



Trade Ally Forum  
April 11, 2017



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



# Residential Program Results and Trends

Marshall Johnson

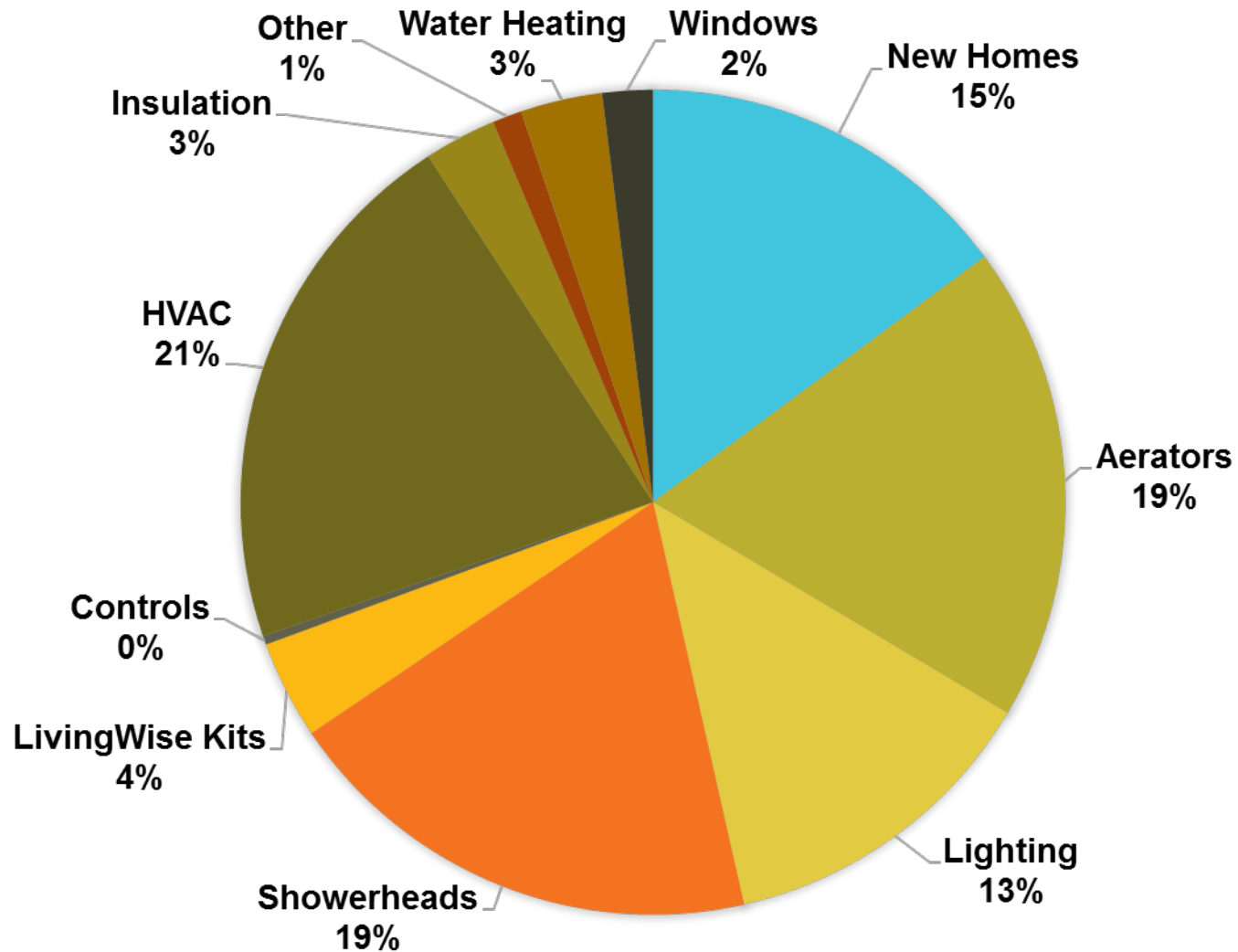
# 2016 Program Results

- 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

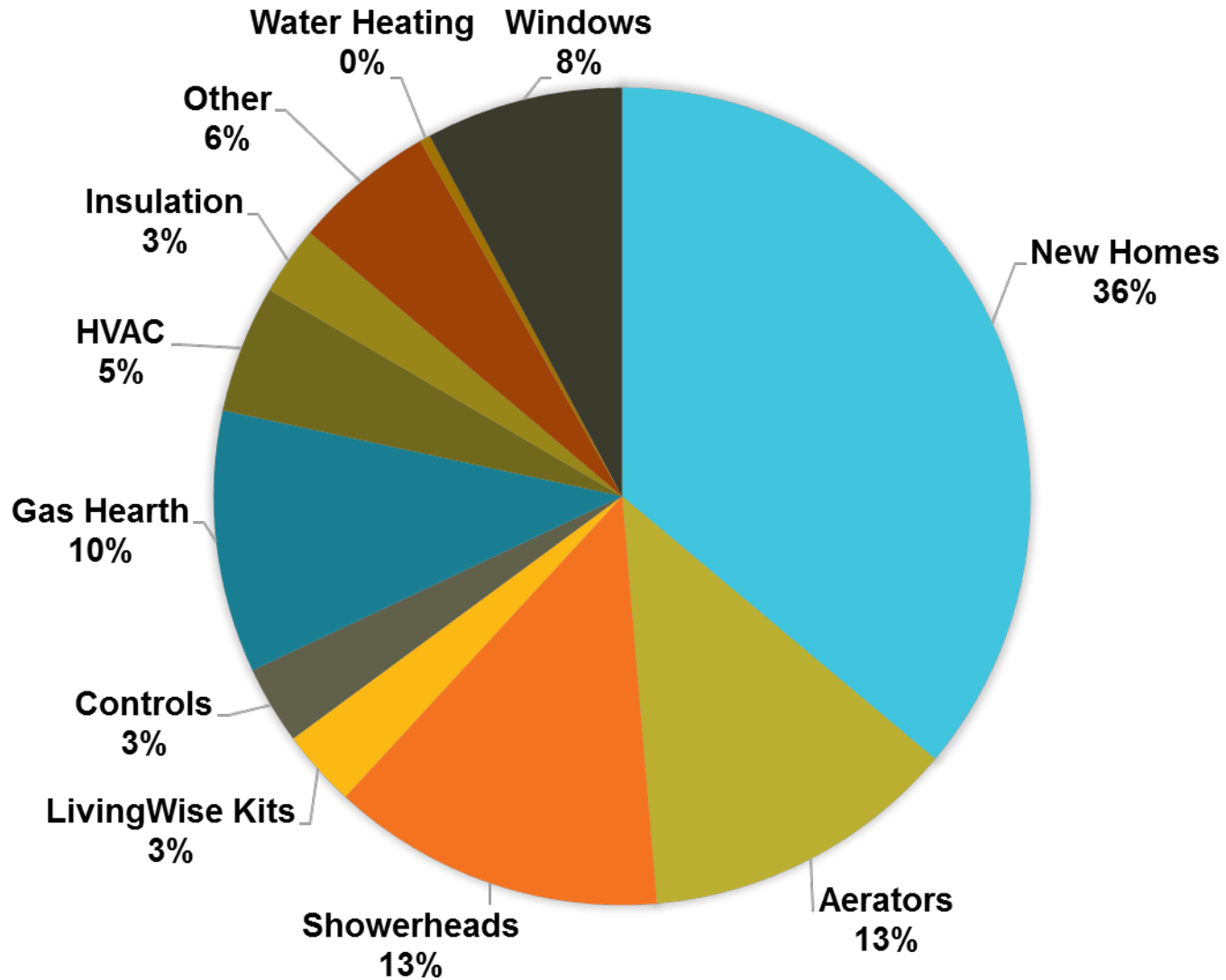


# Electric Savings—2016



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

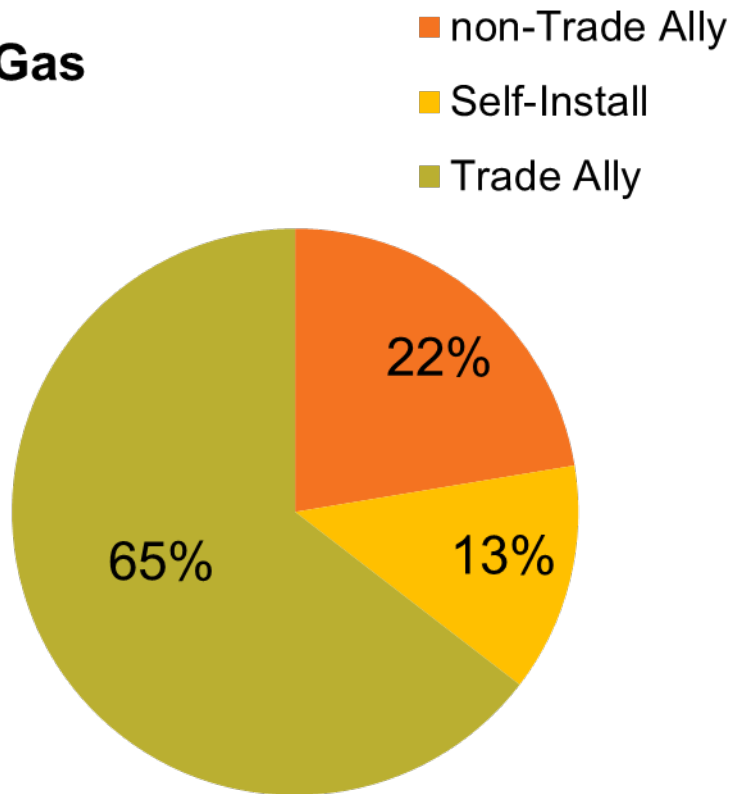
# Gas Savings—2016



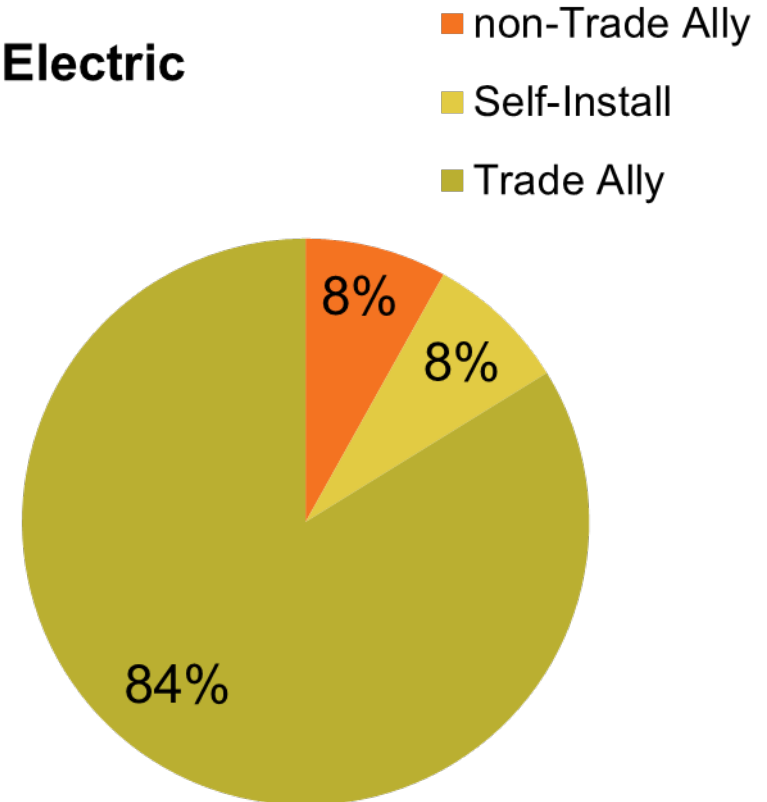
Results are for New Homes and Existing Homes in Oregon & SW Washington

# Existing Homes Project Installations

## Gas



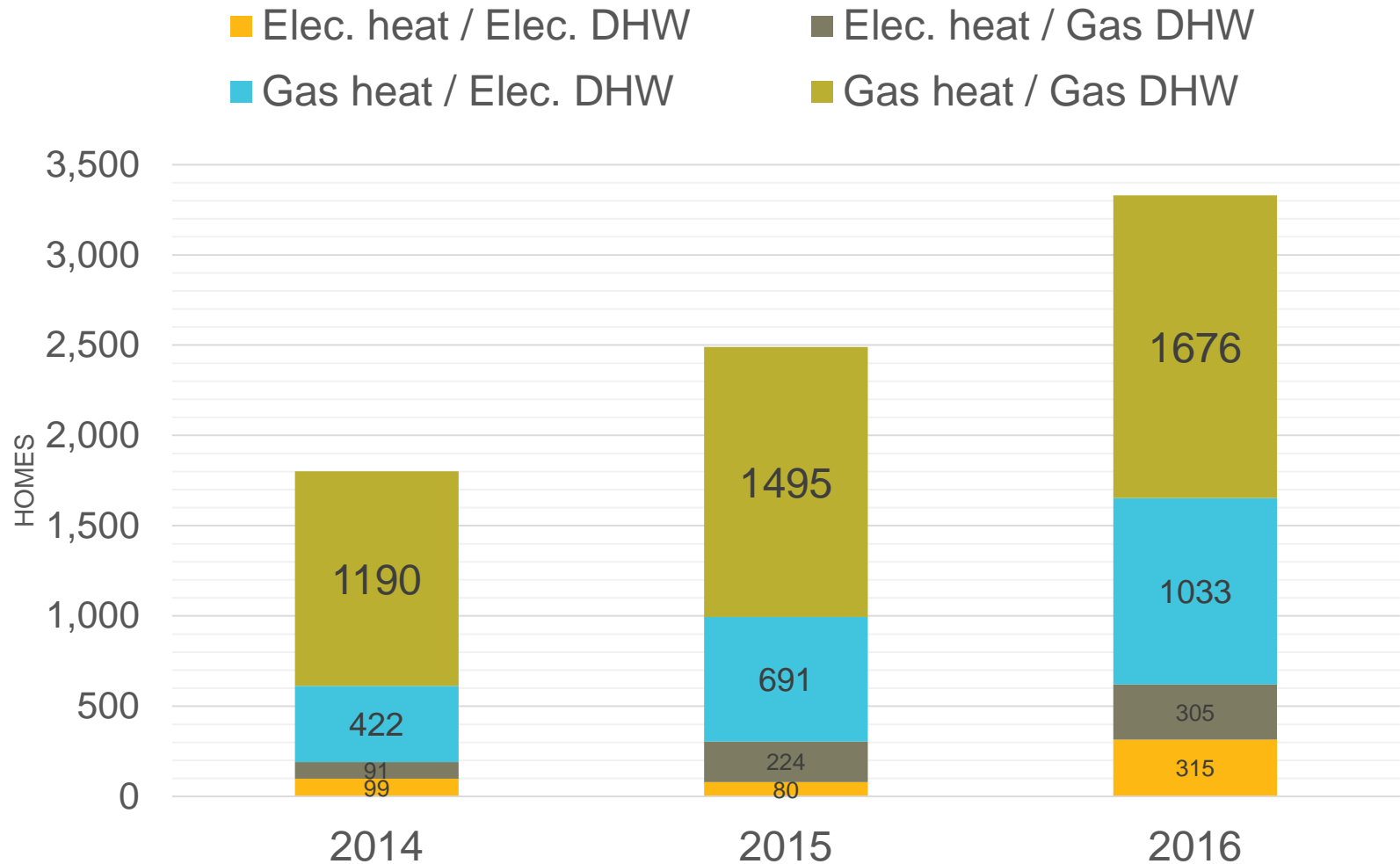
## Electric



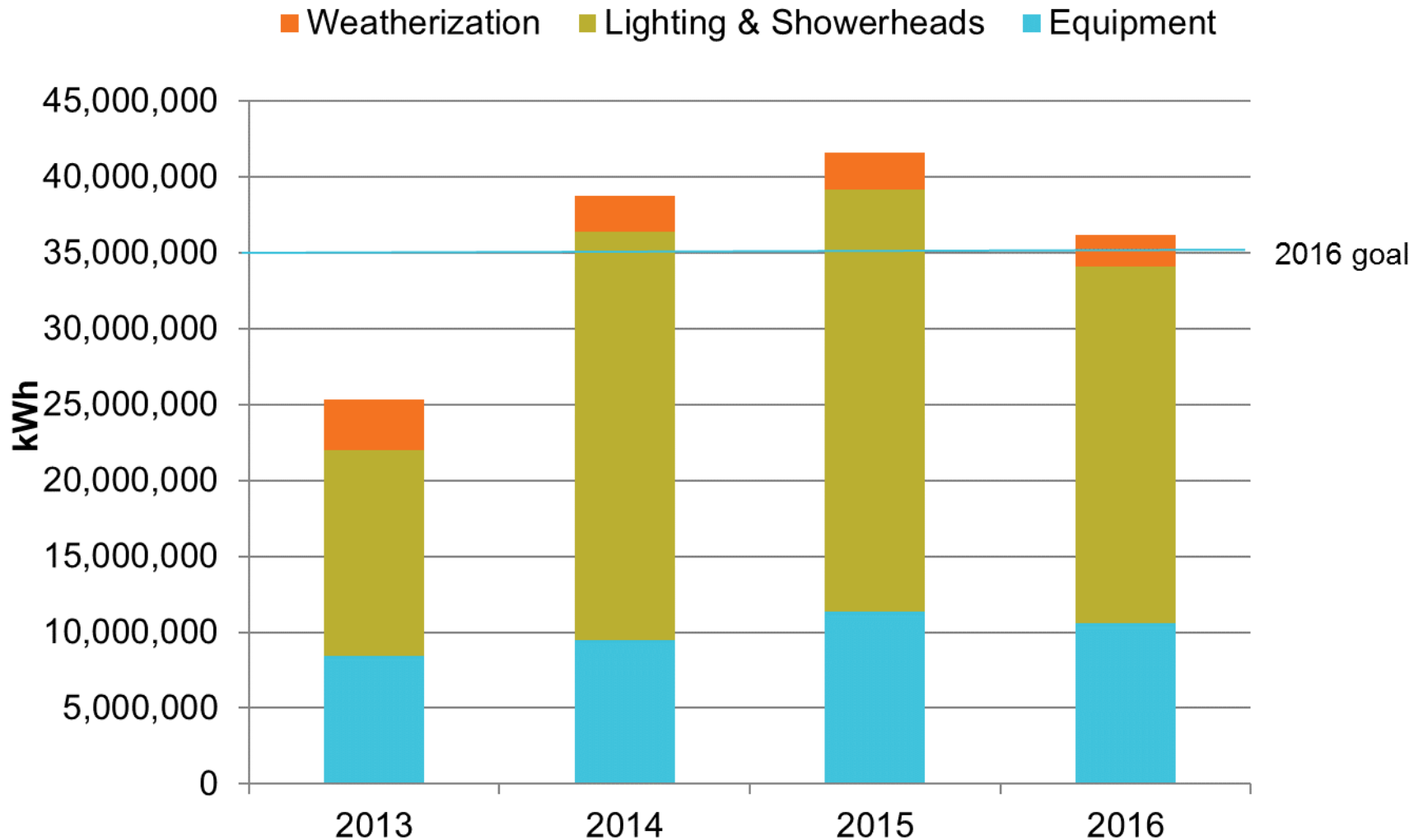
# 2016 Trends



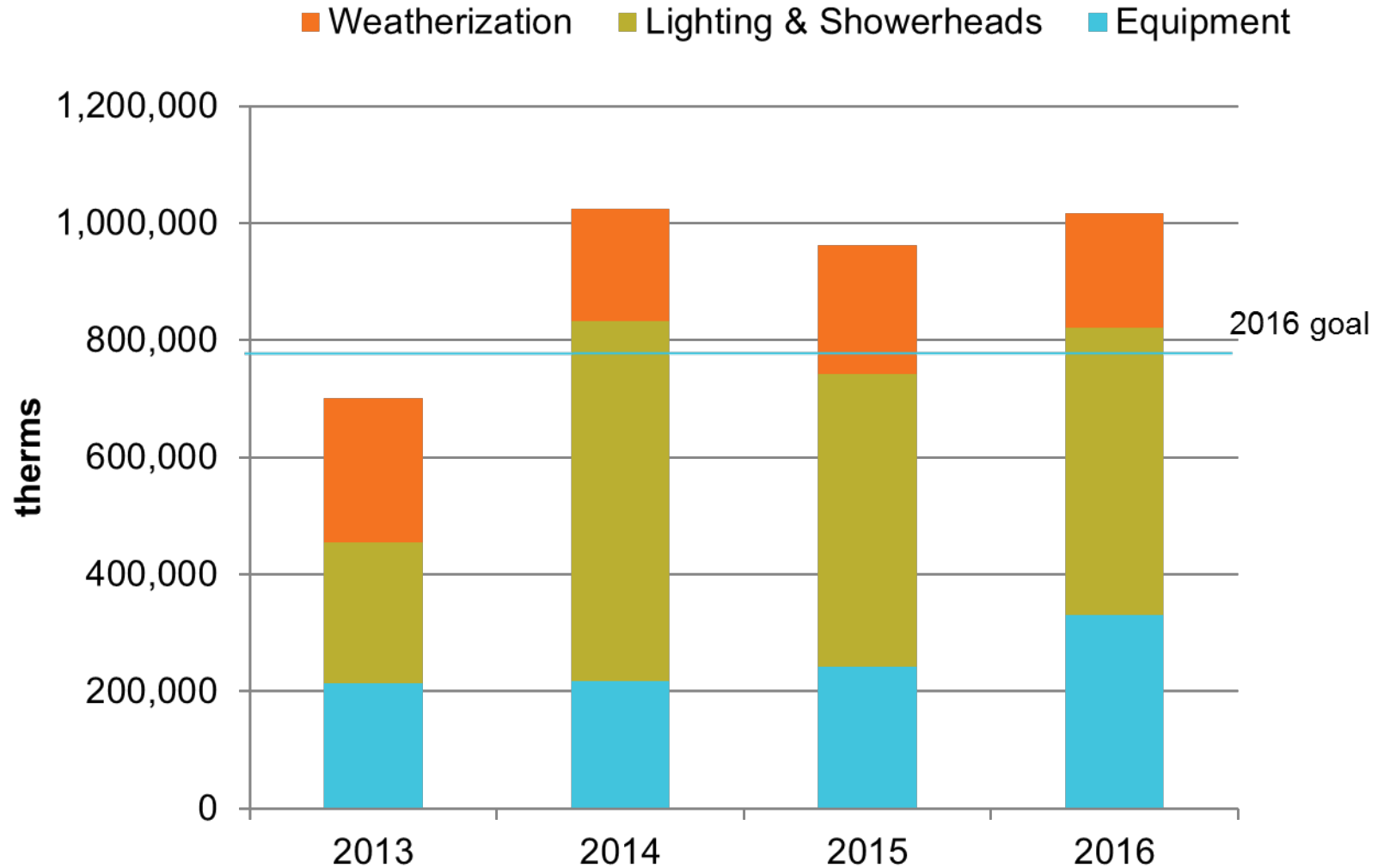
# EPS New Homes Trends



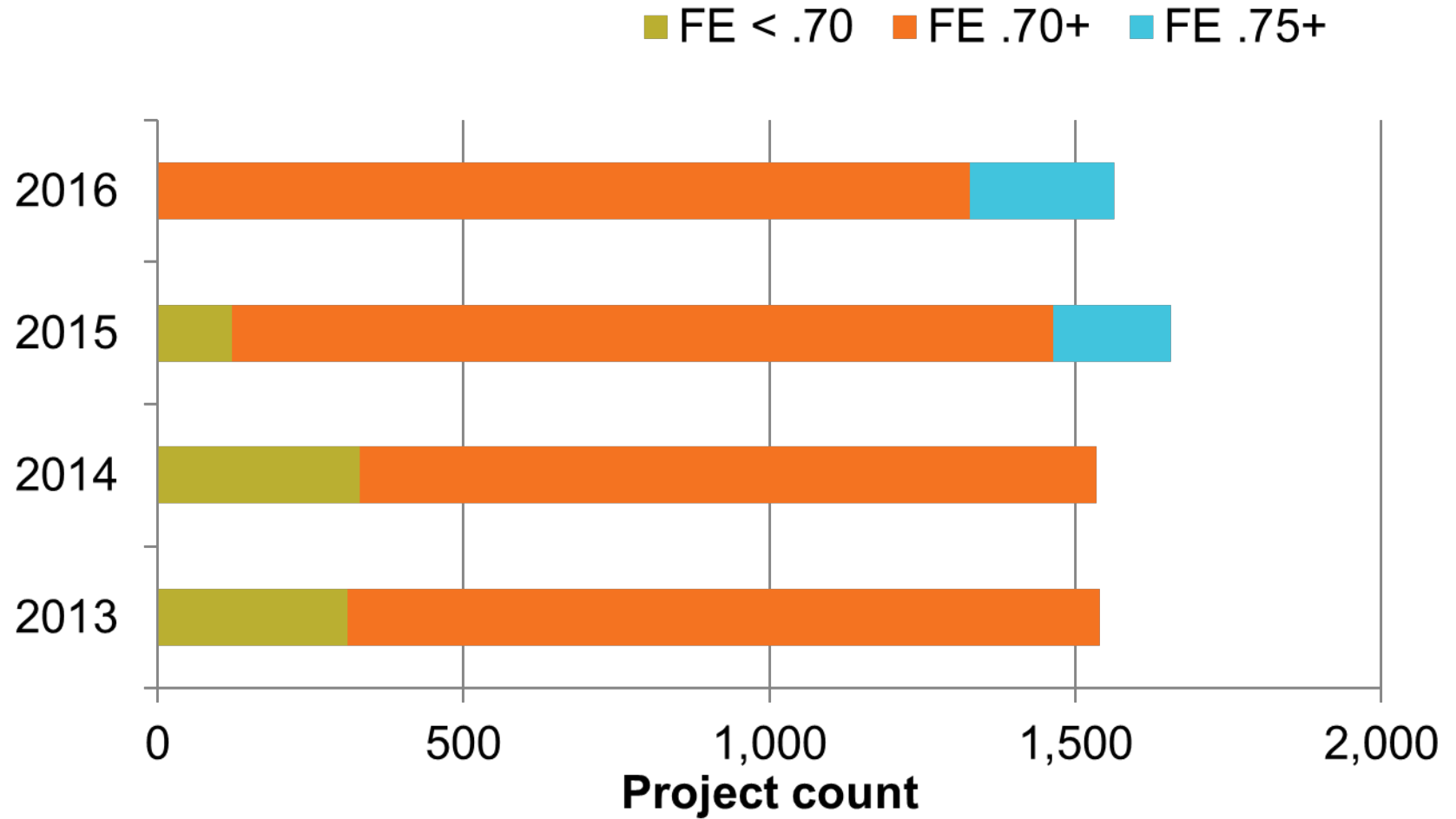
# Existing Homes Trends—Electric



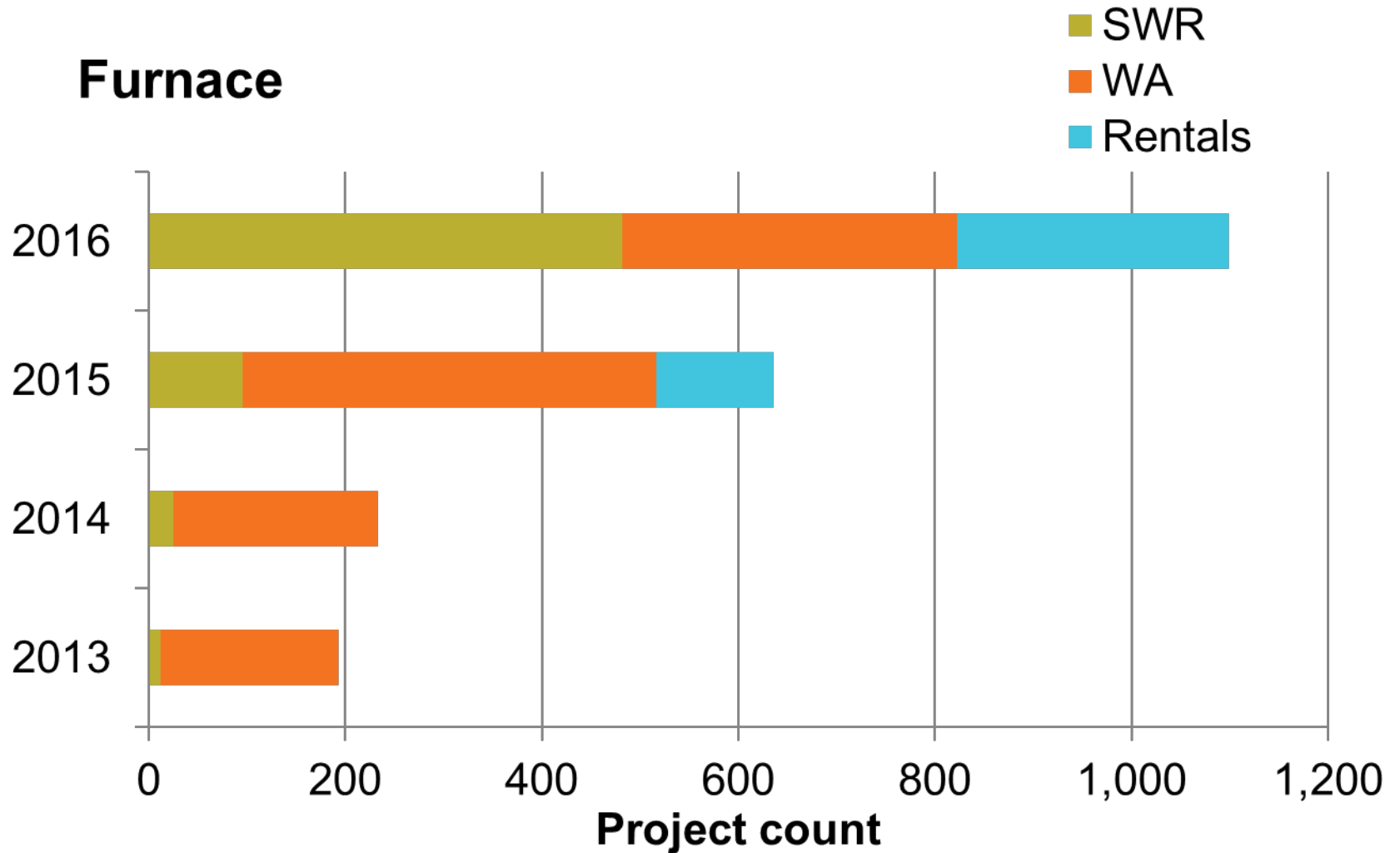
# Existing Homes Trends—Gas



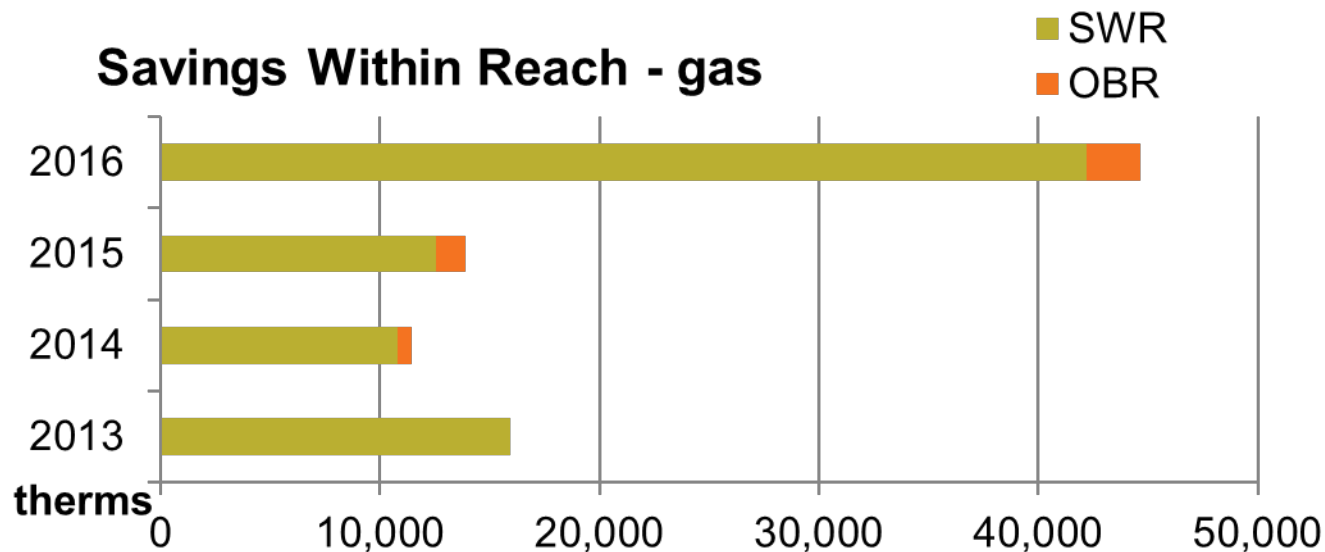
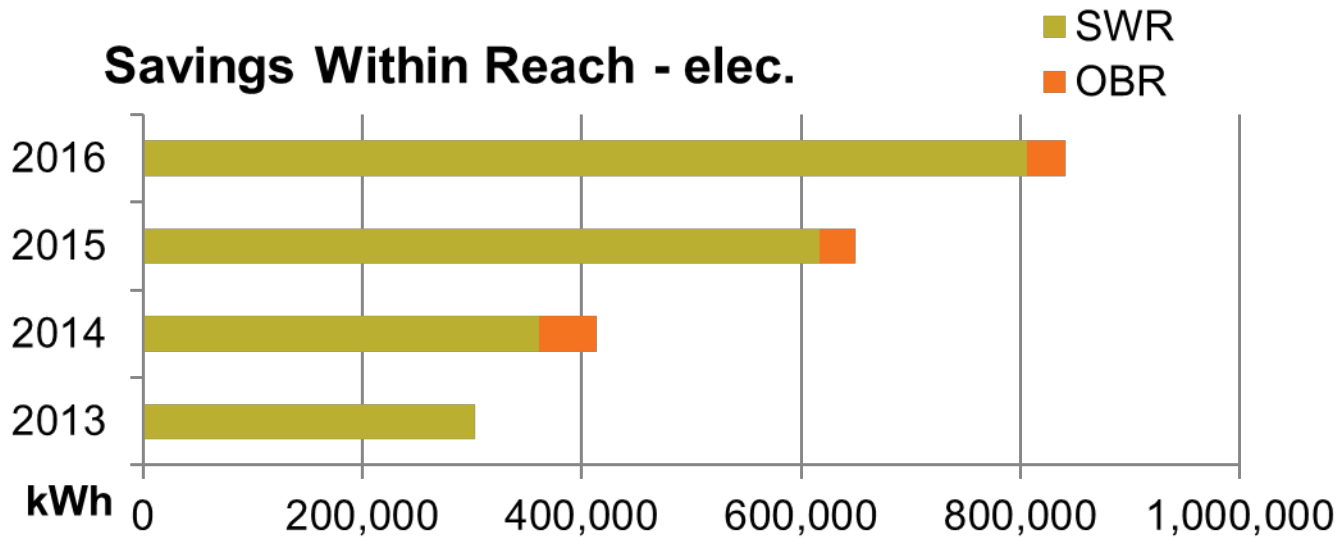
# Gas Hearth Trends



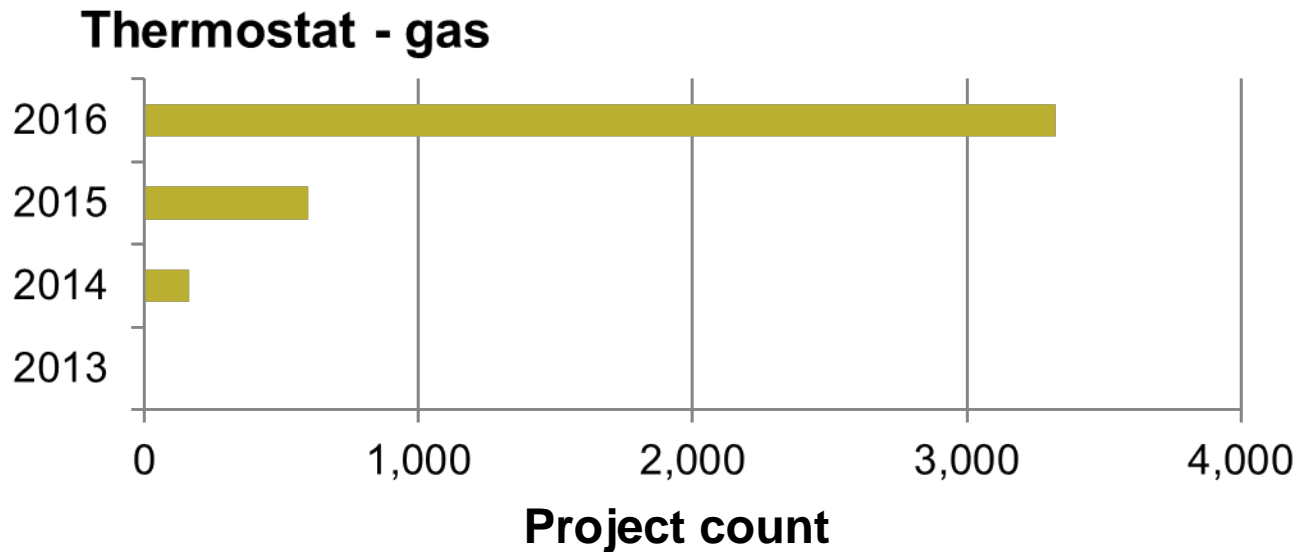
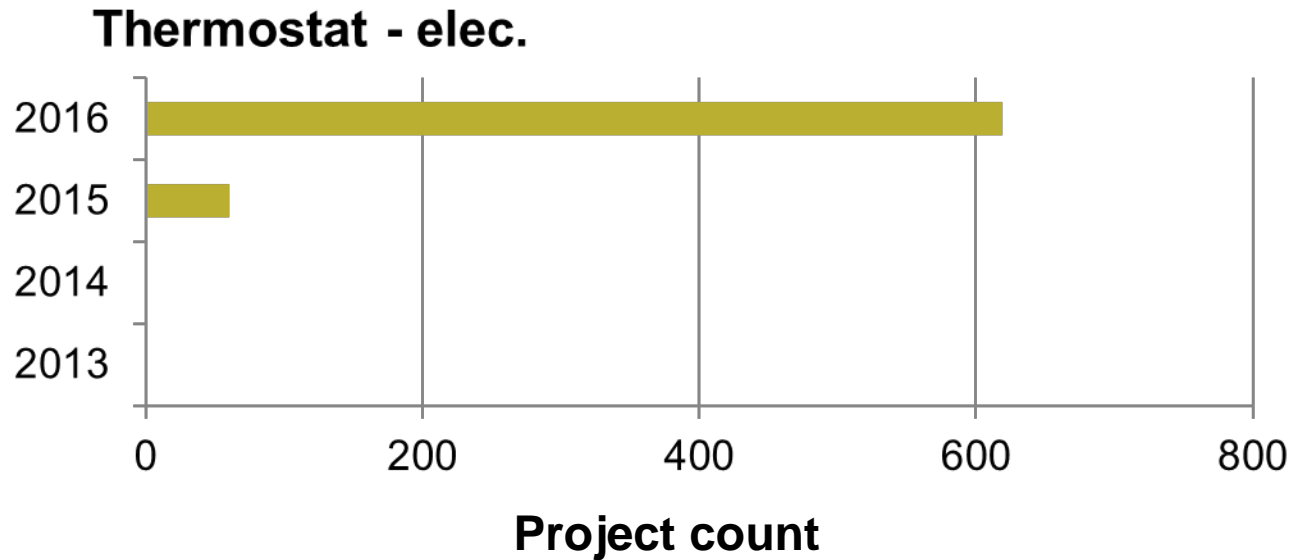
# Gas Furnace Trends



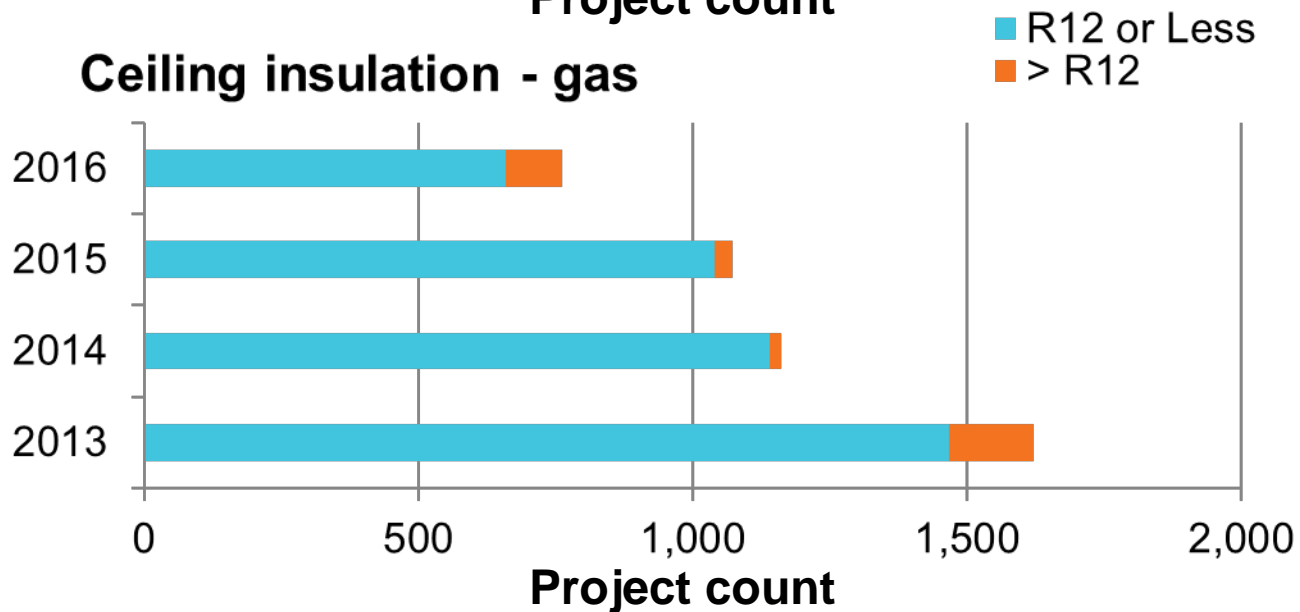
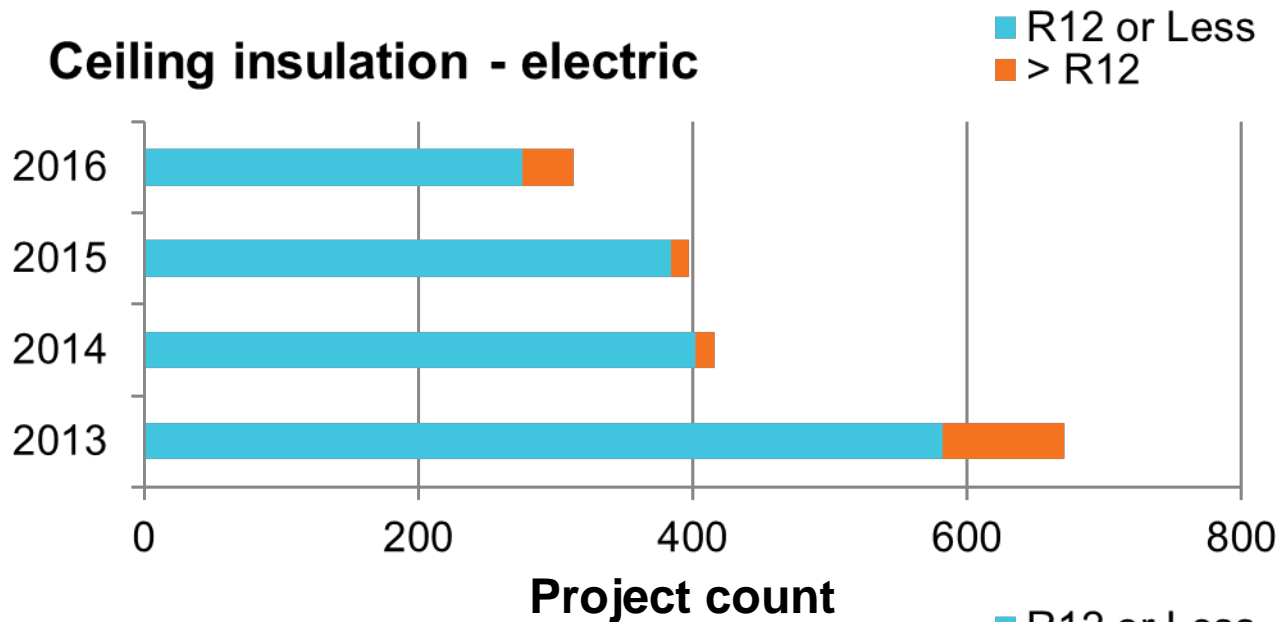
# Savings Within Reach Trends



# Thermostat Trends

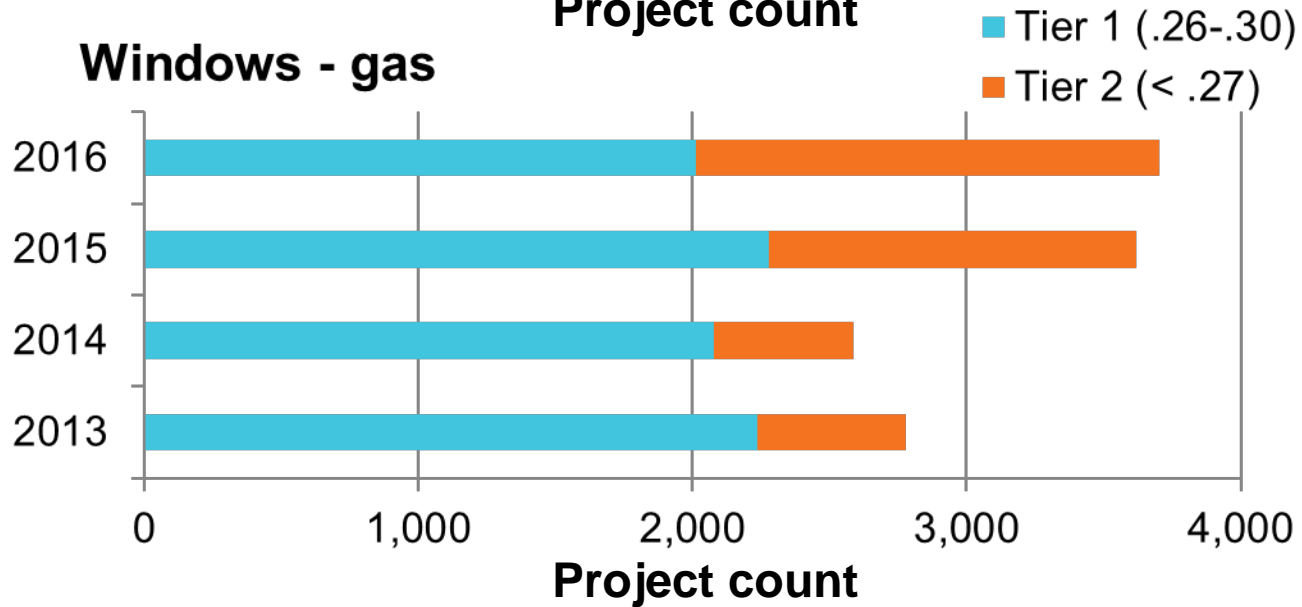
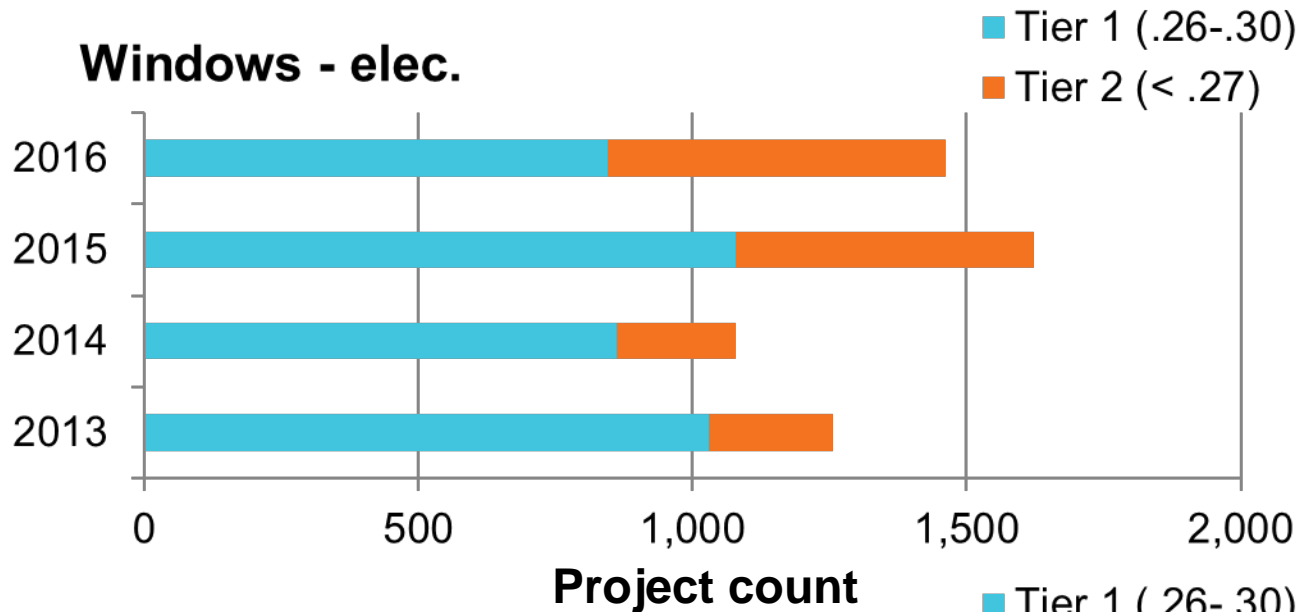


# Insulation Trends

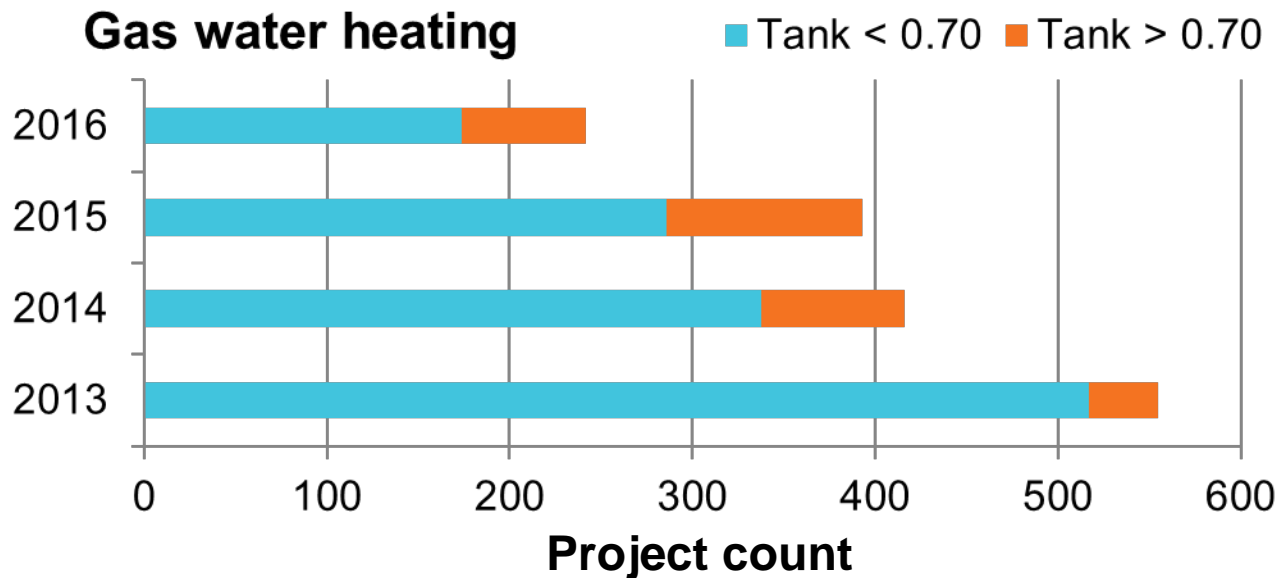
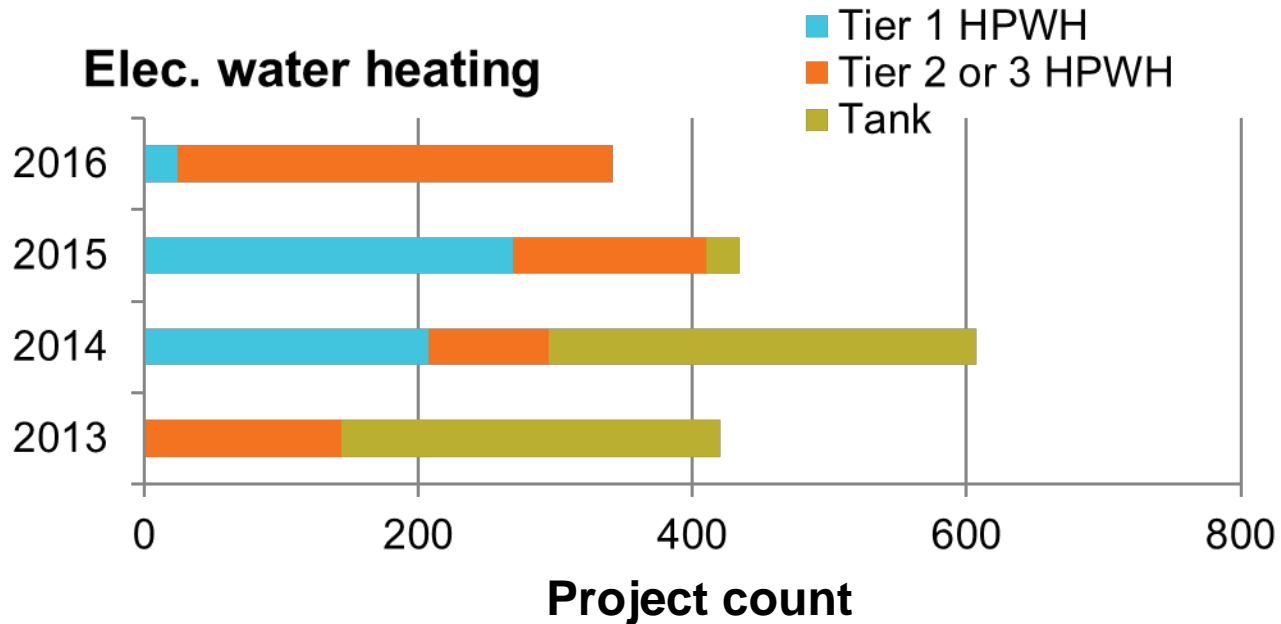




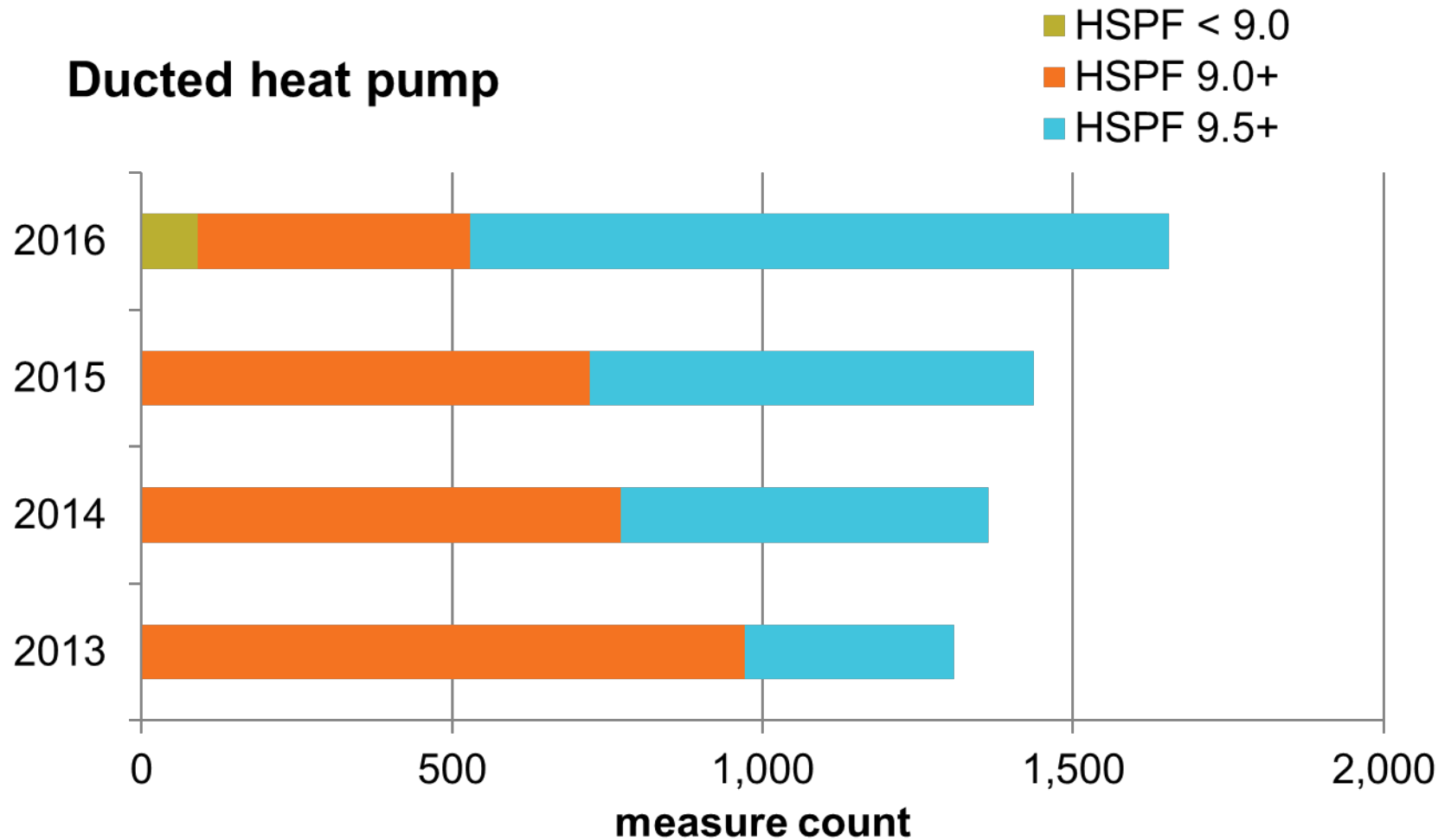
# Windows Trends



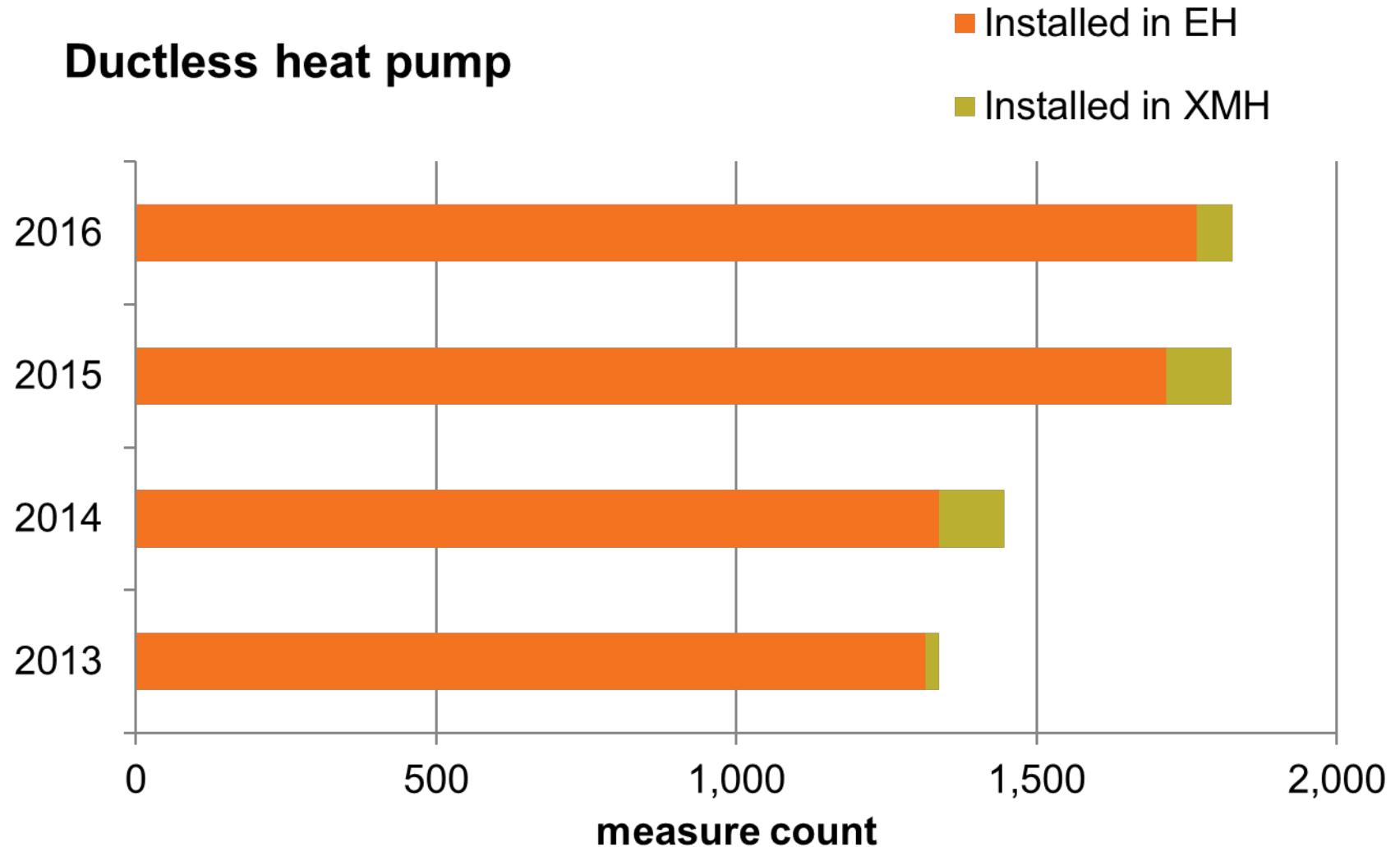
# Water Heating Trends



# 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

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Sr. Program Manager, Residential  
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# Existing Multifamily Program Results and Trends

Kate Scott

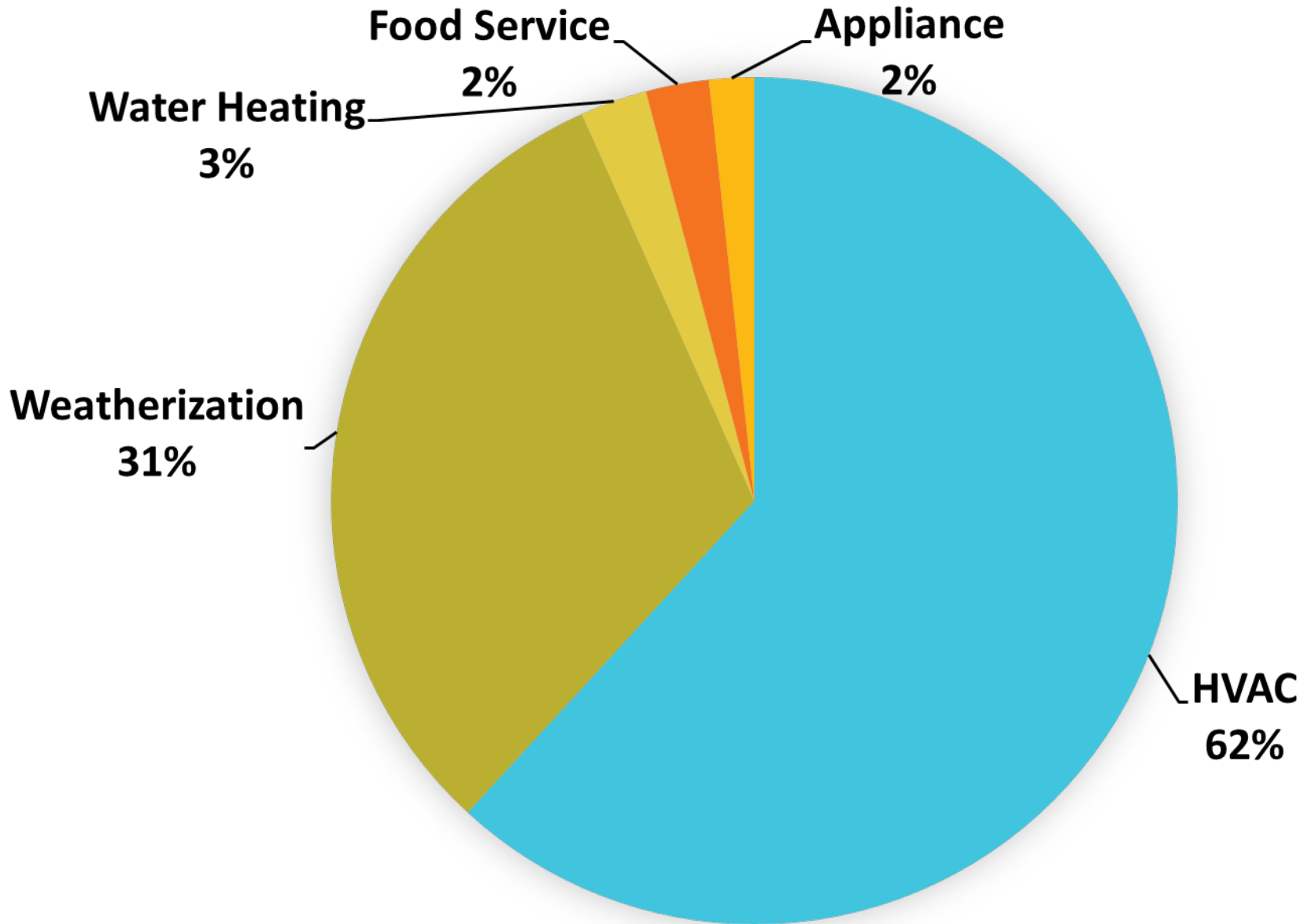
April 11, 2017

# 2016 Multifamily Program Results

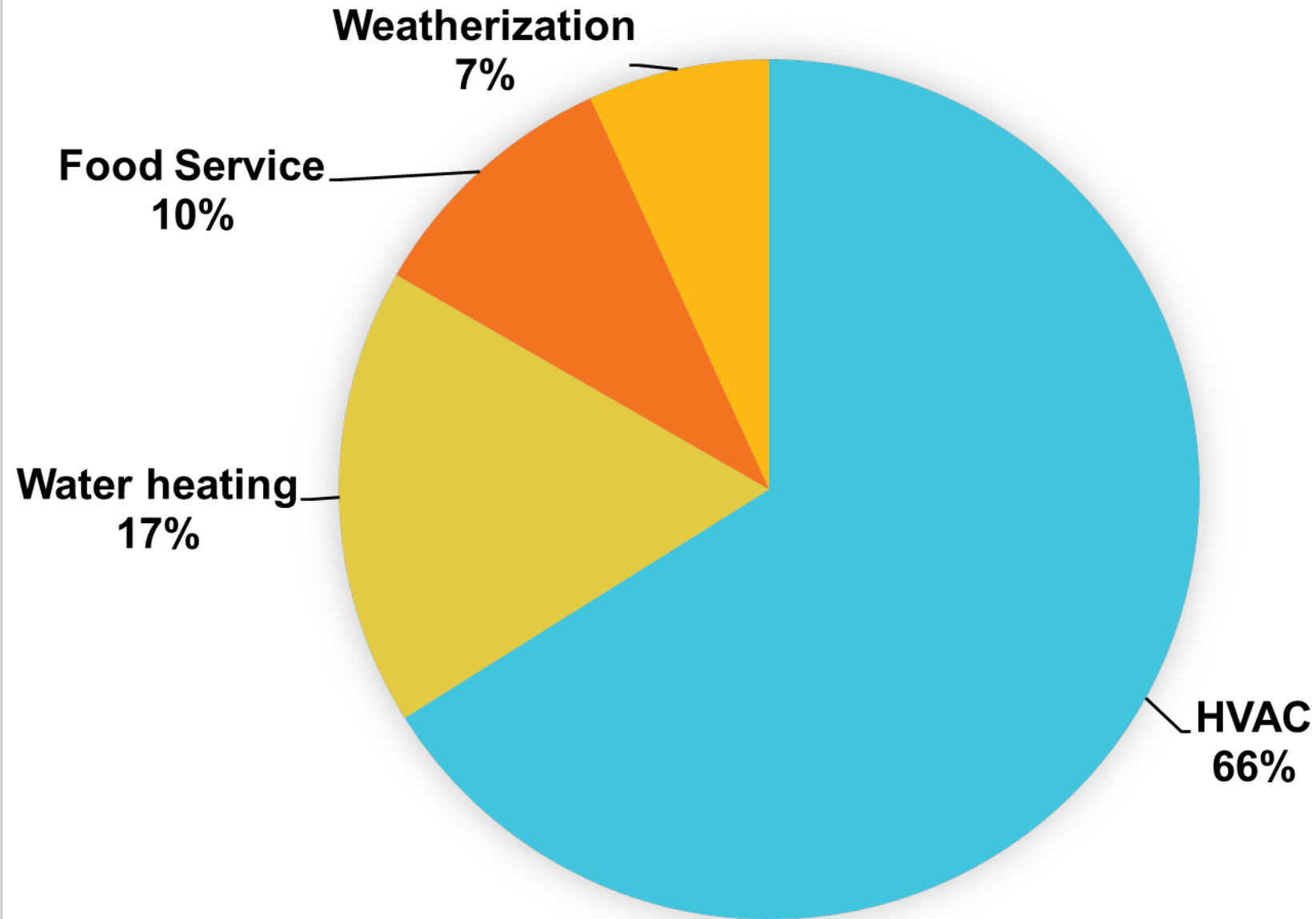
- 2,840 projects completed
- 1,807 sites served
- \$4,448,902 paid in incentives
- Energy Savings
  - 20,787,800 kWh
  - 252,900 therms



# 2016 Prescriptive Electric Savings



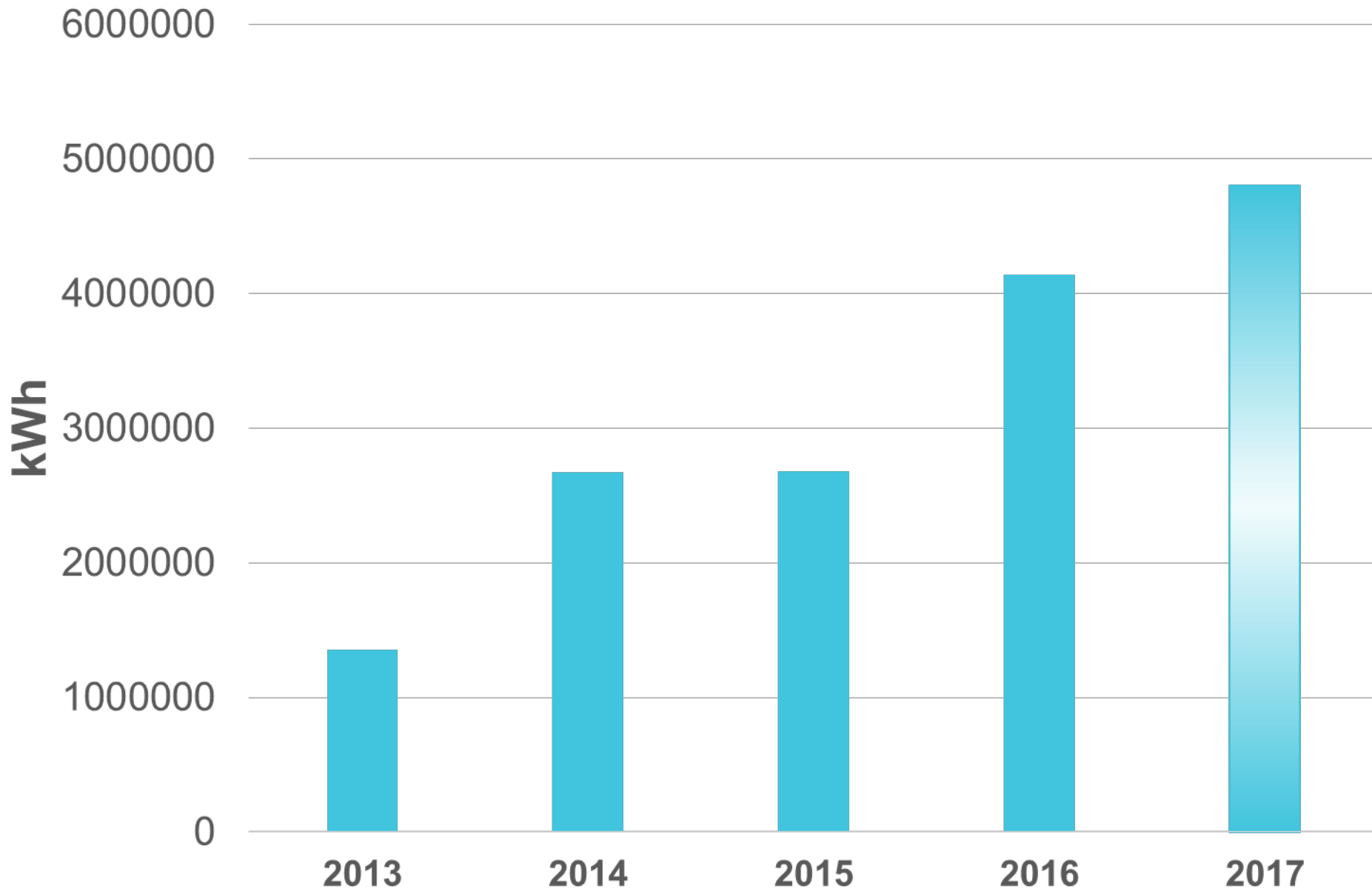
# 2016 Prescriptive Gas Savings



# Prescriptive Measure Trends

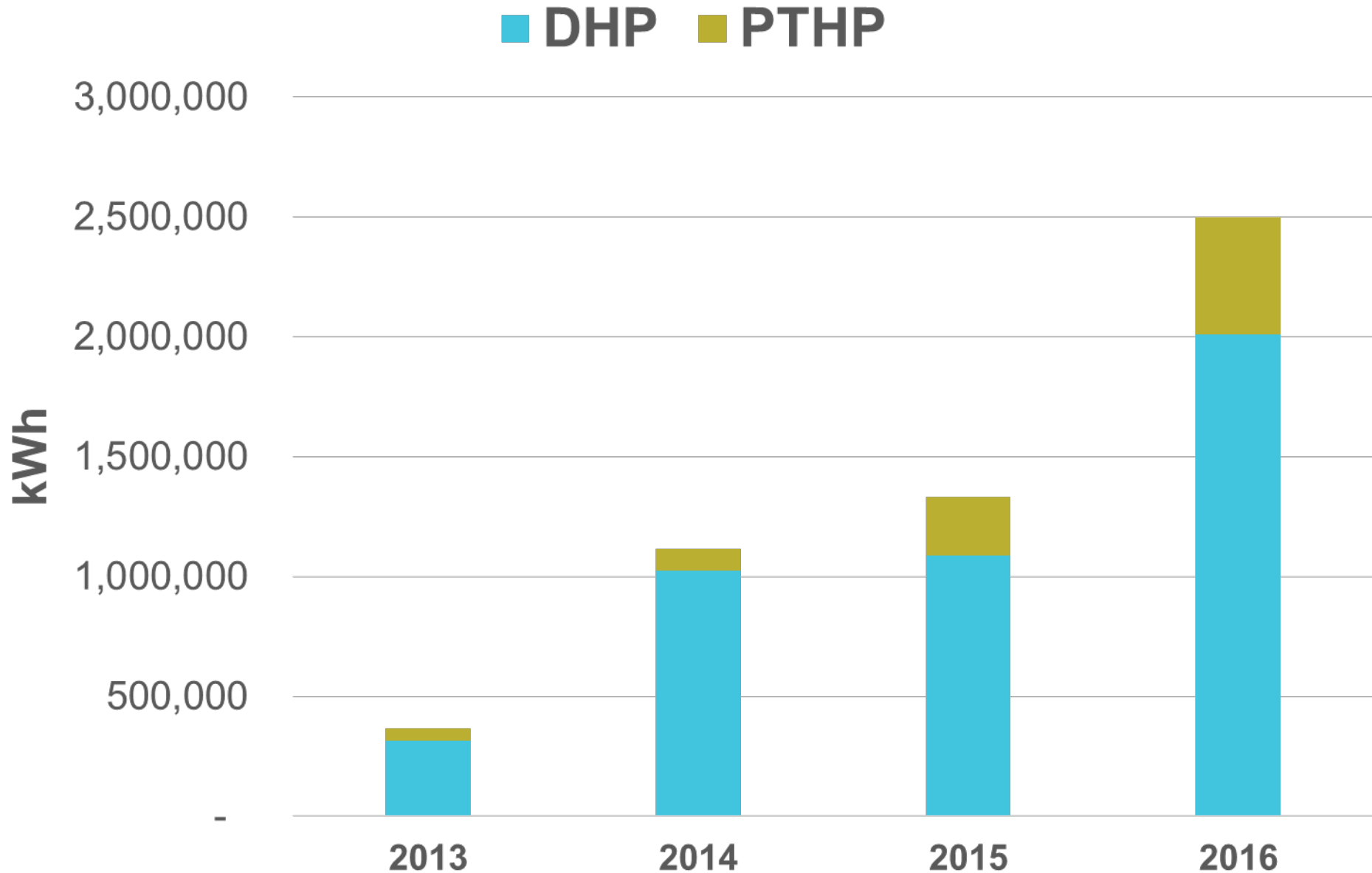
## **Electric Savings**

# All prescriptive savings—Electric



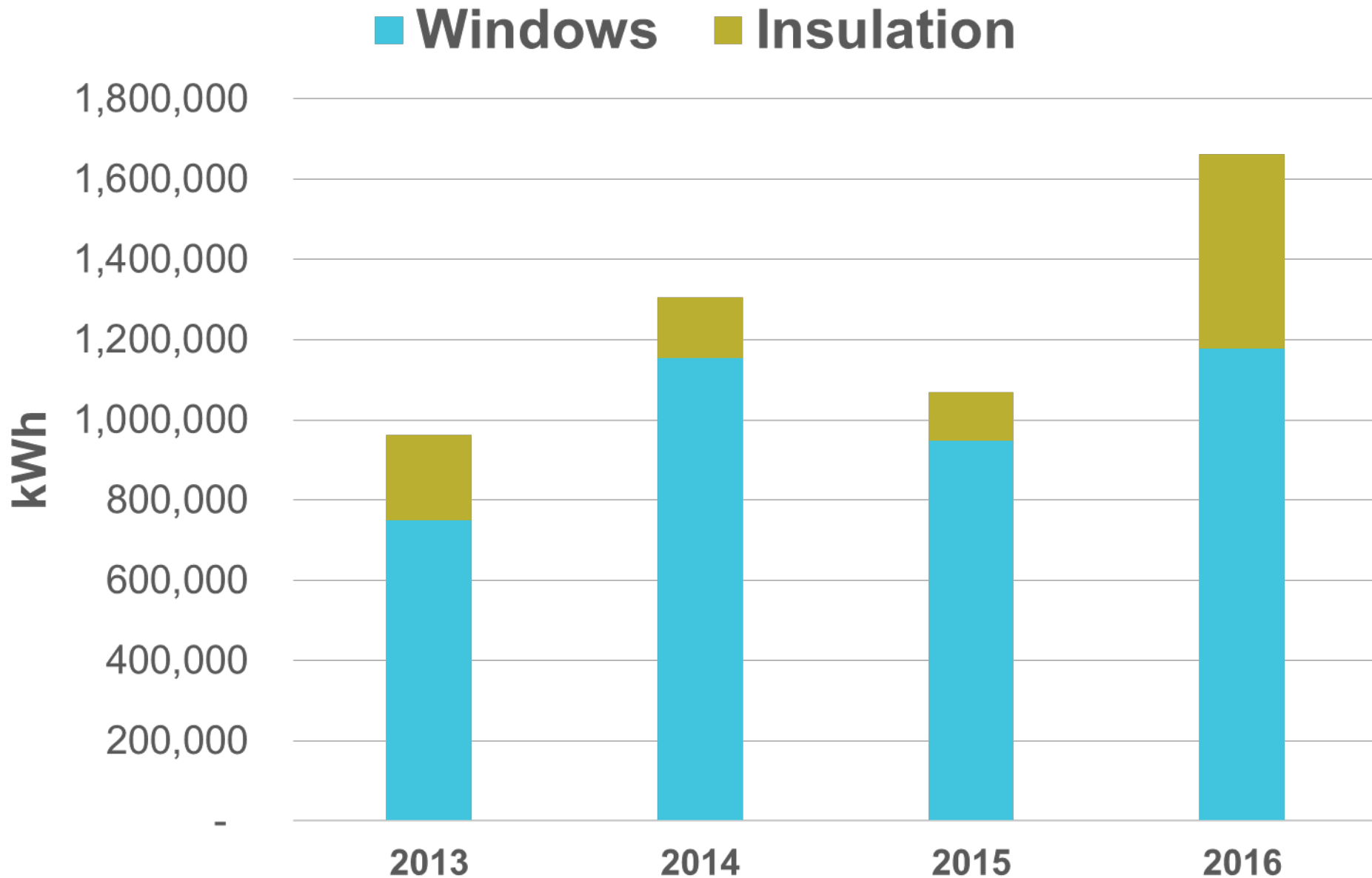


# Ductless, Packaged Terminal Heat Pumps



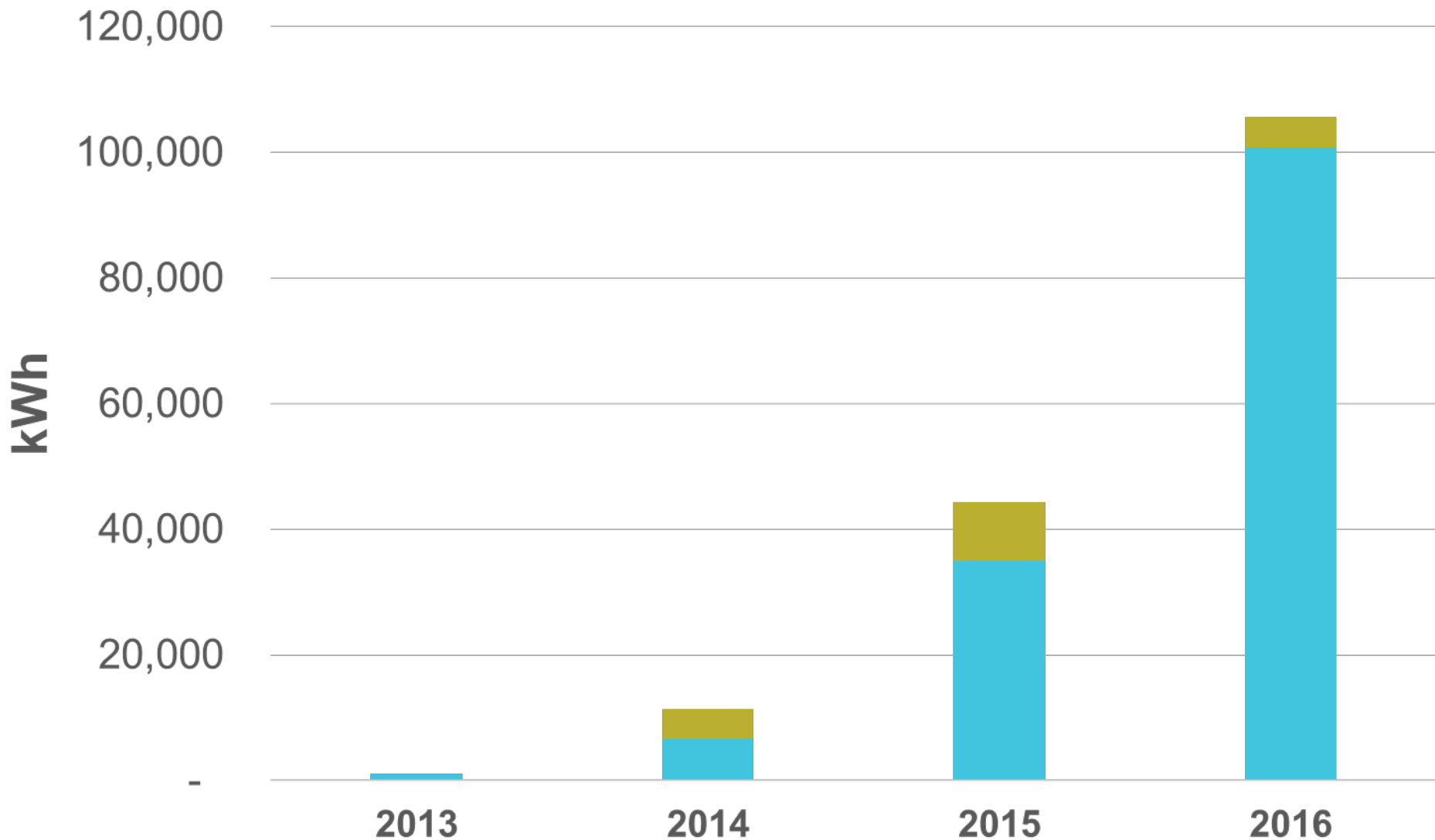


# Weatherization—Electric

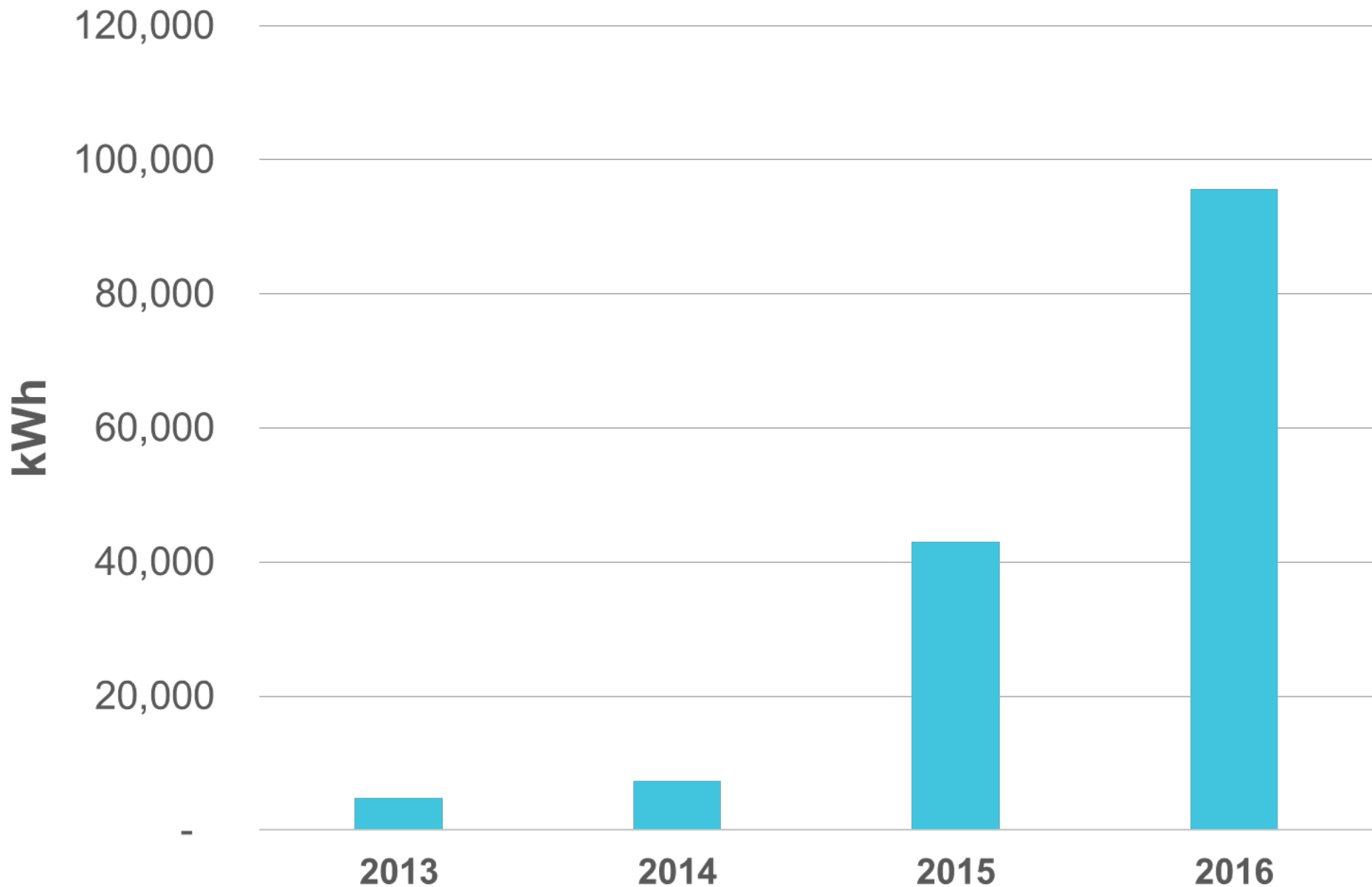


# Water Heating—Electric

■ Electric resistance ■ Heat Pump Water Heater



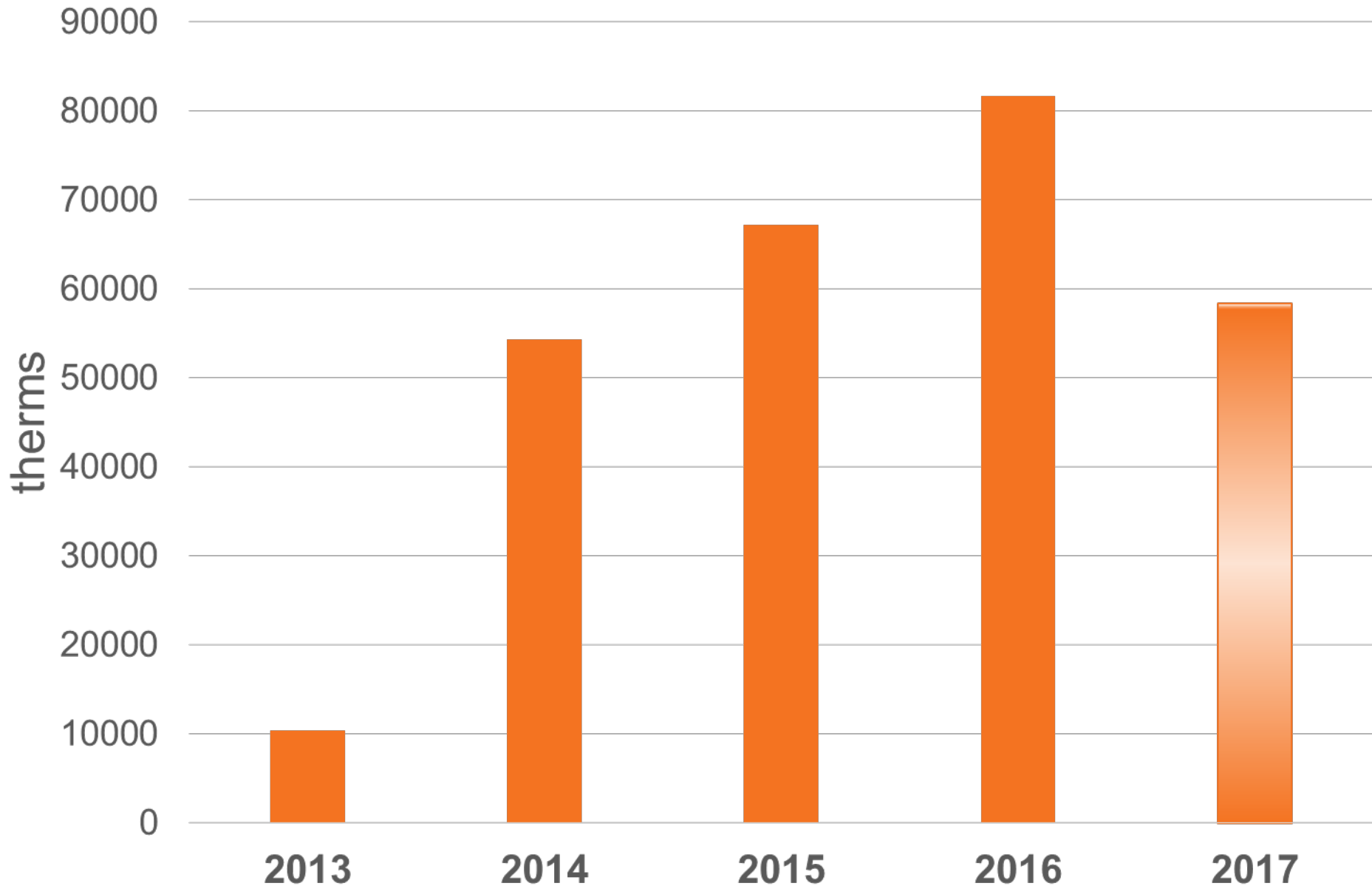
# Foodservice Equipment—Electric



# Prescriptive Measure Trends

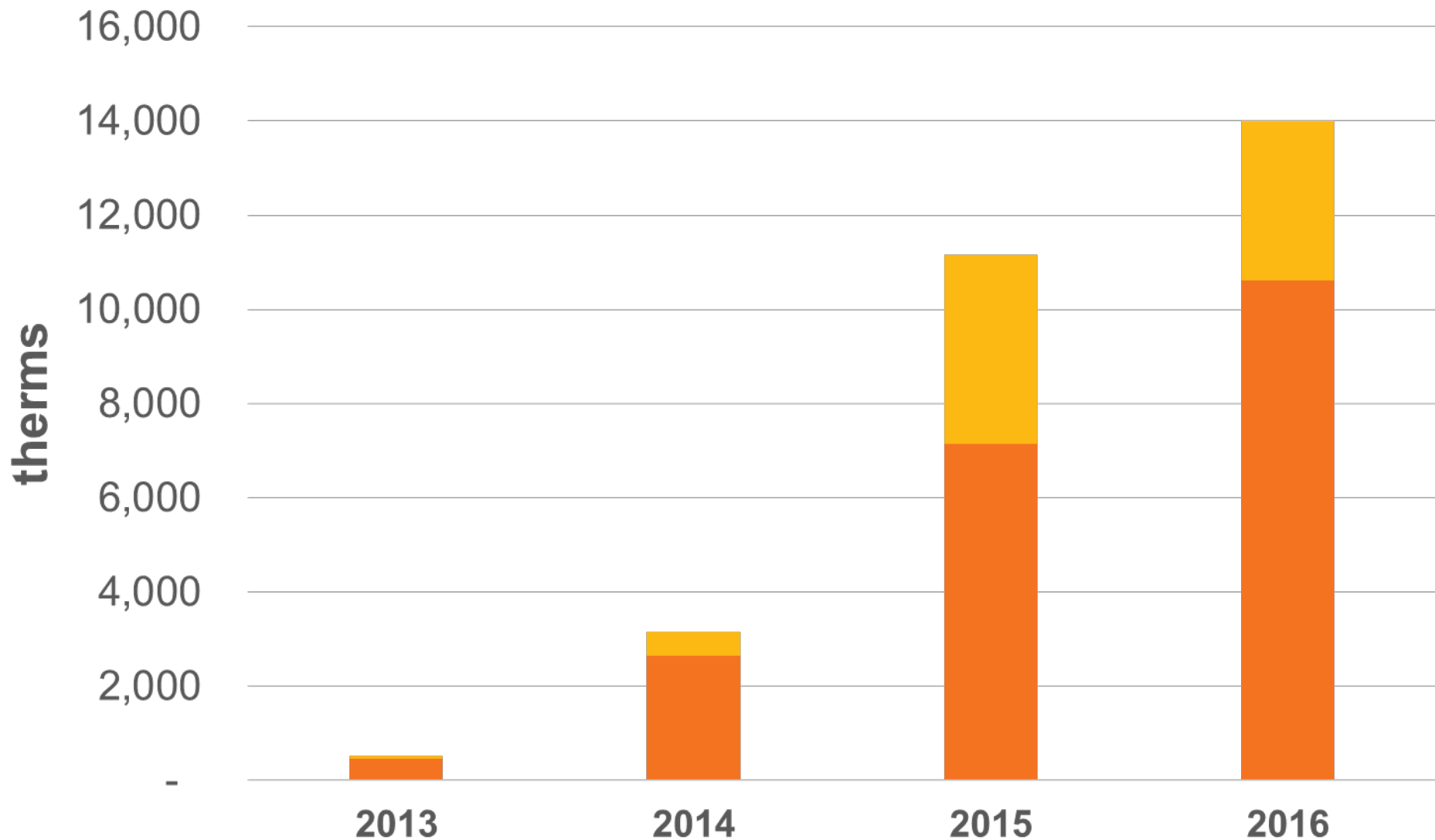
## **Gas Savings**

# All Prescriptive Savings—Gas

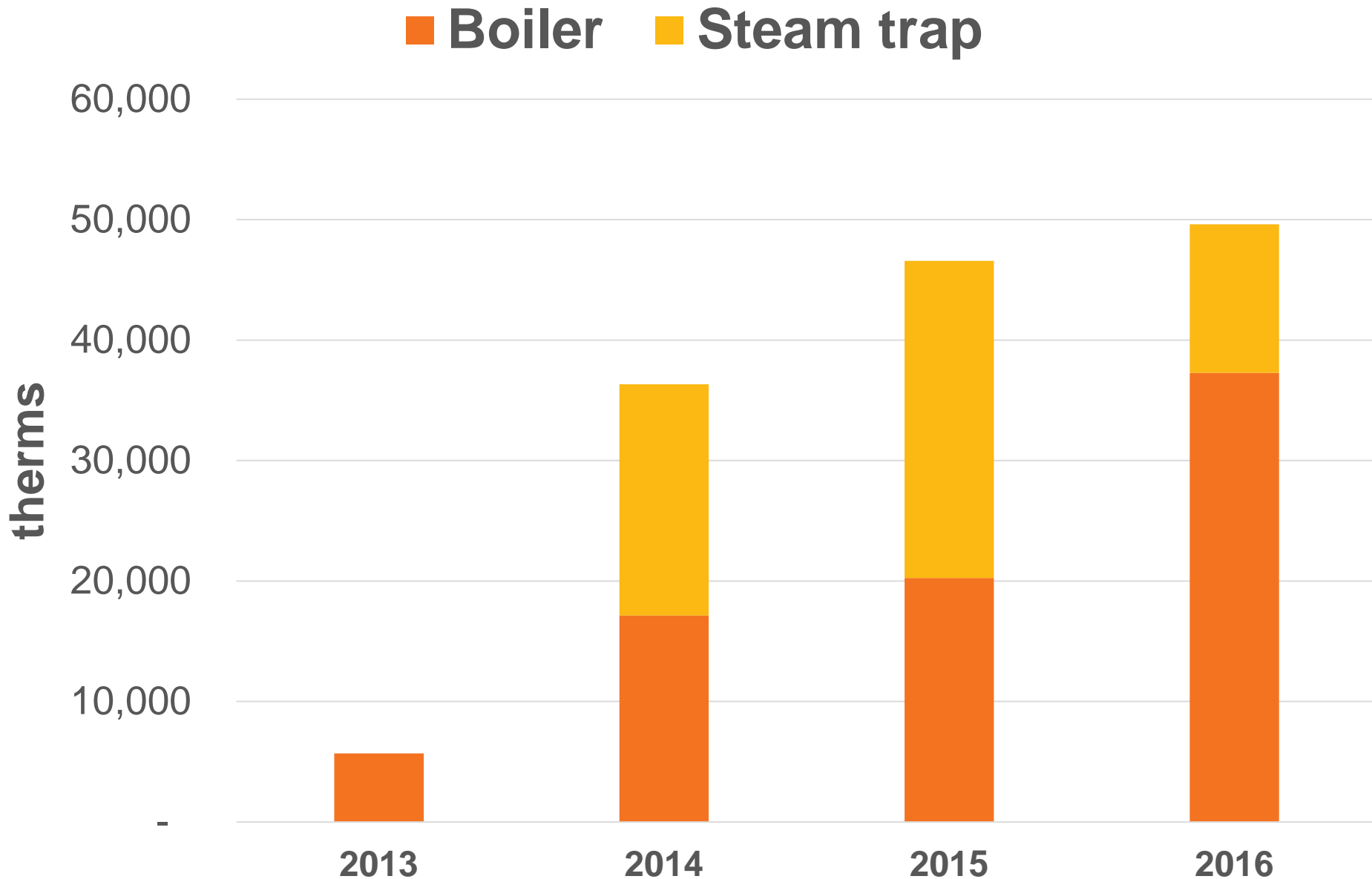


# Water Heating—Gas

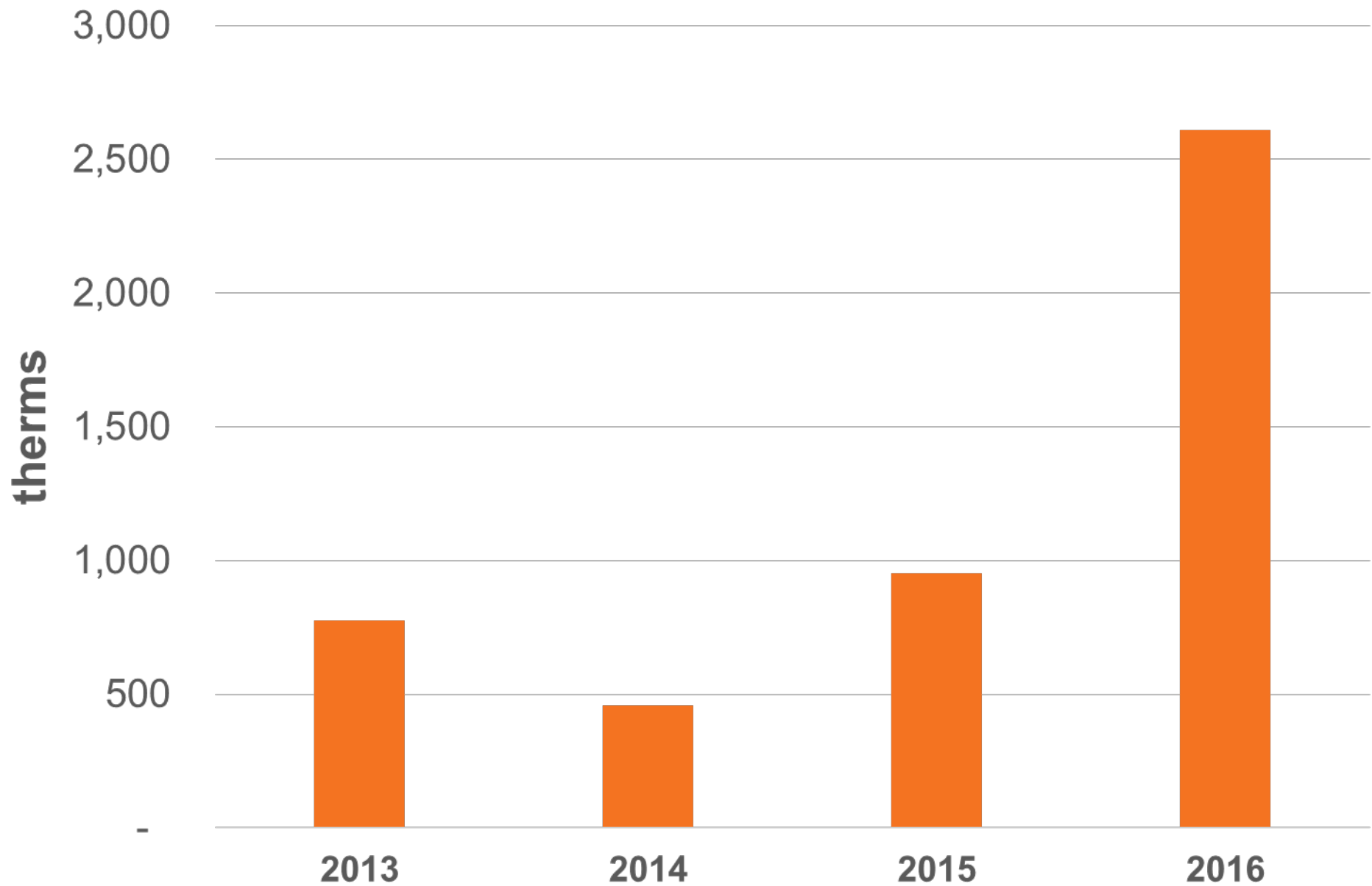
■ Tank ■ Tankless



# Boilers and Steam Traps—Gas

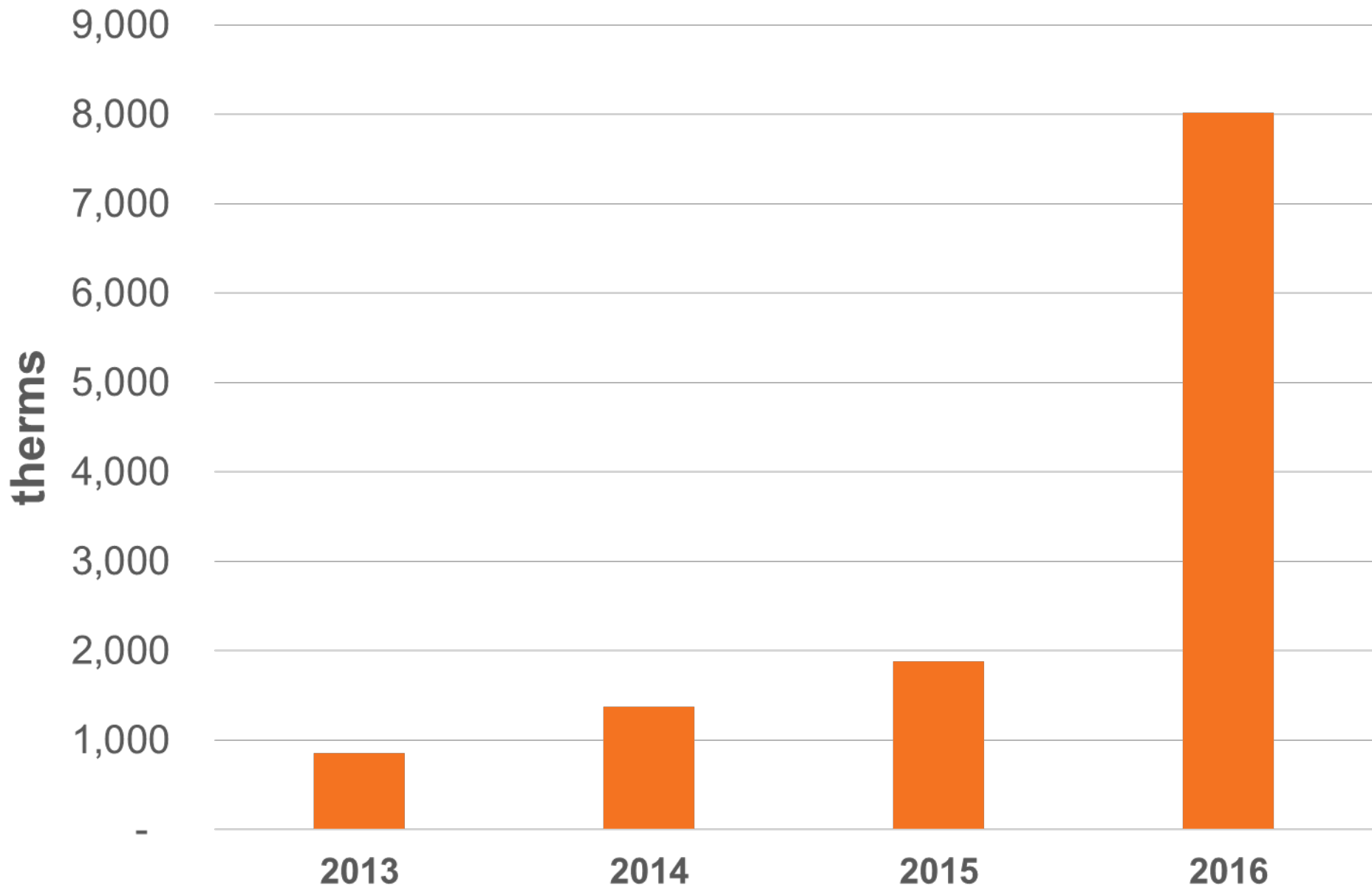


# Furnaces—Gas





# 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

Kate Scott

Multifamily Program Manager

[kate.scott@energytrust.org](mailto:kate.scott@energytrust.org)



## OREGON LOW-INCOME ENERGY SERVICES

PRESENTED BY:

MICHAEL FIGUEREDO, Training and Technical Assistance Coordinator

# ENERGY SERVICES

The Energy Services programs are designed to support housing stabilization for low-income Oregonians by providing energy bill payment assistance and weatherization services to effectively reduce energy costs and improve occupant overall health.



# OREGON'S LOW INCOME WEATHERIZATION ASSISTANCE PROGRAM

The programs provide weatherization and energy conservation services at **no cost** to households at or below 200% federal poverty level.

Weatherization services include:

- Conservation services
- Household health & safety repairs
- Heating equipment repair/replacement
- Energy education

# CLIENT ELIGIBILITY

## ■ OHCS WAP

OHCS	Gross annual income
Household Size	Maximum Income
1 Resident	\$23,540
2 Residents	\$31,860
3 Residents	\$40,180
4 Residents	\$48,500
5 Residents	\$56,820
6 Residents	\$65,140
7 Residents	\$73,460
8 Residents	\$81,780
9 Residents	\$90,100
10 Residents	\$98,420
11 Residents	\$106,740
12 Residents	\$115,060
Each additional	\$8,320

## ■ Energy Trust of Oregon

### ■ Savings Within Reach

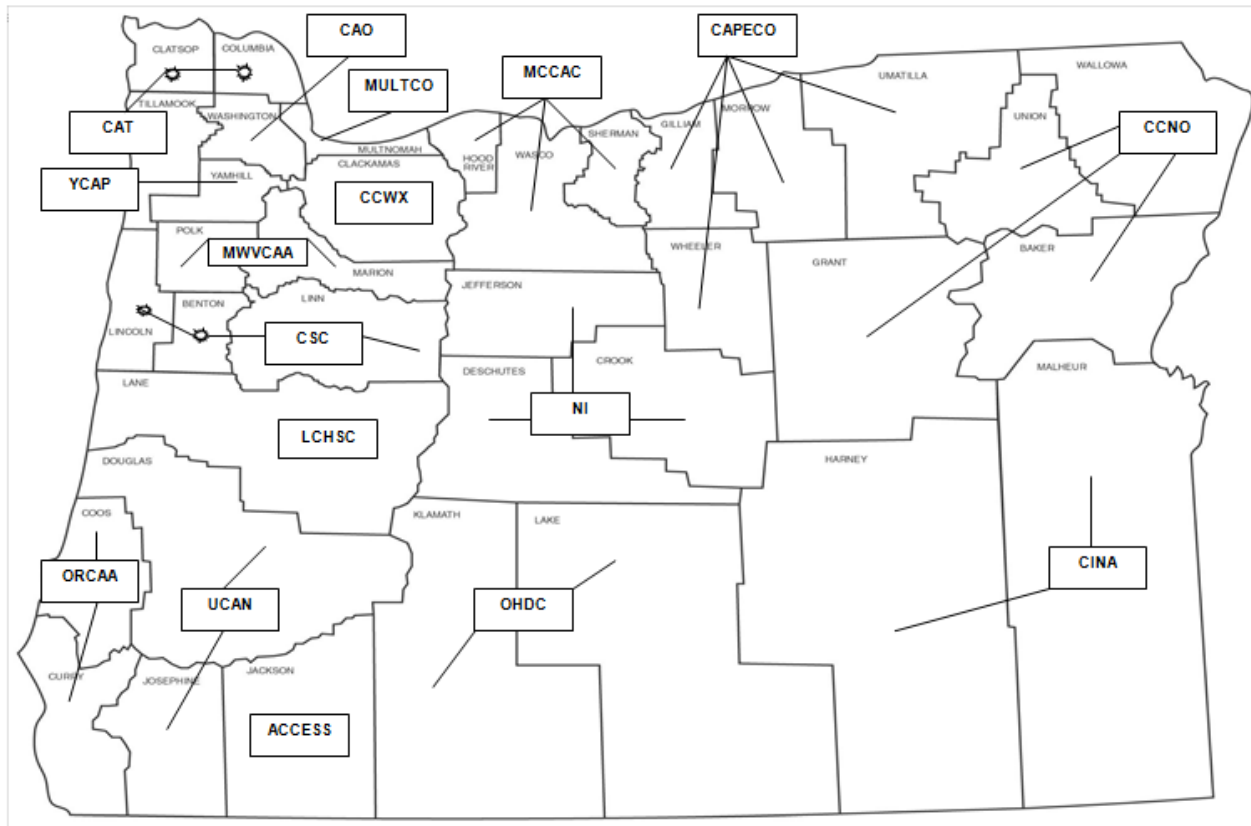
SWR	Gross annual income	
Household size	Minimum	Maximum
1 resident	\$23,340	\$52,530
2 residents	\$31,460	\$60,070
3 residents	\$39,580	\$67,486
4 residents	\$47,700	\$75,025
5 residents	\$55,820	\$81,082
6 residents	\$63,940	\$87,014
7 residents	\$72,060	\$93,071
8 residents	\$80,180	\$99,004

# ENERGY SERVICES

Energy Service programs are delivered through an established network of service providers including:

- Community Action Agencies
- County Governments

# SERVICE AREA MAP FOR WEATHERIZATION PROGRAM AGENCIES



## LEGEND

ACCESS	= Access, Inc.
CAO	= Community Action Organization
CAPECO	= Community Action Programs of East Central Oregon
CAT	= Community Action Team, Inc.
CCNO	= Community Connections of Northeast Oregon, Inc.
CCWX	= Clackamas County Social Services
CINA	= Communities In Action
CSC	= Community Services Consortium
LCHSC	= Lane County
MCCAC	= Mid-Columbia Community Action Council
MULTCO	= Multnomah County
MWVCAA	= Mid-Willamette Valley Community Action Agency
NI	= Neighbor Impact
OHDC	= Oregon Human Development Corporation
ORCAA	= Oregon Coast Community Action
UCAN	= United Community Action Network
YCAP	= Yamhill Community Action Partnership

# ENERGY ASSISTANCE PROGRAMS

OHCS administers Energy Assistance (EA) consisting of two unique programs:

- Low-Income Home Energy Assistance Program (LIHEAP)
  - Federal resource – US Department of Health and Human Services (USHHS)
- Oregon Energy Assistance Program (OEAP)
  - State resource – Portland General Electric & Pacific Power customers

The programs provide for energy bill payment assistance to households at or below 60% state median income.

# OREGON'S LOW INCOME WEATHERIZATION ASSISTANCE PROGRAM

OHCS administers Oregon's Low-Income Weatherization Assistance Program consisting of four distinct programs:

1. DOE Weatherization Assistance Program
  - Federal resource – US DOE
2. Low Income Home Energy Assistance Program- Weatherization
  - Federal resource – US HHS
3. Bonneville Power Administration
  - Federal resource - BPA
4. Energy Conservation Helping Oregonians
  - State resource – Portland General Electric & Pacific Power customers

# ENERGY SERVICES - CURRENT ANNUAL FUNDING

Program	Source	Annual Funding	Program Area
Low-Income Home Energy Assistance Program (LIHEAP)	Federal	\$30 million	Energy Assistance
Oregon Energy Assistance Program (OEAP)	State	\$20 million	Energy Assistance
Energy Conservation Helping Oregonians (ECHO)	State	\$8.6 million	Weatherization
Bonneville Power Administration (BPA)	Federal	\$1.5 million	Weatherization
LIHEAP Weatherization	Federal	\$4.8 million	Weatherization
USDOE Weatherization Assistance Program (DOE WAP)	Federal	\$2.6 million	Weatherization
Multi-Family Weatherization Assistance	State	\$1.5 million	Weatherization
<b>Total</b>		<b>\$69 million</b>	

Low-income weatherization programs help provide stability for Oregonians with low-incomes by making homes more energy efficient and reducing overall utility bill costs.

Time Period	Units Weatherized by CAA's
January 1-December 31, 2014	1,847
January 1- December 31, 2015	1,689
January 1-December 31, 2016	1,870
Total (1/1/14 – 12/31/16)	5,406



# WEATHERIZATION PROCESS FLOW

## Assess



Energy Auditor carefully assesses each home for energy upgrade opportunities including air sealing, insulation, mechanical equipment, and windows/doors as well as identifies health/safety needs and concerns



## Analyze



The Data collected is run through Energy Modeling software to determine cost effectiveness and priority of considered measures. Agencies use this to formulate a workscope.



## Execute



Workscope is awarded to the contractor to complete the work as prescribed by the agency and according to program guidelines.



## Inspect



The agency's Quality Control Inspector (QCI) evaluate the installation based on the scope of work and alignment with program specifications.



## Close



Agency issues payments, reports the project and energy savings, and closes the project. Client receives a packet of information and education related to energy, health, and any equipment installed.



QUESTIONS?

# The Community Action Partnership of Oregon

A series of horizontal bars in shades of green and yellow, with some bars having a stepped or layered appearance, extending across the width of the slide.

Keith Kueny

Energy Policy Coordinator

# What is the Community Action Partnership?

- Community Action Partnership of Oregon (CAPO) is the State Association for Oregon's Community Action network of 17 Community Action Agencies and Oregon Human Development Corporation, a statewide agency serving farmworkers. CAPO and its members are part of the national Community Action Network – a network made up of more than 1,100 local, private, non-profit, and public agencies that work to alleviate and eliminate poverty.
- Each CAA uses a community-based needs assessment to develop advocacy and service priorities to provide the most relevant, most effective services for its own community.

## Services Offered by Community Action Agencies:

- Affordable Housing Development
- Child Care
- Commodity Distribution
- Community Development
- Domestic Violence Victims Assistance
- Economic Development
- Emergency Food & Shelter
- Employment Training
- Energy Assistance (LIHEAP)
- Family Shelters
- Food Banks
- Food Gleaning
- Head Start
- Homeless Shelters
- Housing Rehabilitation
- Information & Referral Service
- In-Home Care
- Warmline Life Skills Training
- Migrant/Farm worker Service
- Neighborhood Centers
- Parent Training
- Public Transportation
- Second Chance Renters Program
- Self-Help Programs
- Special Transportation
- Transitional Housing
- Transportation
- Veterans Services
- Volunteer Services
- Weatherization
- Youth Services

# Weatherization Funding (Varies by Region)

- LIHEAP (Statewide)
- DOE (Statewide)
- BPA Grant & Incentive Funds ( Consumer Owned Utilities)
- ECHO (PGE & Pacific Power territory)
- Cascade, NW Natural, & Avista utility-run programs
  - Gas weatherization funds must be spent in homes with gas as primary heat-source

# Structure of Community Action Weatherization Programs

- Grants are funneled (Leveraged) by coordinators into a single project
  - Health and Safety – ventilation, essential home repairs, & other related measures that insure a safe home
  - A single project can have several funding sources
  - There could be rehab and additional funds through additional funding sources
- RFPs offered for each home, or a group of homes, or single measures

## Intake – Outreach

- Last year CAA's issued 110,000 payments for energy assistance to Oregon households
  - Clients provide proof of income and utility billing
- Referrals are made from energy assistance to weatherization
- Or, Clients apply directly for weatherization
- Energy assistance funds can be used during a no-heat “crisis” to replace primary heat source



# Guidelines

- Generally, the Department of Energy guidelines drive energy savings
- Rem/Rate is used for the home.
  - Depending on the grant, the SIR must equal or be greater than 1.0
  - Certain grants allow for measures to be grouped together -
- Oregon Housing and Community Services (OHCS), along with the agencies, work together to create work specifications that are Oregon-specific
- All jobs must be completed using OHCS's manual
- Inspections done by local agency

Questions? Feel free to reach out to:

---

Keith Kueny  
350 Mission SE  
Salem, OR, 97302



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 \$26, 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 Score

**48**

ENERGY CONSUMPTION:



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



# Home Energy Scoring Updates

Andrew Shepard



# 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

Andrew Shepard, Sr. Project  
Manager NW Natural Washington

[Andrew.Shepard@energytrust.org](mailto:Andrew.Shepard@energytrust.org)





# Thank You

Please join us for the first  
breakout sessions at 10:30 a.m.