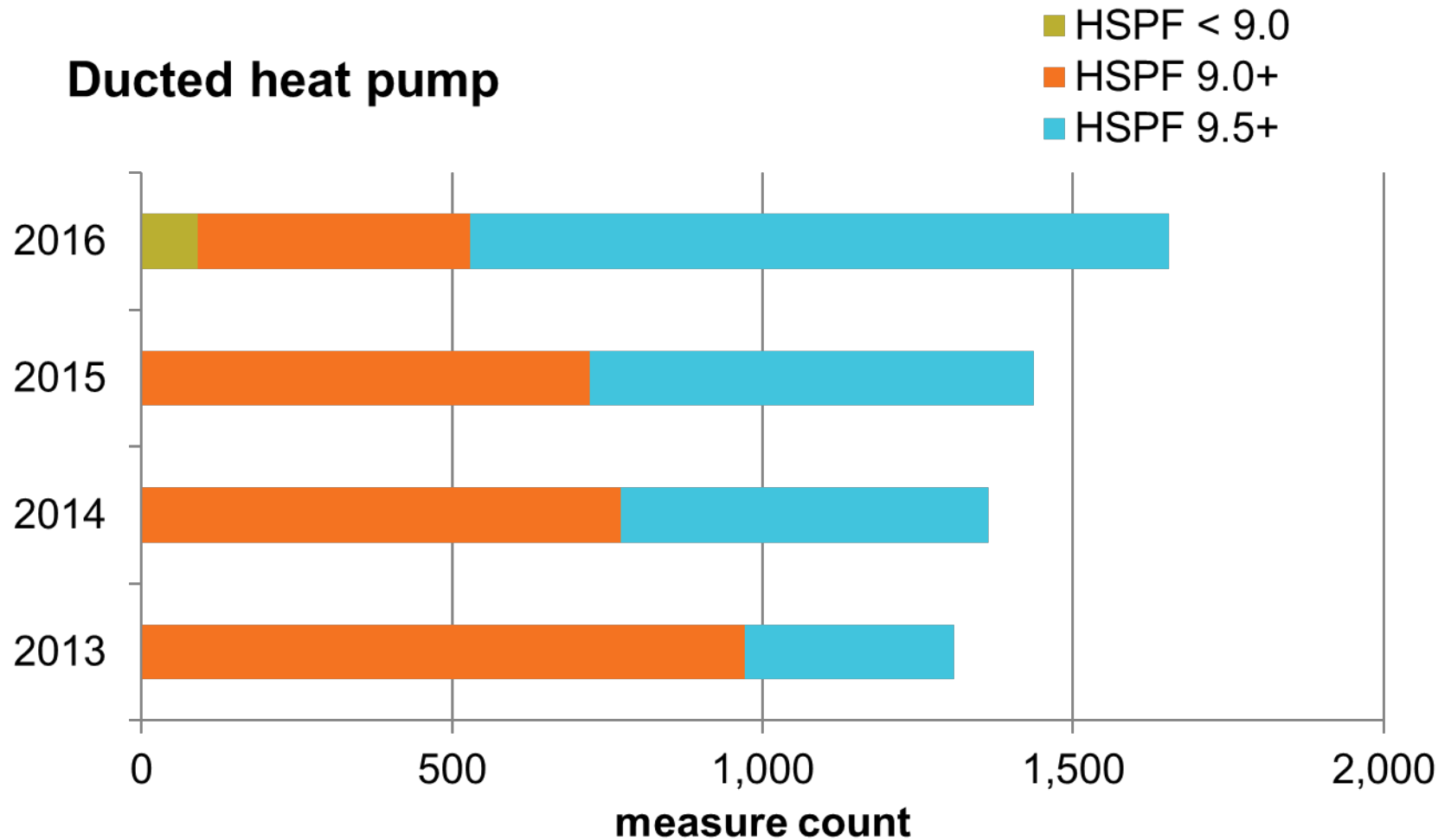
# Windows Trends



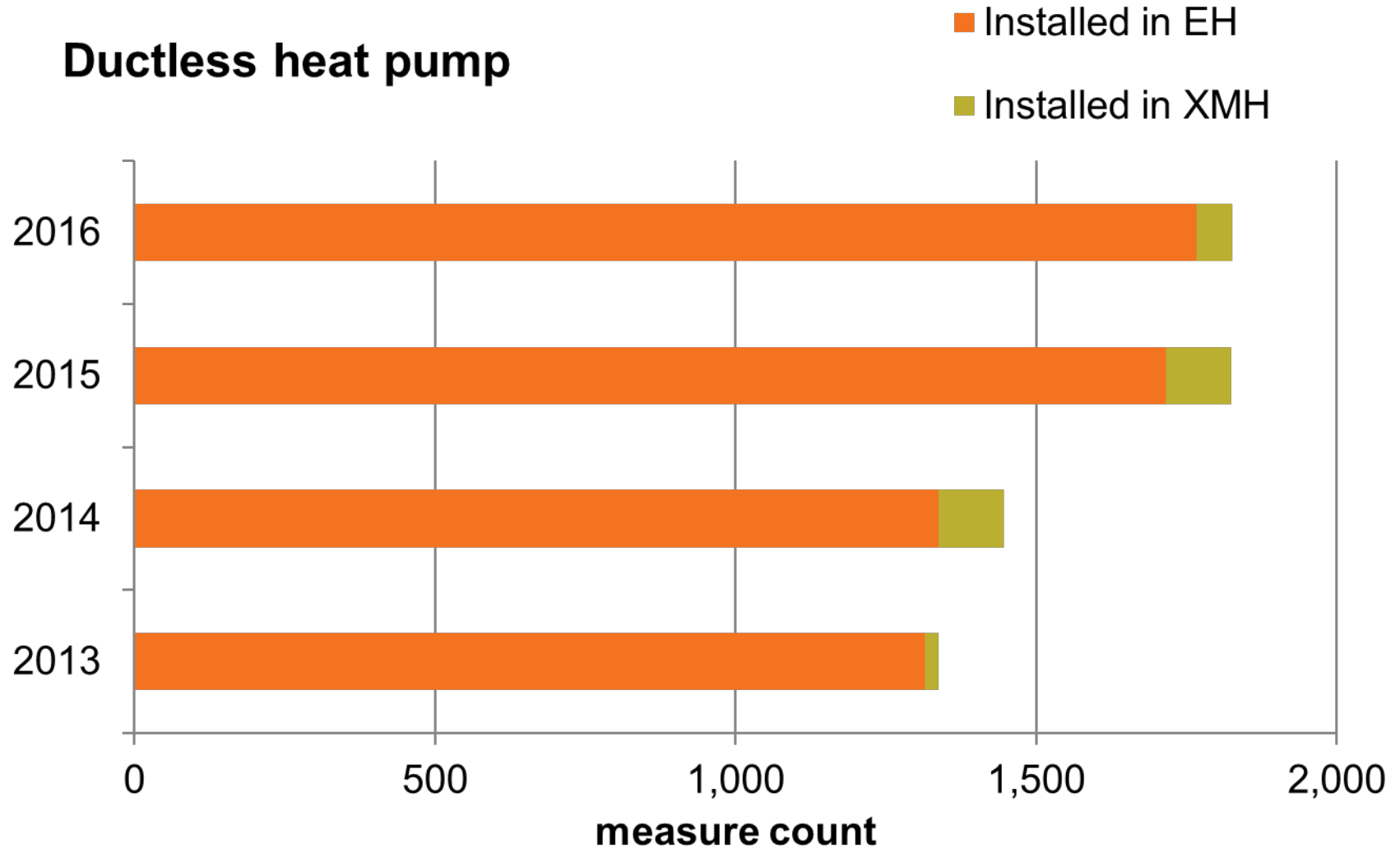
# Water Heating Trends



# Ducted Heat Pump Trends



# Ductless Heat Pump Trends



# 2017 Areas of Focus



# 2017 Electric Savings Goals—Existing Homes

Program Category	2017 Electric Savings (kWh)	% of Portfolio	% Change Allocated Savings 2017 v 2016
Controls	471,756	1%	0%
HVAC	10,243,492	30%	2%
Insulation	681,195	2%	-1%
Other	1,734,171	5%	1%
Water Heating	5,371,270	16%	11%
Windows	722,337	2%	0%
XMH Free Service	458,266	1%	0%
Aerators	4,643,550	14%	-6%
Lighting	4,505,376	13%	-2%
Showerheads	5,131,906	15%	-6%
<b>Total</b>	<b>33,963,318</b>		

# 2017 Gas Savings Goals – Existing Homes

Program Category	2017 Gas Savings (therm)	% of Portfolio	% Change Allocated Savings 2017 v 2016
Controls	178,528	14%	10%
Gas Hearth	208,890	17%	0%
HVAC	134,328	11%	3%
Insulation	56,284	5%	1%
Other	96,679	8%	5%
Water Heating	54,659	4%	3%
Windows	144,787	12%	1%
XMH Free Service	571	0%	0%
Aerators	145,869	12%	-11%
Showerheads	175,545	14%	-4%
<b>Total</b>	<b>1,238,266</b>		

# 2017 Regional Focus – New Homes

Region	2017 Targets
1 - North Coast	17
2 - South Coast	0
3 - Portland Metro	2,555
4 - Mid Willamette Valley	32
5 - Southern Willamette Valley	108
6 - Southern	133
7 - Columbia Basin	26
8 - Central	368
9 - Klamath Basin	0
10 - Northeast	5
11 - Eastern	0
12 - Southwest Washington	593
Total	3,837



# Thank You

Eric Koch  
Program Manager Existing  
Homes  
[Eric.Koch@clearesult.com](mailto:Eric.Koch@clearesult.com)





# Existing Multifamily Program Results and Trends

Nate Collins

April 13, 2017

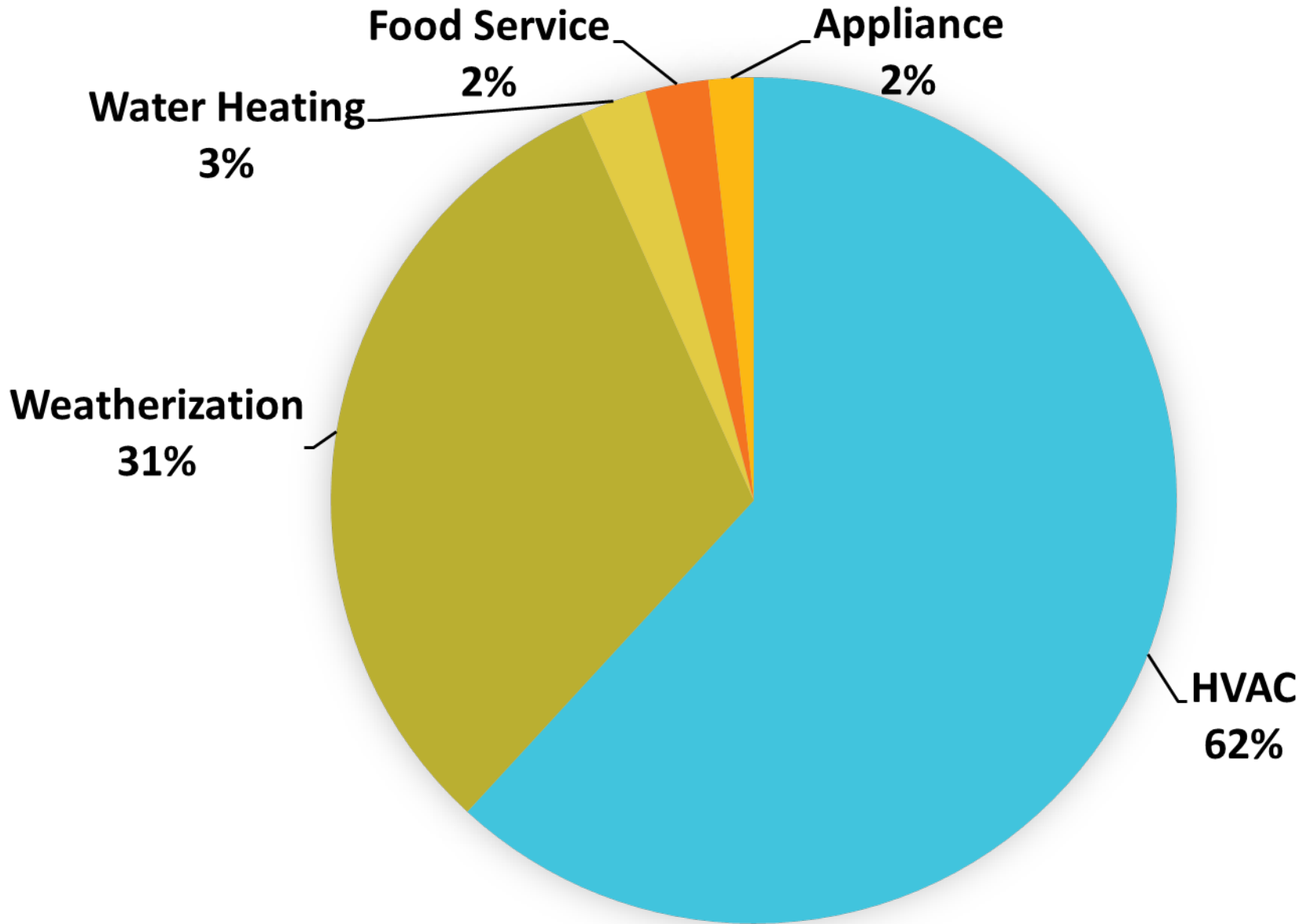


# 2016 Multifamily Program Results

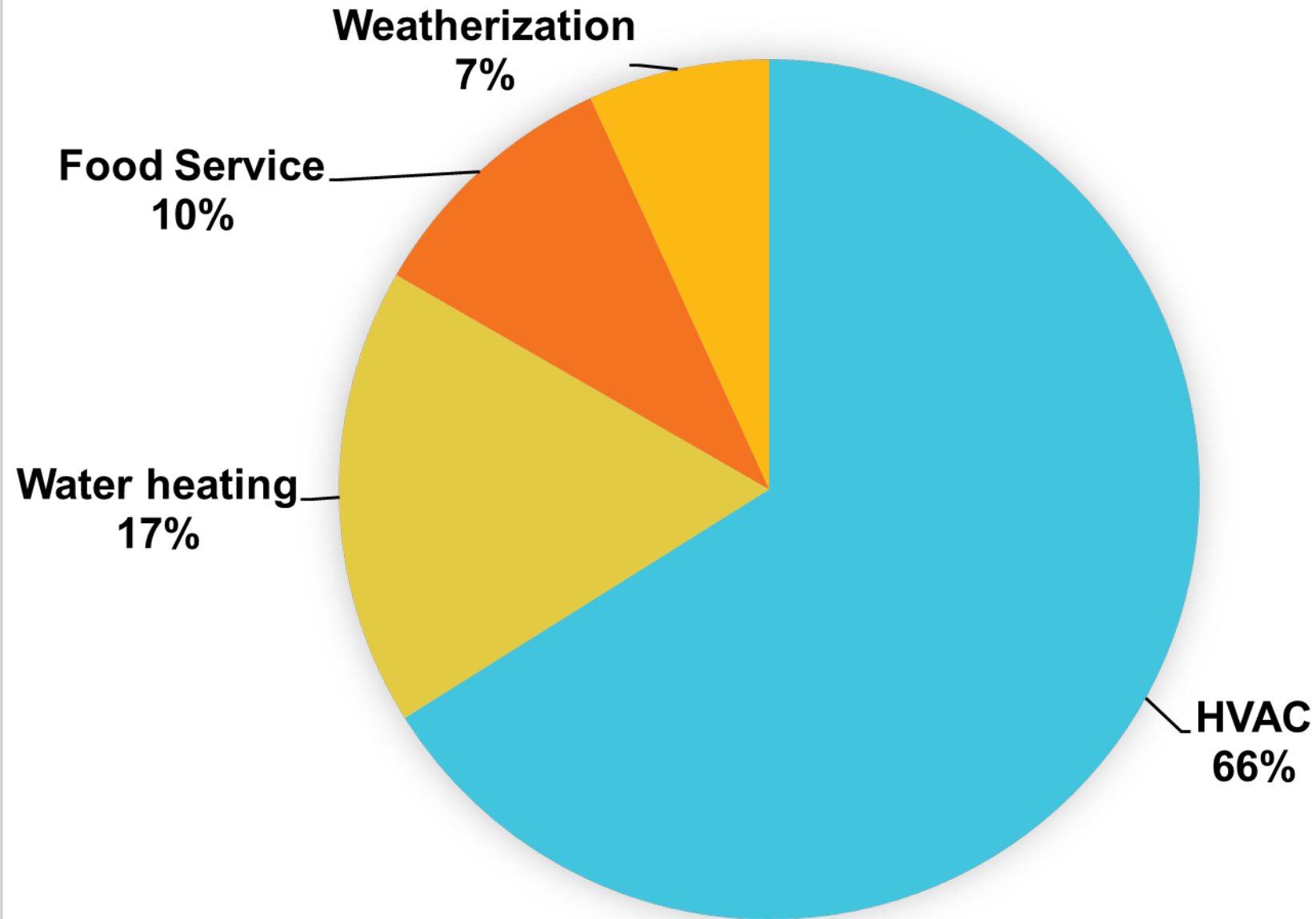
- 2,840 projects completed
- 1,807 sites served
- \$4,448,902 paid in incentives
- Energy Savings
  - 20,787,800 kWh
  - 252,900 therms



# 2016 Prescriptive Electric Savings



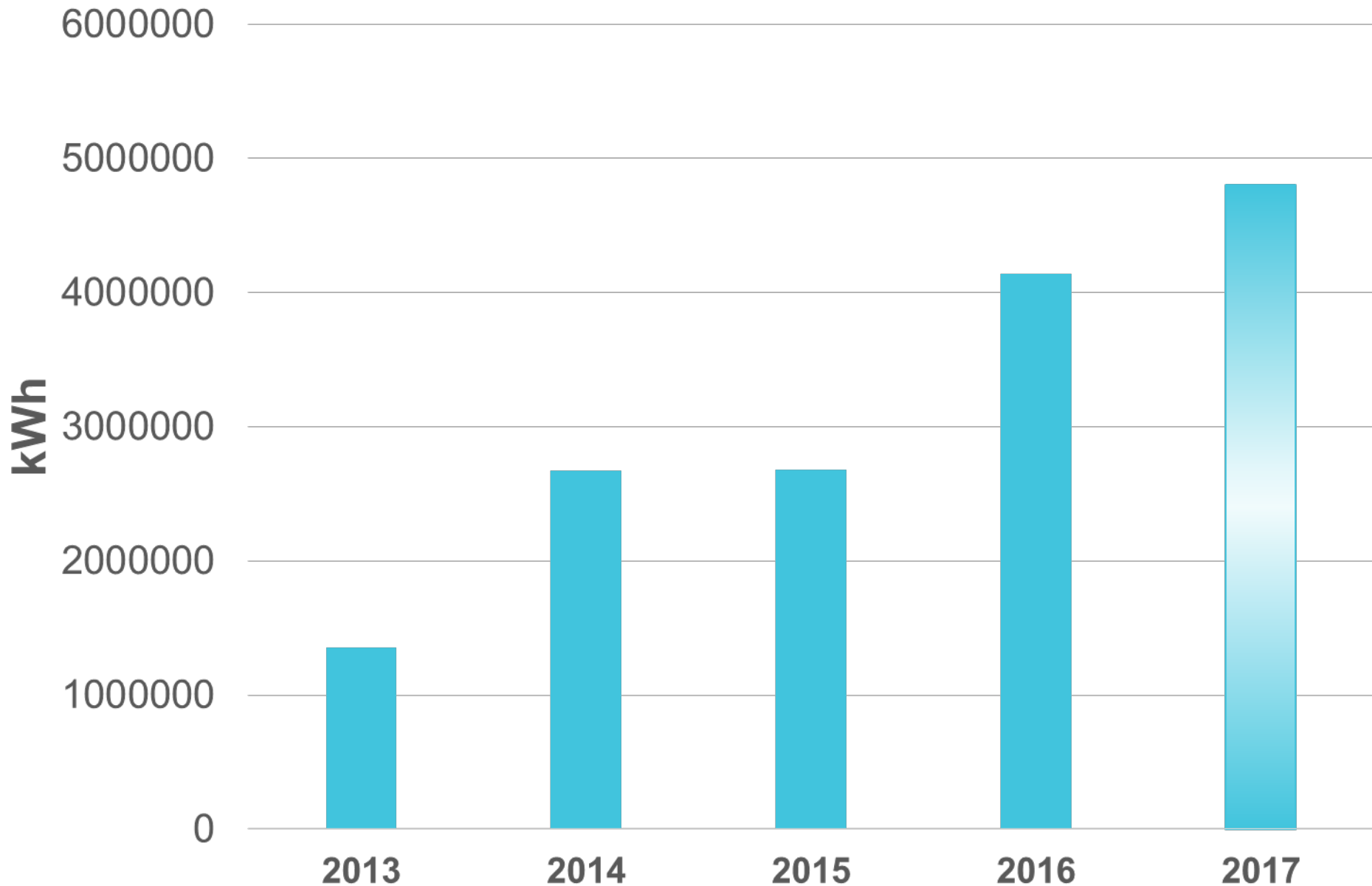
# 2016 Prescriptive Gas Savings



# Prescriptive Measure Trends

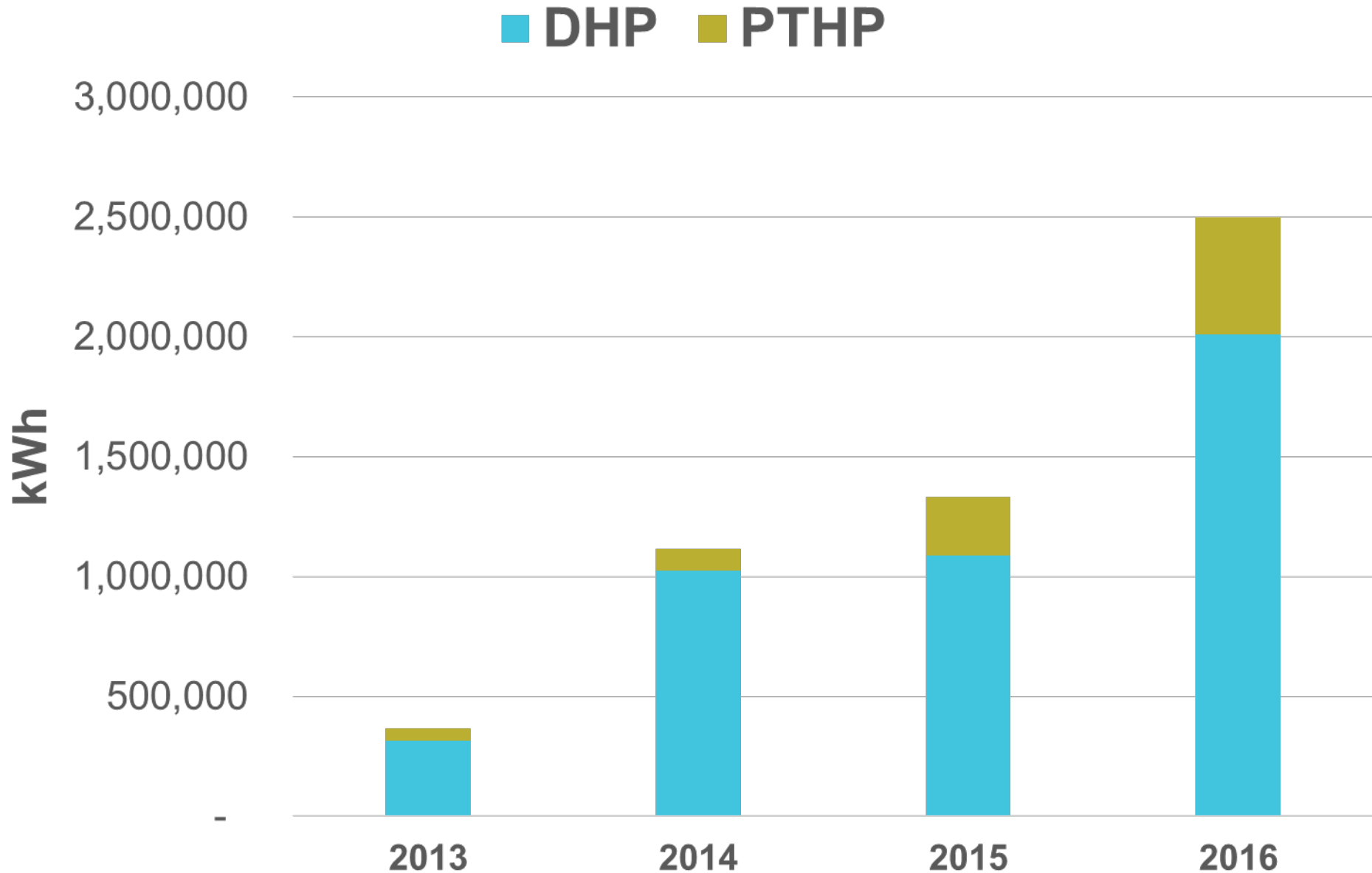
## **Electric Savings**

# All prescriptive savings—Electric

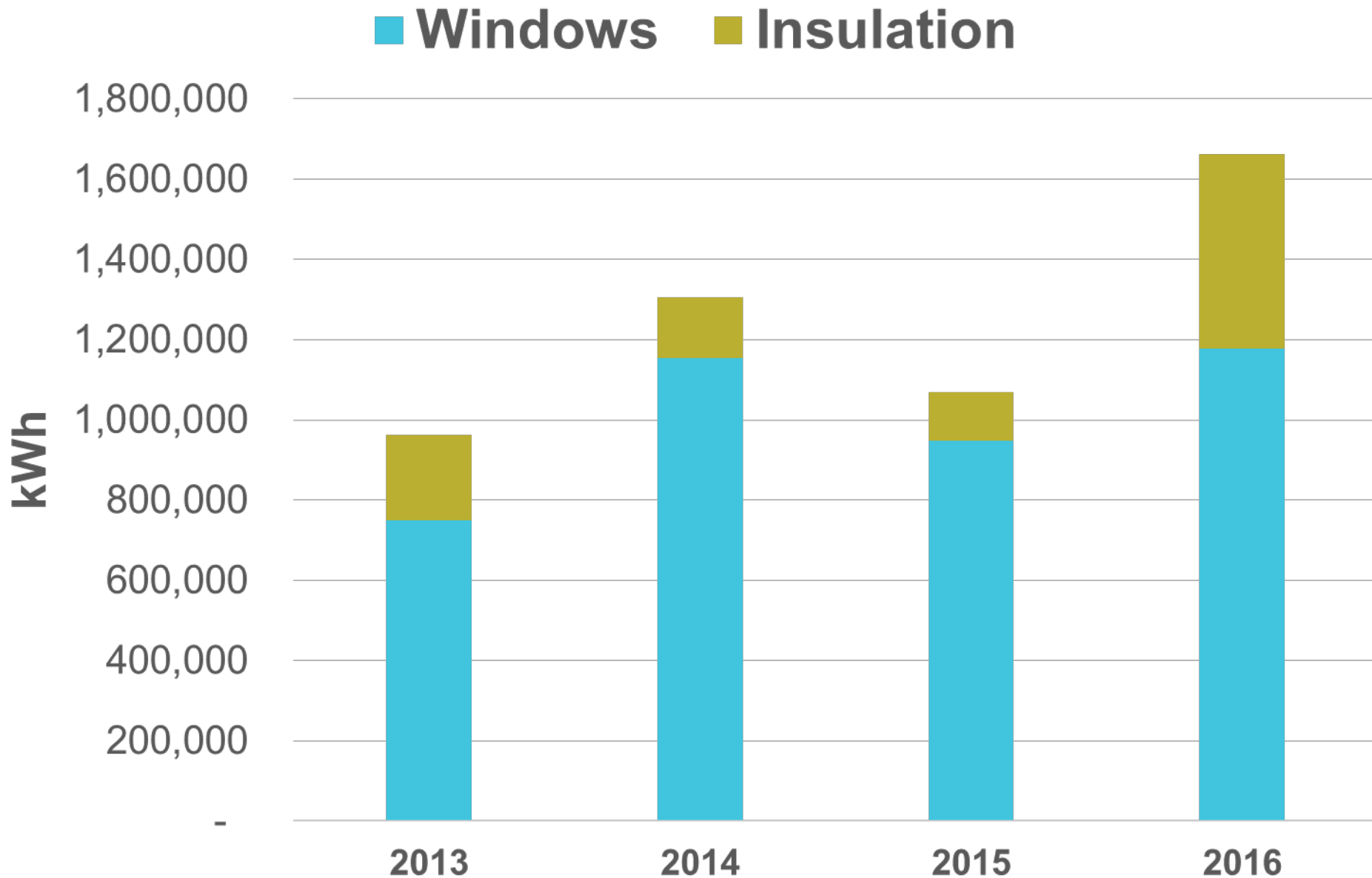




# Ductless, Packaged Terminal Heat Pumps

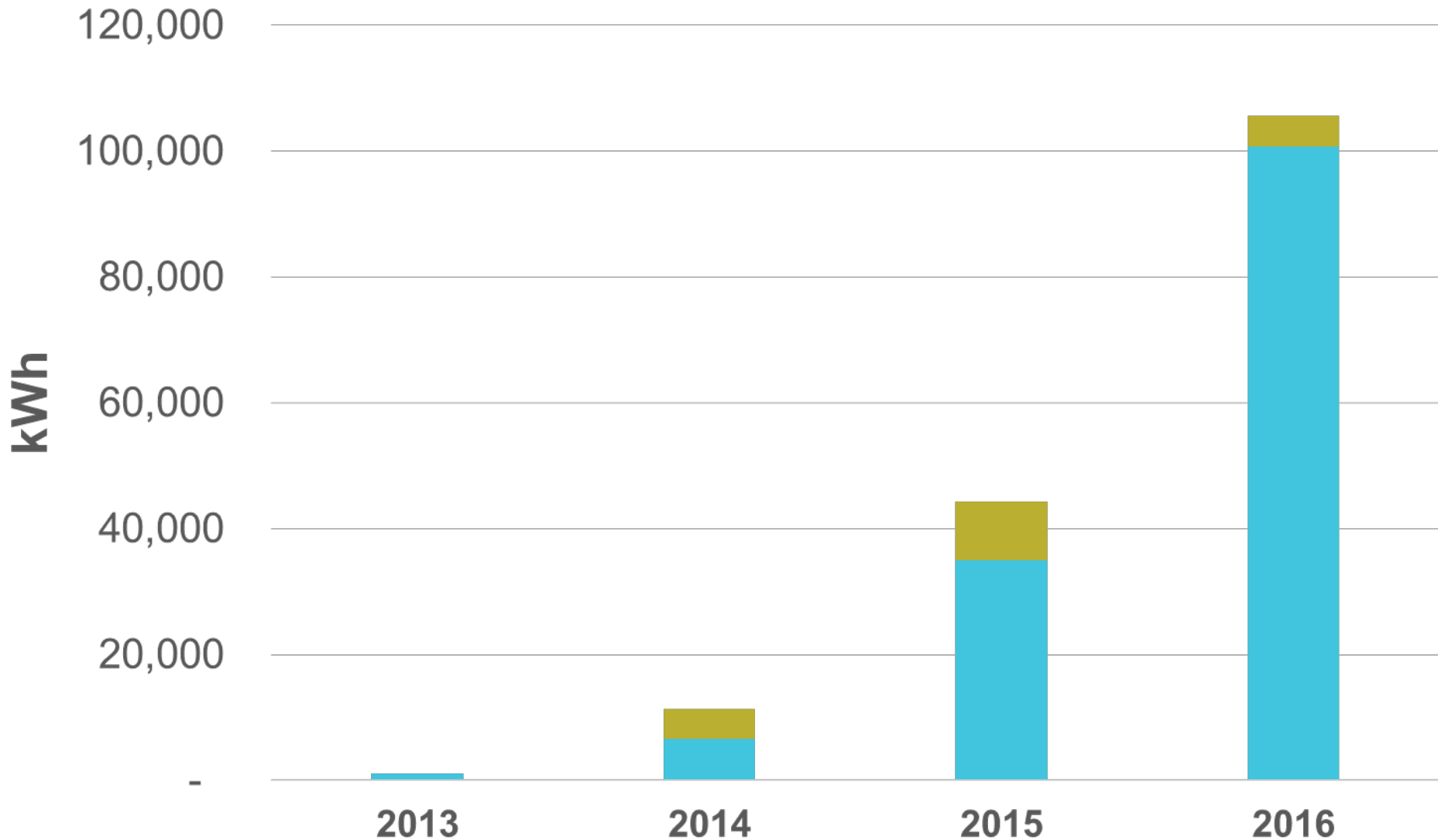


# Weatherization—Electric

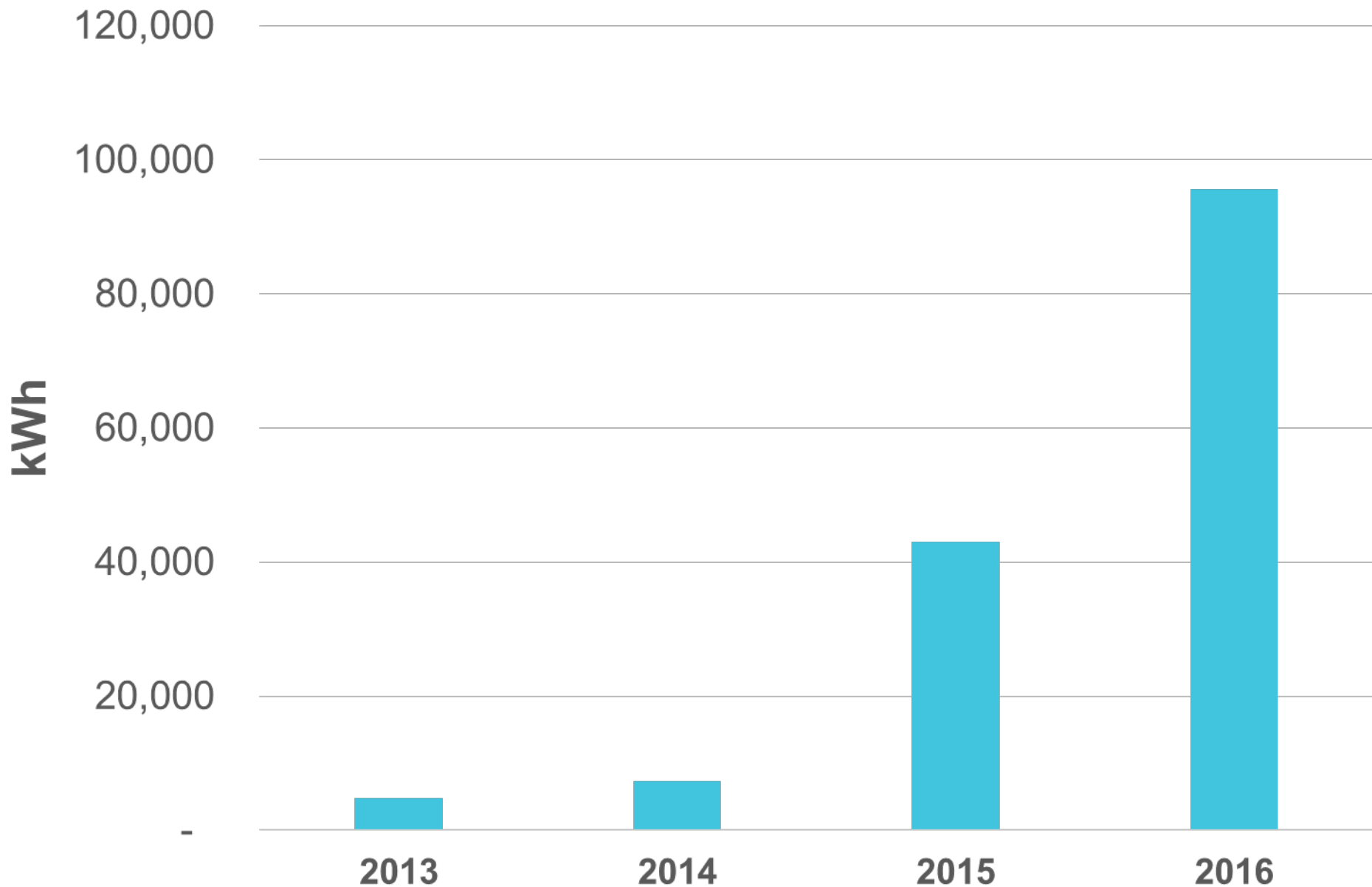


# Water Heating—Electric

■ **Electric resistance** ■ **Heat Pump Water Heater**



# Foodservice Equipment—Electric

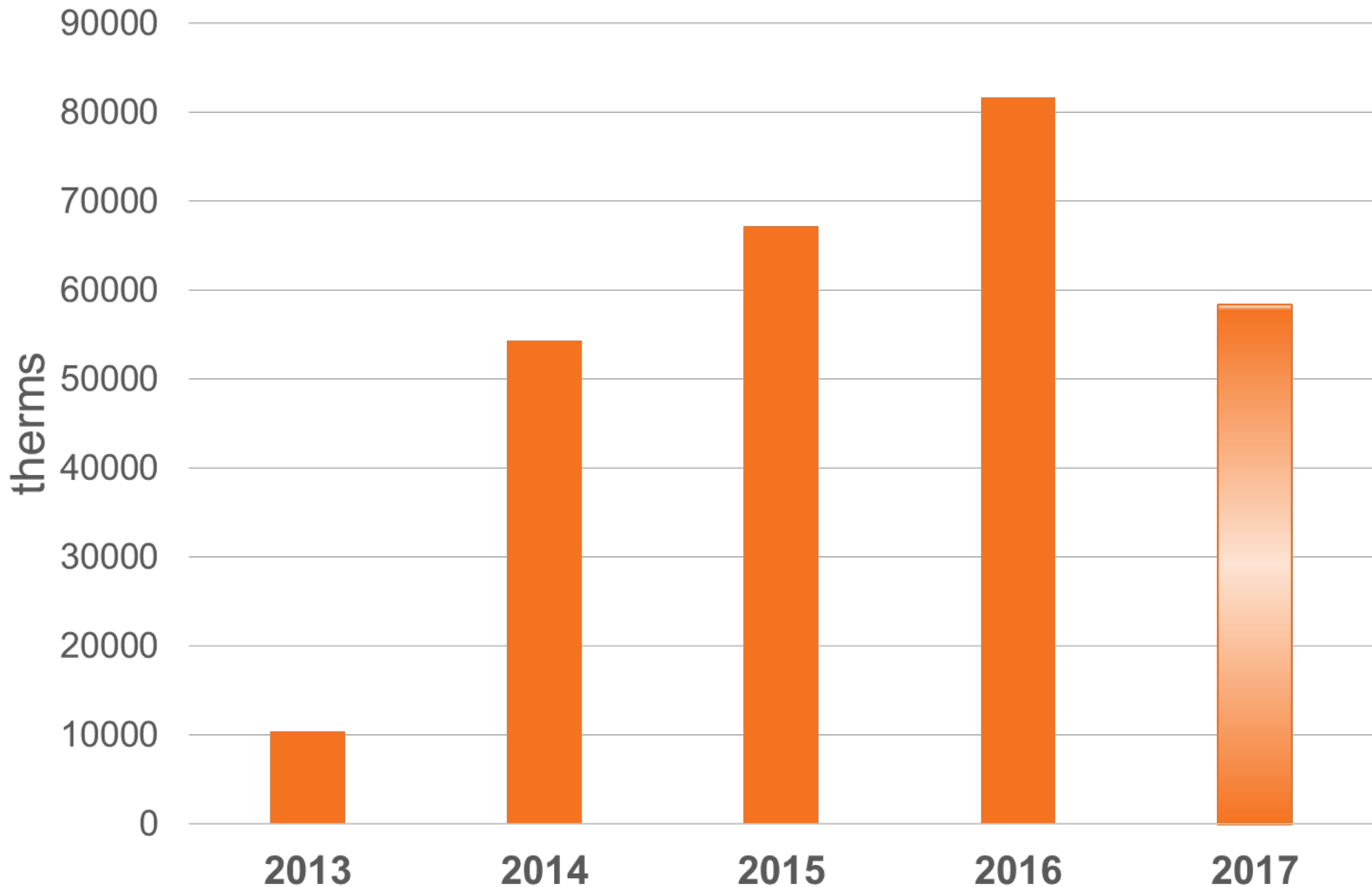


# Prescriptive Measure Trends

## **Gas Savings**

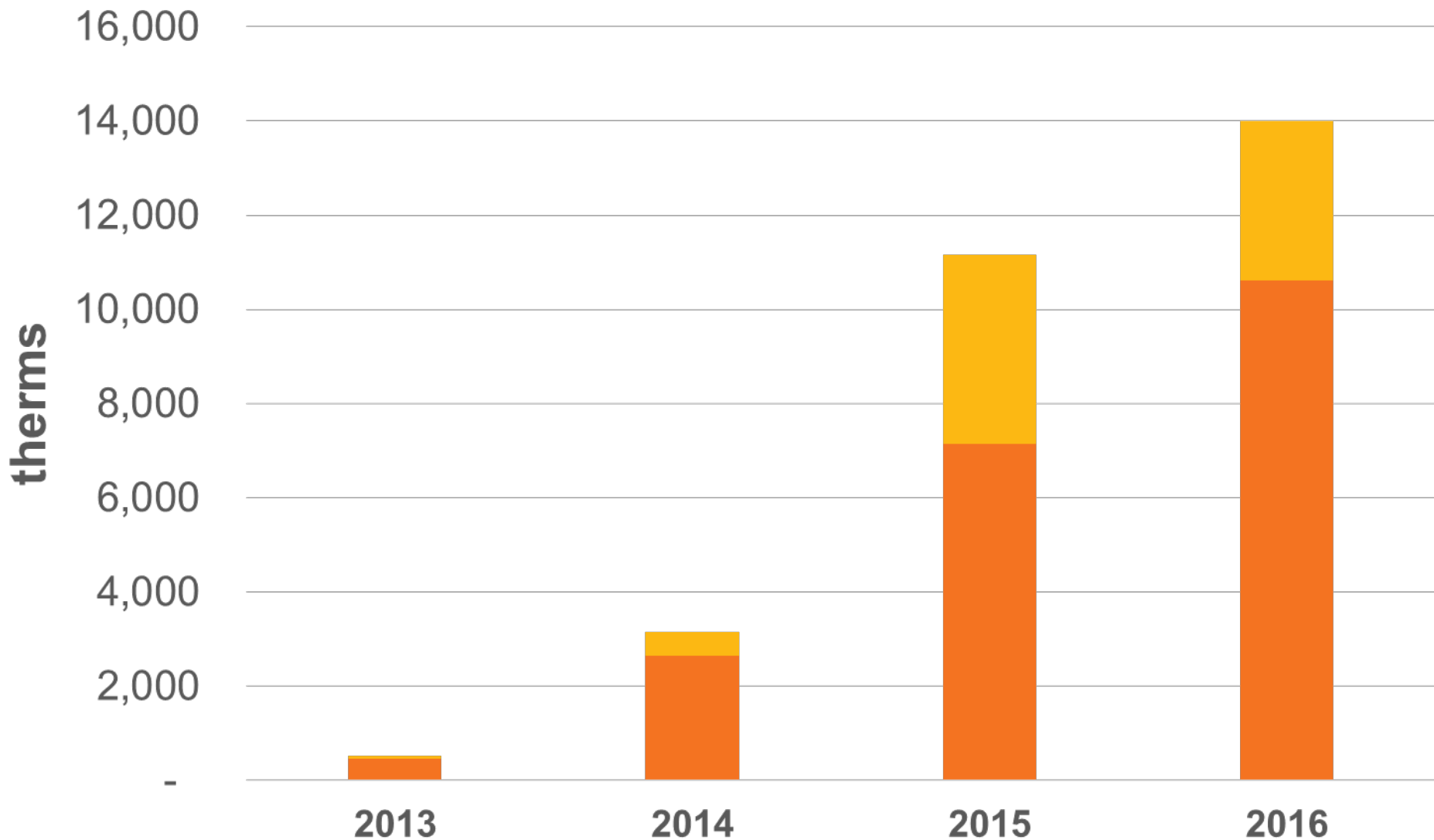


# All Prescriptive Savings—Gas



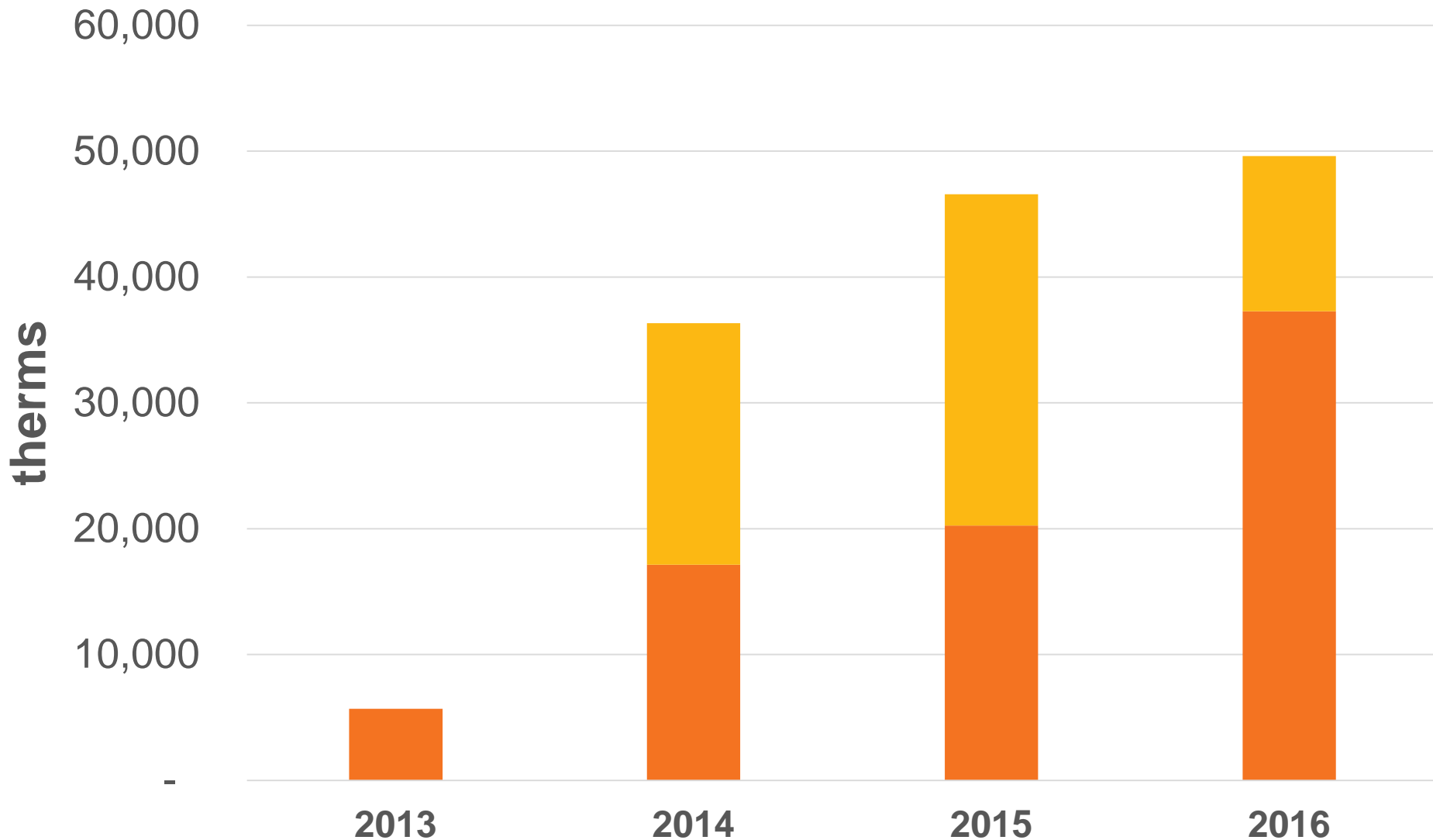
# Water Heating—Gas

■ Tank ■ Tankless

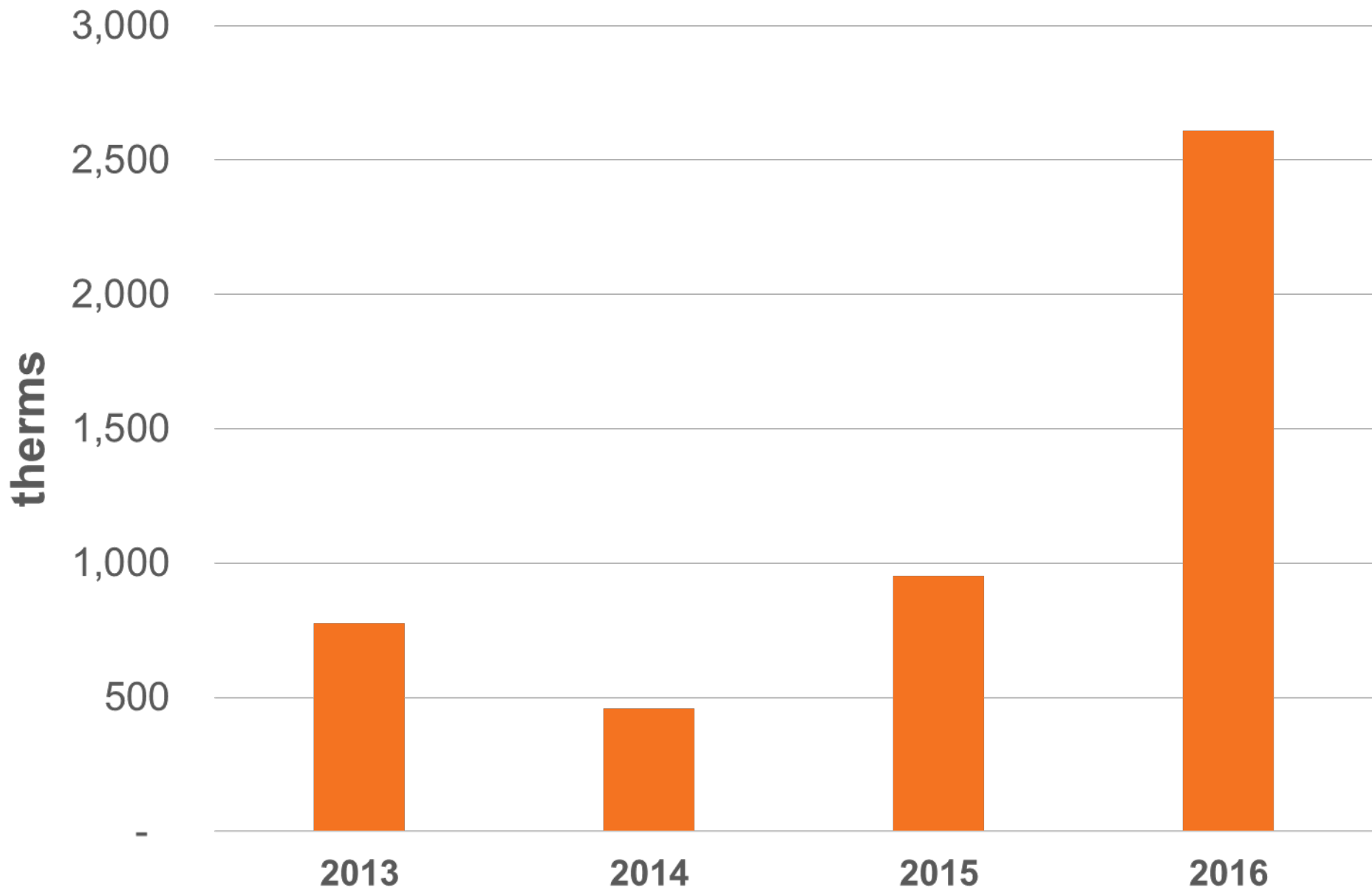


# Boilers and Steam Traps—Gas

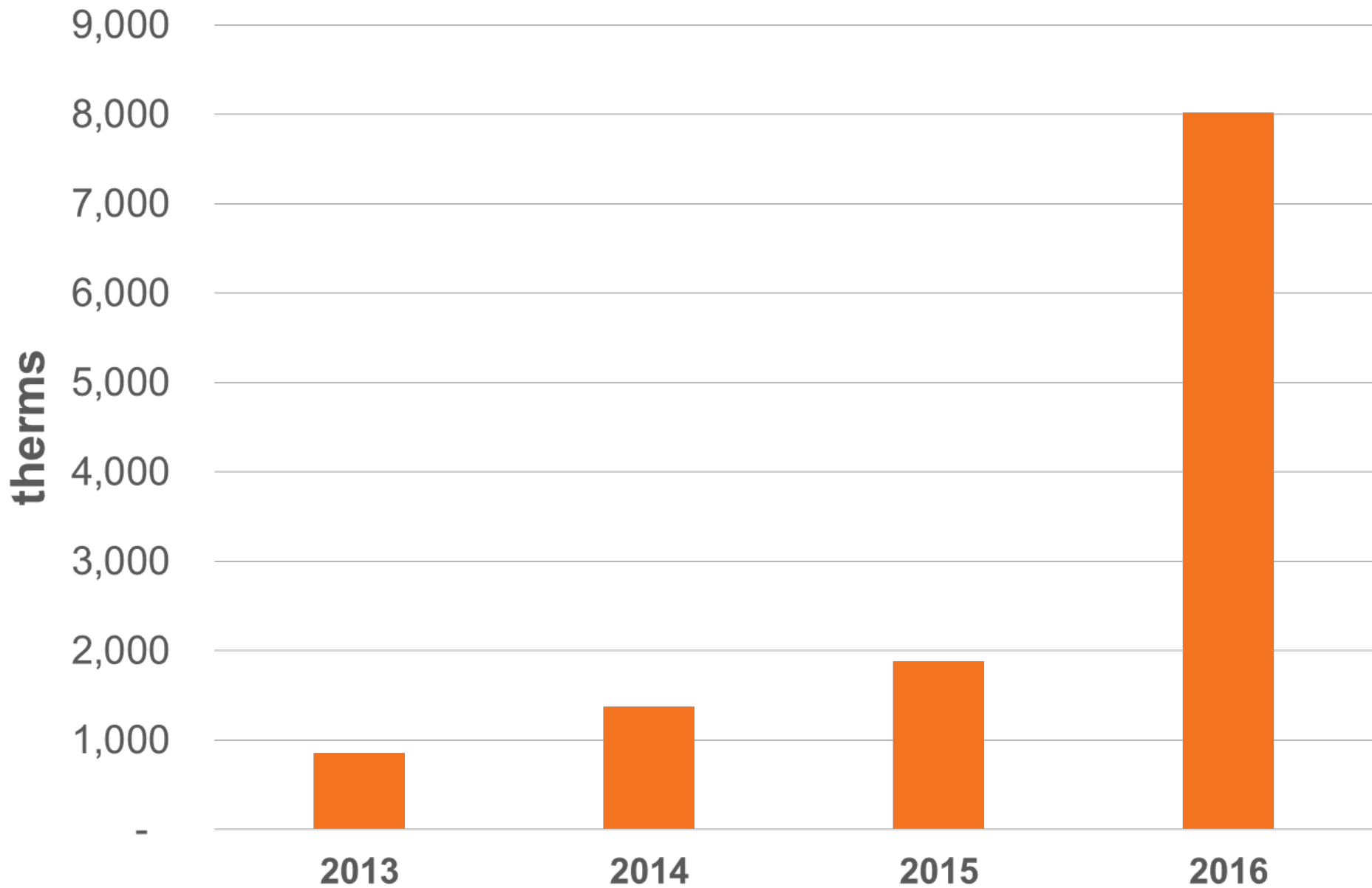
■ Boiler ■ Steam trap



# Furnaces—Gas



# Foodservice Equipment—Gas



# 2017 Direction

# Key Measures for 2017

- Electric

- Ductless heat pumps and packaged terminal heat pumps—high savings, growing in popularity
- Weatherization—high demand, consistent opportunity
- Water heating—strong growth area

- Gas

- Boilers—high savings, high incentive
- Steam traps—high savings, quick payback
- Tankless water heaters—expanding measure, growing in popularity



# On the Horizon

- <199 kBTU tankless water heaters
  - Requirements: no added storage tanks
  - (>200 kBTU measure – unchanged)
- Smart thermostats
  - Qualifying models: Nest and Ecobee
  - All property types qualify

# New Hires

- Brooke Ingram
  - Business Development in Southern Oregon
    - Contact: [brooke.ingram@lmco.com](mailto:brooke.ingram@lmco.com)
    - 503-354-4491
- Dan St. Germain
  - Business Development in Central and Eastern Oregon
    - Contact: [daniel.j.st.germain@lmco.com](mailto:daniel.j.st.germain@lmco.com)
    - 541-419-7907



# Thank You

Nate Collins

Trade Ally Coordinator

[Nate.Collins@Imco.com](mailto:Nate.Collins@Imco.com)

# 40 years



*Helping People Help Themselves*

Joe Vollmar

Housing Director

Toby Bunow

Housing Program  
Supervisor



# ACCESS HELPS

- ❖ We provide food, housing, warmth and other essential services to Jackson County's low income children, families, seniors and people with disabilities
- ❖ As the Community Action Agency of Jackson County, ACCESS has been helping residents break the cycle of poverty since the 1970's
- ❖ ACCESS currently serves local residents through 15 programs designed to address problems from one-time emergencies to longer-term issues



# Services

## Support Service

- ❖ Energy assistance
- ❖ Senior/Disabled outreach
- ❖ Veteran services
- ❖ Medical equipment
- ❖ Rental assistance
- ❖ Deposit assistance

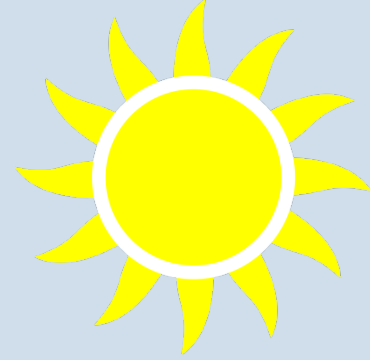
## Housing

- ❖ Homeownership & related services
- ❖ Homebuyers assistance
- ❖ Financial education
- ❖ Weatherization
- ❖ Low-income rental units

## Nutrition

- ❖ 24 food pantry locations
- ❖ Collaboration with local grocery stores, farms & community gardens
- ❖ Provide monthly food boxes to low income seniors

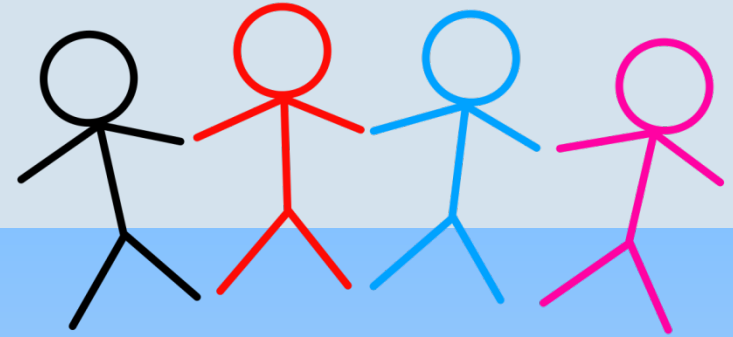




# ACCESS Weatherization



# The Low-Income Weatherization Assistance Program (WAP)



The Low-Income Weatherization Assistance Program (WAP) provides weatherization and energy conservation services at no cost to households at or below 200% of federal poverty income level.

Poverty Income Guidelines by Family Size - Source USDOE		
Household Unit Size	Annual Income	Monthly Income
1	\$23,760	\$1,980.00
2	\$32,040	\$2,670.00
3	\$40,320	\$3,360.00
4	\$48,600	\$4,050.00
5	\$56,880	\$4,740.00
6	\$65,160	\$5,430.00
7	\$73,460	\$6,121.67
8	\$81,780	\$6,815.00
9	\$90,100	\$7,508.33
10	\$98,420	\$8,201.67
11	\$106,740	\$8,895.00
12	\$115,060	\$9,588.33
each additional member	\$8,320	\$693.33

## How to Apply:



## Weatherization

- ☑ The occupant of the home must apply for weatherization assistance
- ☑ Assistance can be provided to both renters and home owners
- ☑ Both mobile and stick built homes
- ☑ Applicants are placed on a waitlist, this program does not provide emergency assistance
- ☑ Current estimated wait on the waitlist is approximately 2-3 years
- ☑ Applicants wait time is determined by a priority point system

# How It Works:

Once the client has been qualified for the program, ACCESS will send a Weatherization Technician to their home to conduct a detailed inspection known as an “energy audit”. This audit includes conducting a blower-door and duct-blaster test to determine what work is required to meet weatherization standards.

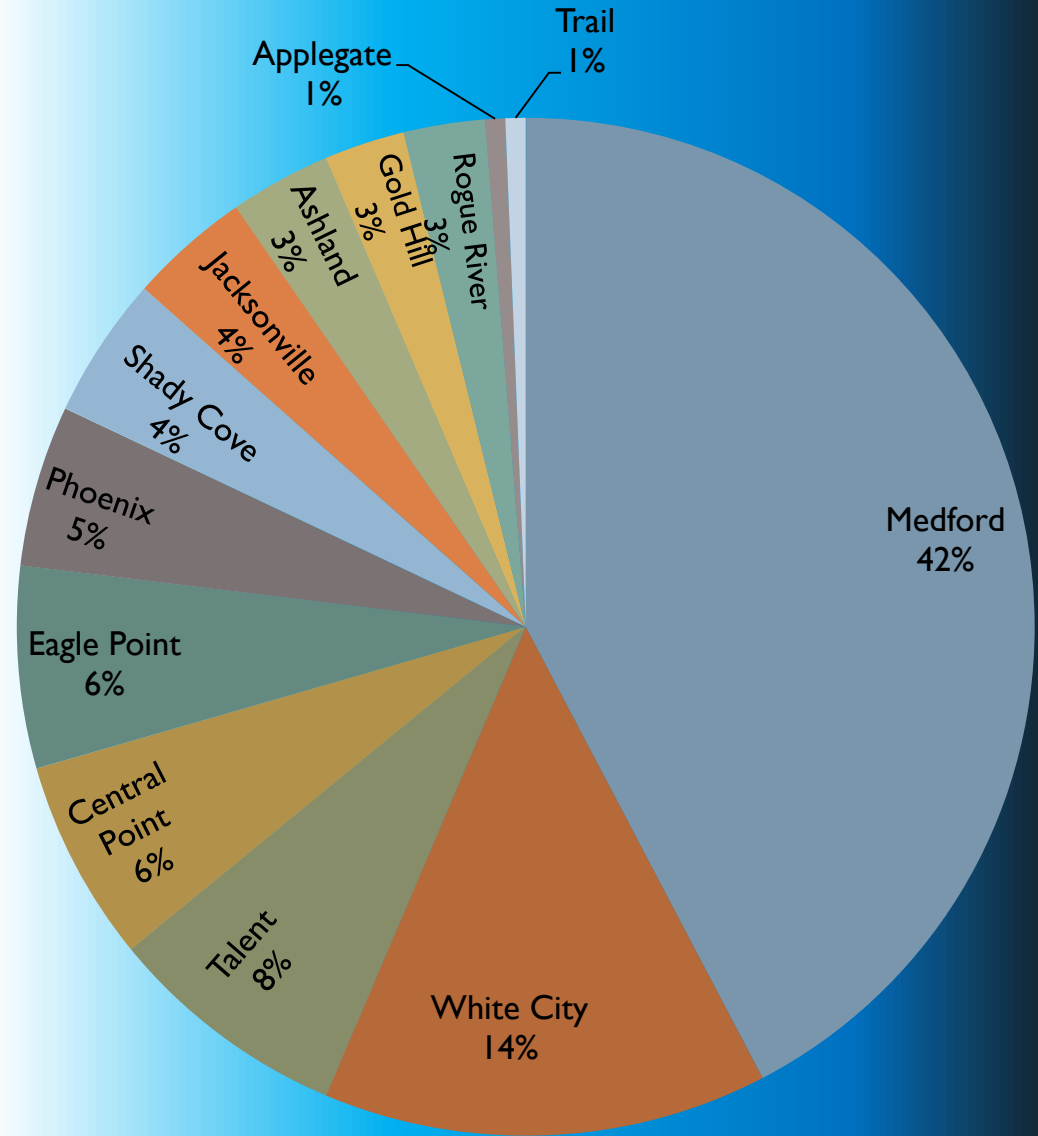


ACCESS then contracts with local contractors to install the recommended improvements at no cost to the client. We inspect 100% of the weatherization work completed.



# In 2016:

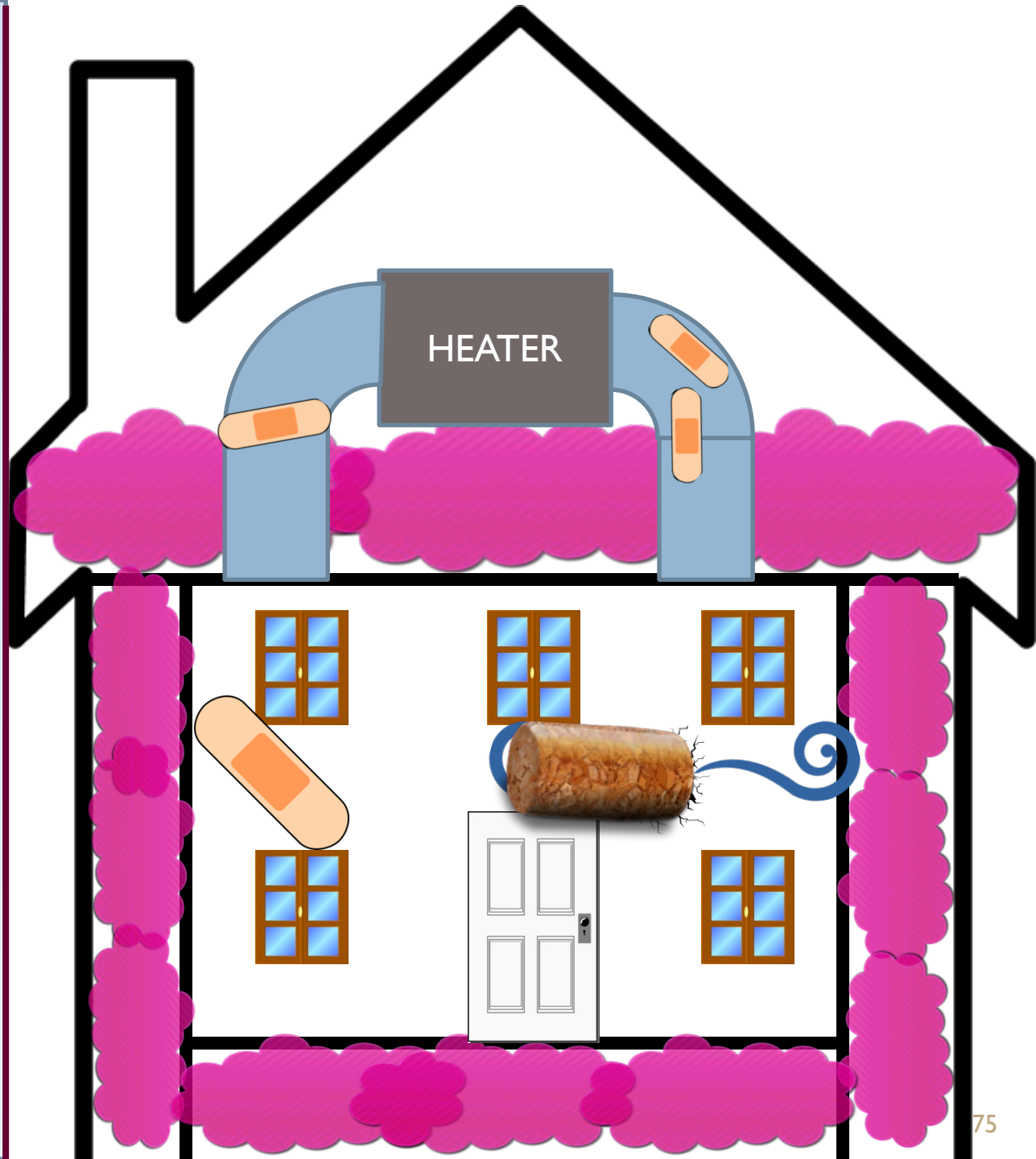
- ACCESS weatherized over 150 homes in Jackson County
- $\frac{3}{4}$  of the homes were mobile homes
- The average annual energy savings per home was \$360



Out of the over 150 homes weatherized in Jackson County

## Possible Energy Saving Improvements:

- ✓ Ceiling, wall and floor insulation
- ✓ Energy efficient windows
- ✓ Energy related minor home repairs
- ✓ Air infiltration reduction
- ✓ Heating duct improvements





# Mobile Home Roofing



Before

- Insulation added inside the attic cavity
- White TPO membrane reflects heat & seals against rain
- Save 10%-15% in energy costs

One item ACCESS provides through weatherization, that is unique to mobile homes, is a new TPO insulated roof system.

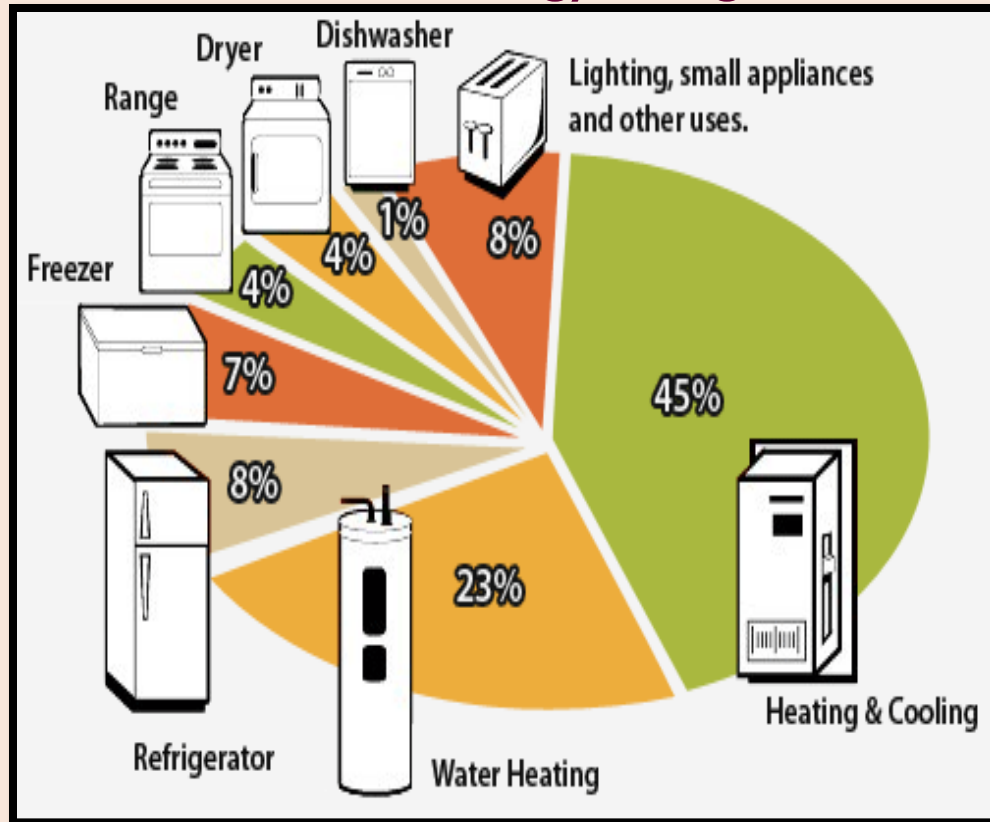


After

# Energy Conservation Education

In Oregon, there are over 80,000 households making less than half of the poverty rate, while 20% of their income goes towards energy costs.

## Home Energy Usage



Along with home improvements, ACCESS offers;

- 👍 Energy Education classes
- 👍 In-home Energy Education
- 👍 Free Energy Education/Saving kits

This low income program provides the means to lower the energy cost within the home, as well as provide a more comfortable living space.

Not everyone meets the program qualifications, if people are over income or if there are improvements that we cannot provide; the client will be referred to the Energy Trust

Household Unit Size	Annual Income	Monthly Income
1	\$23,760	\$1,980.00
2	\$32,040	\$2,670.00
3	\$40,320	\$3,360.00
4	\$48,600	\$4,050.00
5	\$56,880	\$4,740.00
6	\$65,160	\$5,430.00
7	\$73,460	\$6,121.67
8	\$81,780	\$6,815.00
9	\$90,100	\$7,508.33
10	\$98,420	\$8,201.67
11	\$106,740	\$8,895.00
12	\$115,060	\$9,588.33
each additional member	\$8,320	\$693.33

## ACCESS Contact Information:

Phone: 541-779-6691

Web: [accesshelps.org](http://accesshelps.org)

# Contractors interested in doing work for ACCESS?

Please contact us:

TBunow@accesshelps.org

JVollmar@accesshelps.org

- 👍 Working with a stable, established community service agency
- 👍 Weatherization projects year around
- 👍 Variety in workload
- 👍 Contributing to the improvement of homes and lives
- 👍 Service to community



\*All of our contractors are required to perform all measures prescribed by ACCESS themselves, they cannot sub-contract.

# Thank you

Phone: 541-779-6691

Info @: [accesshelps.org](http://accesshelps.org)







EPS is a tool to assess a home's energy consumption, cost and carbon footprint.

EPS™ is an energy performance score that measures and rates the energy consumption and carbon footprint of an existing home. The lower the score, the better—a low EPS identifies a home as energy efficient with a smaller carbon footprint and lower energy costs.

Estimated Monthly Energy Costs

**\$69\***

Estimated average annual energy costs:

**\$824\***

Estimated average energy costs per month: Electric \$28, Natural gas \$43

Location:  
100 N Sample St  
Portland, OR 972xx

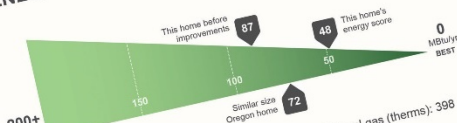
YEAR BUILT: 1962  
SQ. FOOTAGE: 890  
EPS ISSUE DATE: 04-01-2013

Utilities:  
Gas: NW Natural  
Electric: Portland General Electric

ENERGY CONSUMPTION: Measured in millions of Btu per year (MBtu/yr).  
One million Btu = 293 kWh or 10 therms.

Energy Score

**48**



Estimated average energy usage: Electric (kWh): 4,378\*, Natural gas (therms): 398



# Home Energy Scoring Updates

Eric Koch





# Agenda

- Energy Trust EPS Update
- City of Portland Home Energy Disclosure Ordinance Overview

# Energy Trust's Energy Performance Scores

- EPS for Existing Homes
  - After stakeholder input and review, EPS for Existing Homes will no longer be offered as of July
  - Earth Advantage will introduce and facilitate the Department of Energy's Home Energy Score using CakeSystems software
  - Energy Trust will work with CakeSystems and the Oregon Department of Energy to ensure Home Energy Score sheets are HB 2801 compliant
- EPS for New Homes
  - Remains unchanged and available for newly constructed above-code homes



# City of Portland Home Energy Score Ordinance

- The City of Portland recently adopted a policy to require home energy scores on single-family homes at time of sale
- Policy effective January 1, 2018

# Background to Home Energy Score Ordinance

- A companion to the Portland's Commercial Energy Use Disclosure Policy
- Primary approach to produce changes in the residential sector for the purpose of meeting the city's Climate Action Plan





# Requirements

The City of Portland's policy requires sellers of single-family homes to:

1. Obtain a home energy performance report that includes a home energy score
2. Disclose the information from the report to the City of Portland at or before the time that the home is listed publicly for sale on the market



# U.S. DOE—Home Energy Score



## Home Energy Score

Score

Home Facts

Recommendations

ADDRESS 12345 Honeysuckle Lane  
Smithville, AR 72466

HOME SIZE 1,800 square feet

YEAR BUILT 1970

AIR CONDITIONING Yes

Your home's  
current score **2**

Score with  
improvements

**6**

Estimated  
annual  
savings

**\$541**

Uses  
more  
energy

1

2

3

4

5

6

7

8

9

10

Uses  
less  
energy

Learn more at [homeenergyscore.gov](http://homeenergyscore.gov)



The **Home Energy Score** is a national rating system developed by the U.S. Department of Energy. The Score reflects the energy efficiency of a home based on the home's structure and heating, cooling, and hot water systems. The **Home Facts** provide details about the current structure and systems. **Recommendations** show how to improve the energy efficiency of the home to achieve a higher score and save money.

OFFICIAL ASSESSMENT | Assessor ID 101019 | Assessed on Nov 20, 2015 | Label ID# 99011 | v2015

- Online tool; can be linked to other software tools
- Takes an hour or less to complete
- Can be generated by utilities, contractors, home inspectors or others
- Automated and no reporting requirements
- Over 60,000 scores

# Construction and Use Type

- **Single-family homes** include
  - Existing, detached single-family homes
  - Existing attached single-family structures like townhomes
  - Newly constructed homes that are either detached or attached side-by-side
- The policy will apply to attached single family homes that are laid out side-by-side and **not stacked**
- Energy modeling software can provide individual scores for attached homes only when they are **side-by-side** and not stacked





# Rentals and ADUs

- Initially, the requirement will apply only to owner-occupied units
- Requirements for single-family rental homes will be phased in over time
- Detached accessory dwelling units (ADUs) are not covered by the proposed requirement



# Waiver for Energy Trust EPS-Rated New Homes

- Newly-built homes receiving an Energy Trust EPS are given a waiver from complying to exact rules of the ordinance
  - EPS to be temporarily considered a compliant score
  - Waiver process is in development
  - Energy Trust will help develop process with city to ensure minimal impact on EPS verifiers and builders



# City of Portland Implementation Partners

Earth Advantage has been selected to support the City of Portland in implementing the Home Energy Score Ordinance, and will:

- Support prospective assessors with onboarding, training and mentoring (Home Performance Guild will assist)
- Oversee all required quality assurance activities for assessors issuing scores
- Provide information and training options to the real estate industry
- Collaborate with Home Performance Guild and Enhabit on the city's implementation plan

# Portland Home Energy Scoring

For more information, visit the City of Portland's Home Energy Score Policy web page, or read the adopted code language:

- <https://www.portlandoregon.gov/bps/71421>
- <http://www.portlandoregon.gov/bps/article/620857>







## Next Steps

- Stakeholder group formed to prepare market
- HB 2801 approval process
- Onboarding of more Home Energy Assessors to accommodate demand (business opportunity for new homes verifiers)
- Study to determine HES/EPS compatibility
- Automatic RMLS data transfer
- Explore seamless process to create Home Energy Scores with REM/Rate inputs



Questions?





# Thank You

Eric Kock  
Program Manager, Existing Homes

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# Thank You

Please join us for the first  
breakout sessions at 10:40 a.m.