

Agenda

Conservation Advisory Council

Wednesday, May 3, 2017

1:30 p.m. – 4:30 p.m

Address:

421 SW Oak St., #300

Portland, OR 97204

1:30 Welcome and Introductions

1:35 Announcements and Old Business *(discussion)*

Feb 2017 CAC minutes

Criteria for CAC membership (from Launch of 2017 CAC part 1 in Feb) - discuss feedback from Board Policy Committee and finalize

1:45 2017 Legislative Update *(information)*

Staff will provide an update on the state legislative session and bills that are being monitored. Under our grant agreement with the OPUC, Energy Trust does not take positions on legislation or engage in political issues. During legislative sessions, we monitor bills that could impact Energy Trust and respond to legislative requests for information.

2:00 Existing Buildings Pay for Performance offering *(information)*

Staff will present an overview of the 2017 expansion of the Pay for Performance pilot for commercial buildings.

2:30 Residential Trends: Existing and New Homes *(information)*

Staff will present an overview of recent trends in key measures/tracks in the existing and new home programs.

3:00 Updates on Portland's Home Energy Scoring Ordinance *(information)*

Andria Jacob will present an overview of the City's efforts to introduce required energy performance scoring for homes for sale.

3:30 Diversity Initiative *(discussion)*

Staff will provide an update on Energy Trust's Diversity Initiative.

3:50 Coming to the 2017 CAC – part 2 *(discussion)*

What comes to CAC? CAC members will review the draft calendar of potential 2017 CAC topics and provide feedback and ideas about items of interest for 2017.

4:15 Public comment

4:30 Adjourn

The next scheduled meeting of the Conservation Advisory Council will be Wednesday, June 21, 2017.

CRITERIA FOR SELECTING CAC AND RAC MEMBERS

CAC Membership Selection Criteria: proposed final

- **Representation from broad interests of the Energy Efficiency industry**
- **Representation of organizational perspectives, usually not individual businesses**
- **Good strategic thinking to bring perspective to CAC topics and needs**
- **Ability to advocate for the broader Energy Efficiency mission**
- **Wide geographic diversity, representative of all service territories and regions**
- **Varied industry backgrounds from varied customer sectors**
- **Varied professional backgrounds –diversity other than geographic**
- **Program administrator experience may be desired**
- **Experience in the Energy Industry**

RAC Membership Selection Criteria Already In Place

- **Experience with renewable energy**
Experience with and interest in renewable energy projects is the key characteristic for RAC members.
- **Varied renewable energy expertise across technologies and the development cycle**
We seek to have people on the RAC who understand as many pieces of the renewable energy market and the project development and installation process as possible: financing, permitting, policy, incentives, and business planning to name a few. We also want representation across the technology portfolio that we fund.
- **Good problem-solving skills and creative thinking**
The renewable energy market is challenging. RAC members must bring good problem-solving skills and be willing to think through issues from a variety of perspectives. We need people who will look at the renewable energy arena holistically, not just from the perspective of their organizations.
- **Wide geographic representation**
We seek to have people from various parts of the state participate on the RAC.
- **Varied professional backgrounds**
Ideally, the RAC should consist of people who come from non-profits, businesses, and government.



Residential Program Trends—Existing and New Homes

Conservation Advisory Council

May 3, 2017

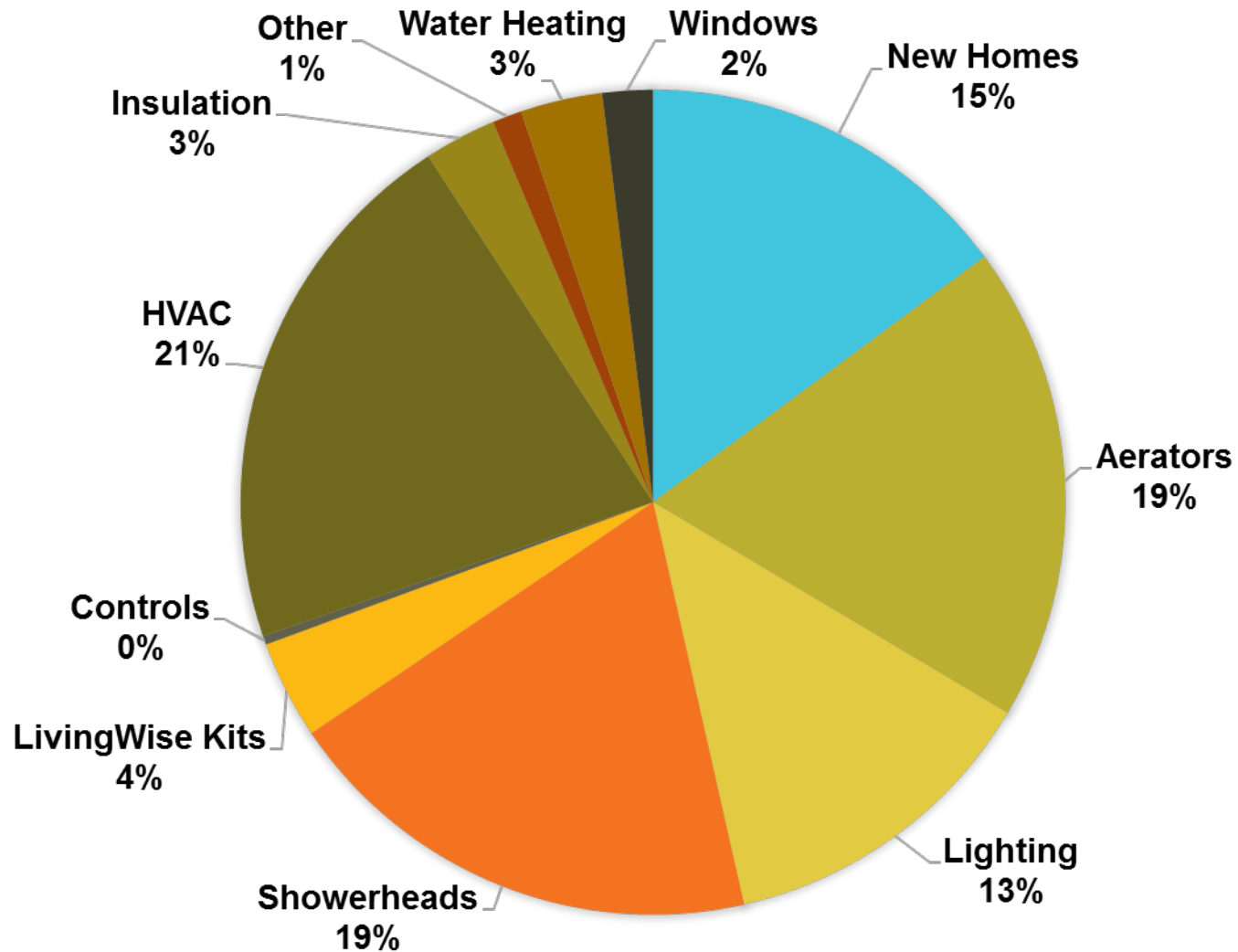
2016 Program Results

- 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

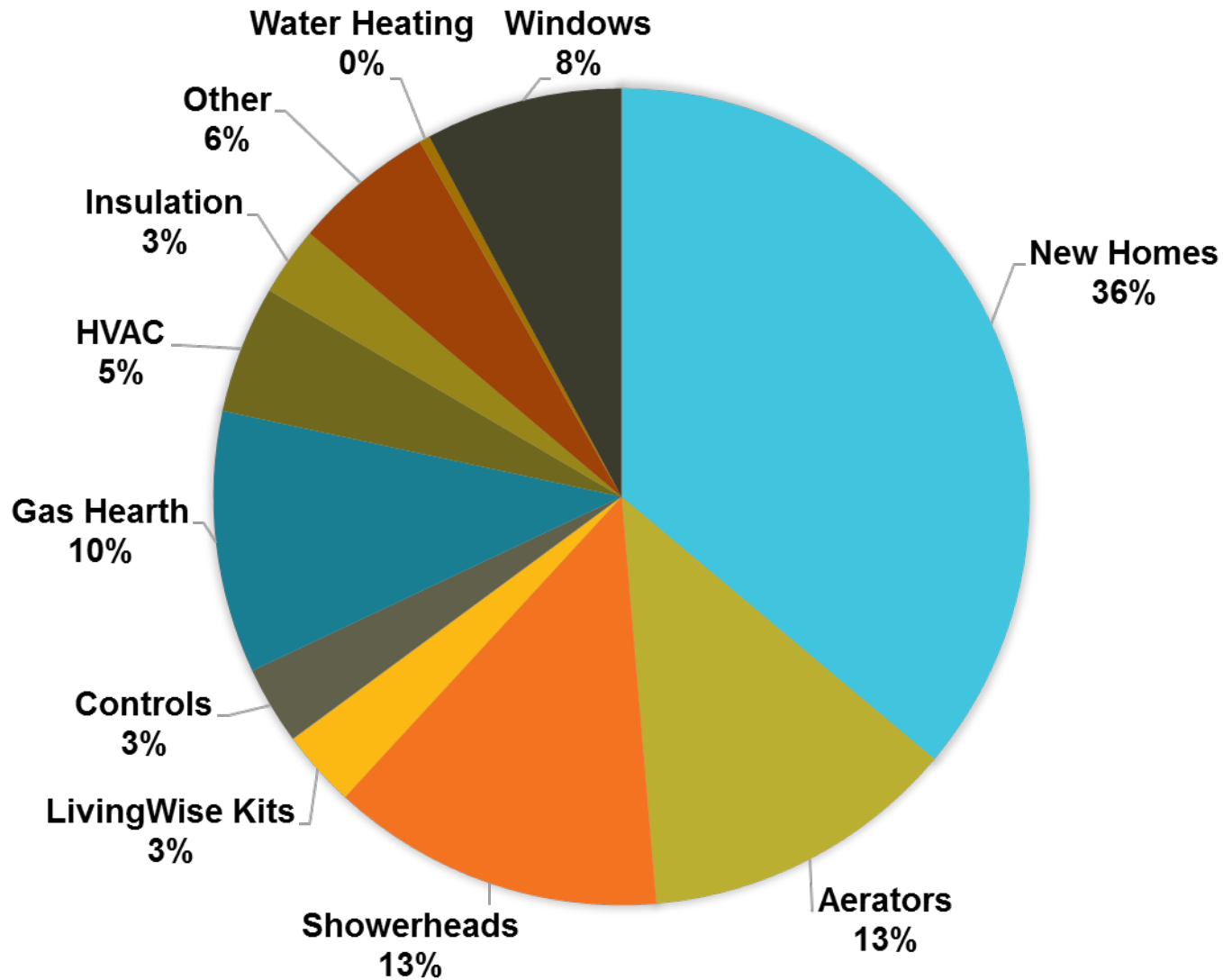


Electric Savings—2016



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

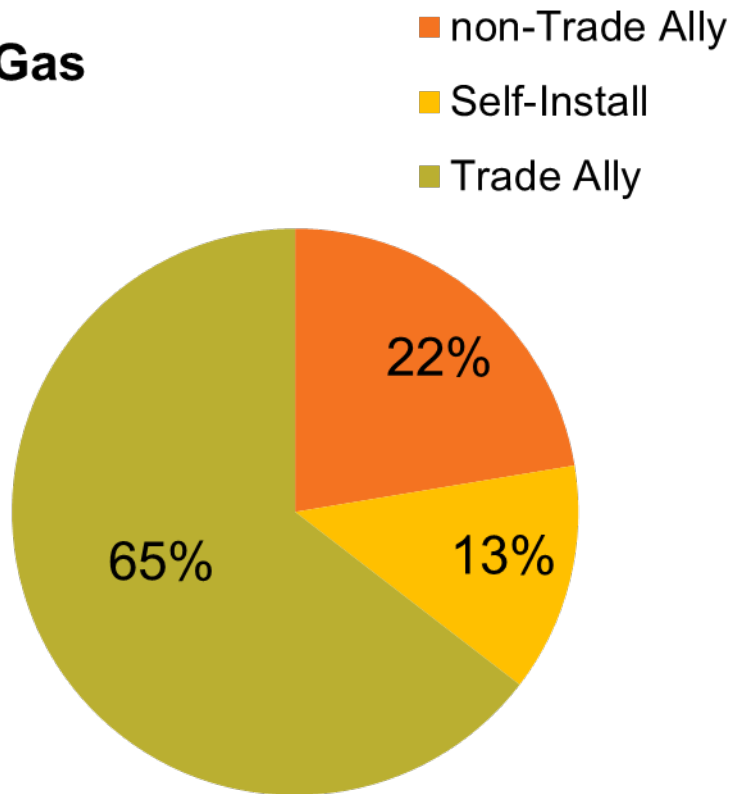
Gas Savings—2016



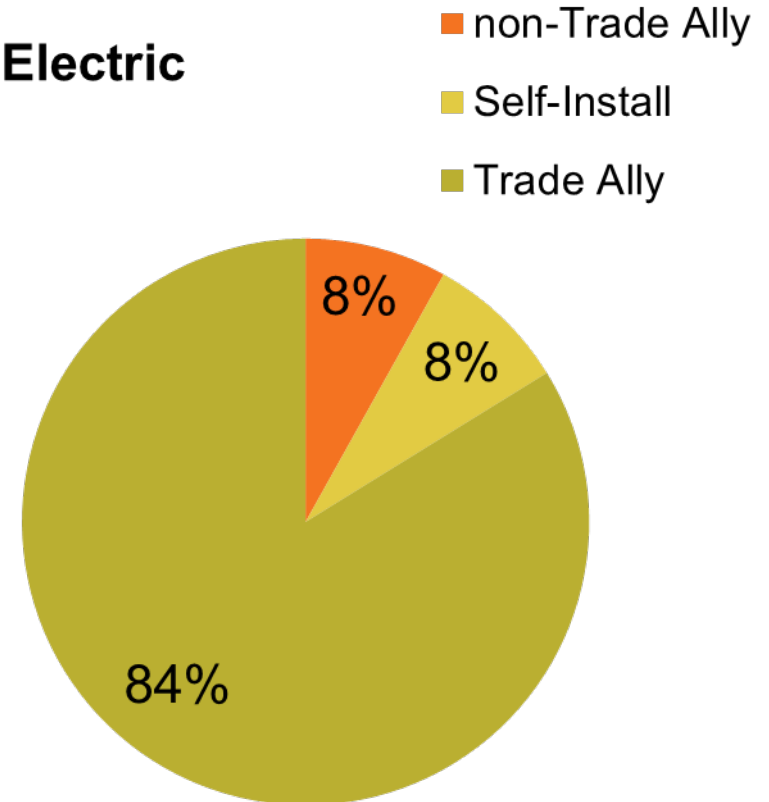
Results are for New Homes and Existing Homes in Oregon & SW Washington

Existing Homes Project Installations

Gas

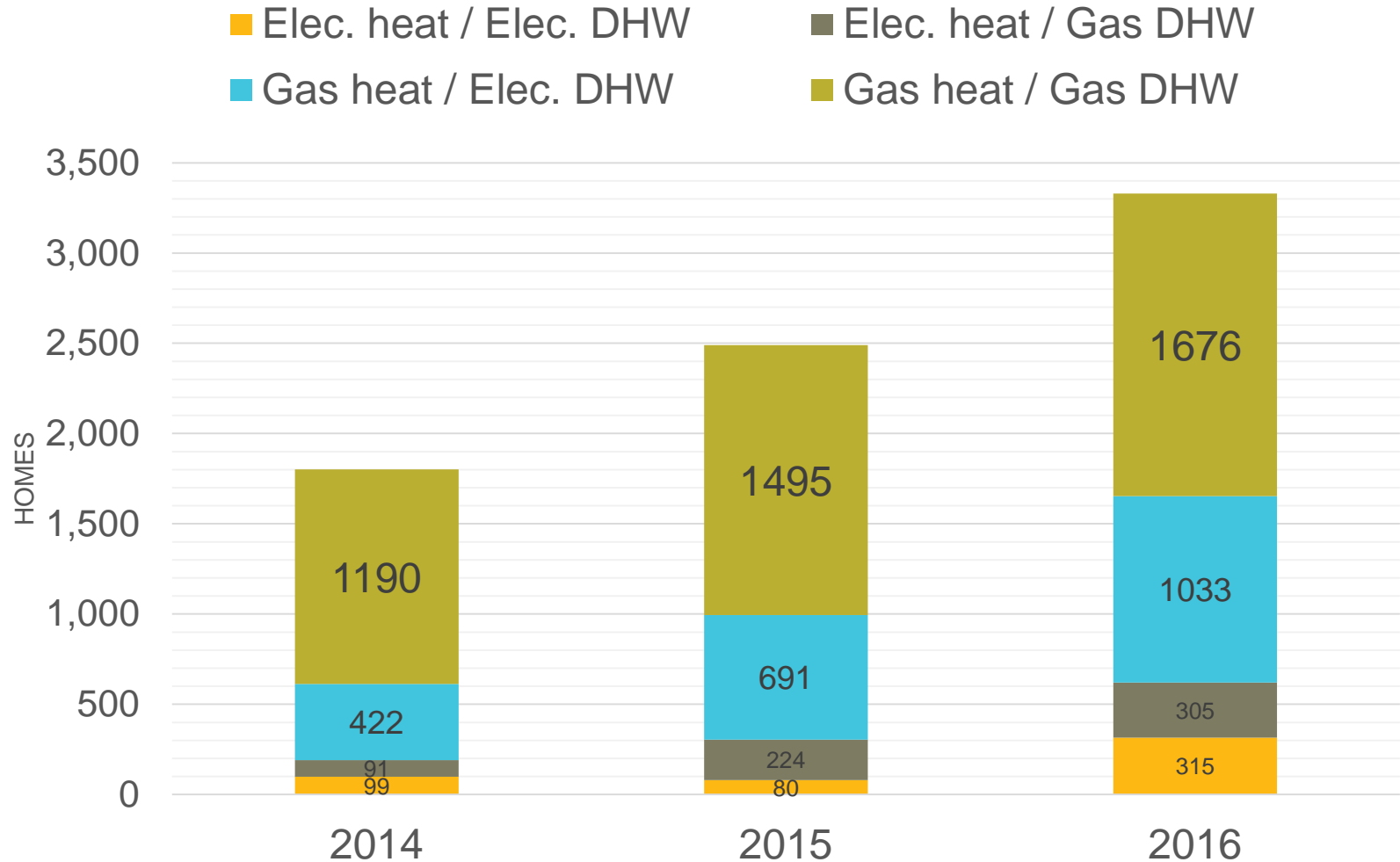


Electric

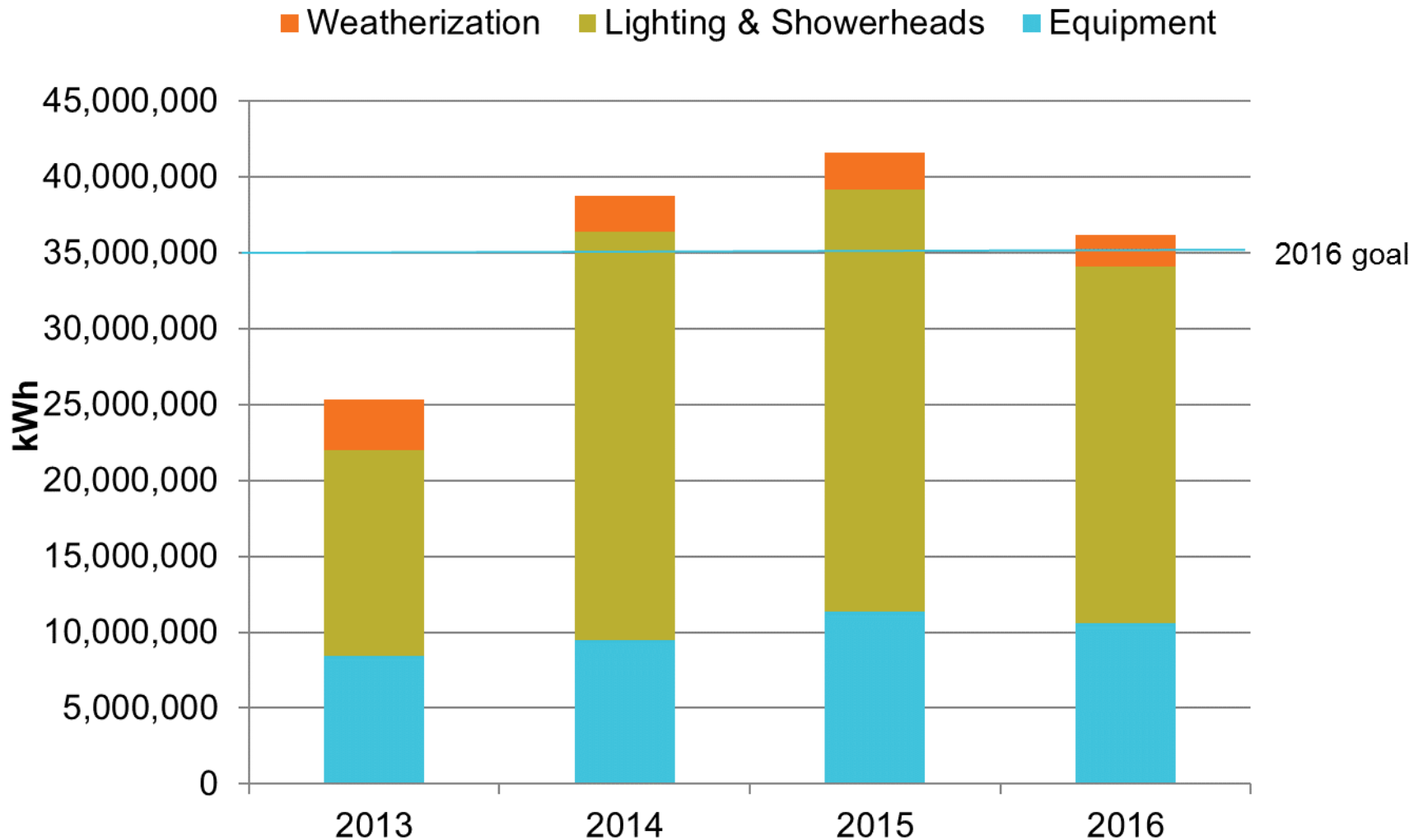


2016 Trends

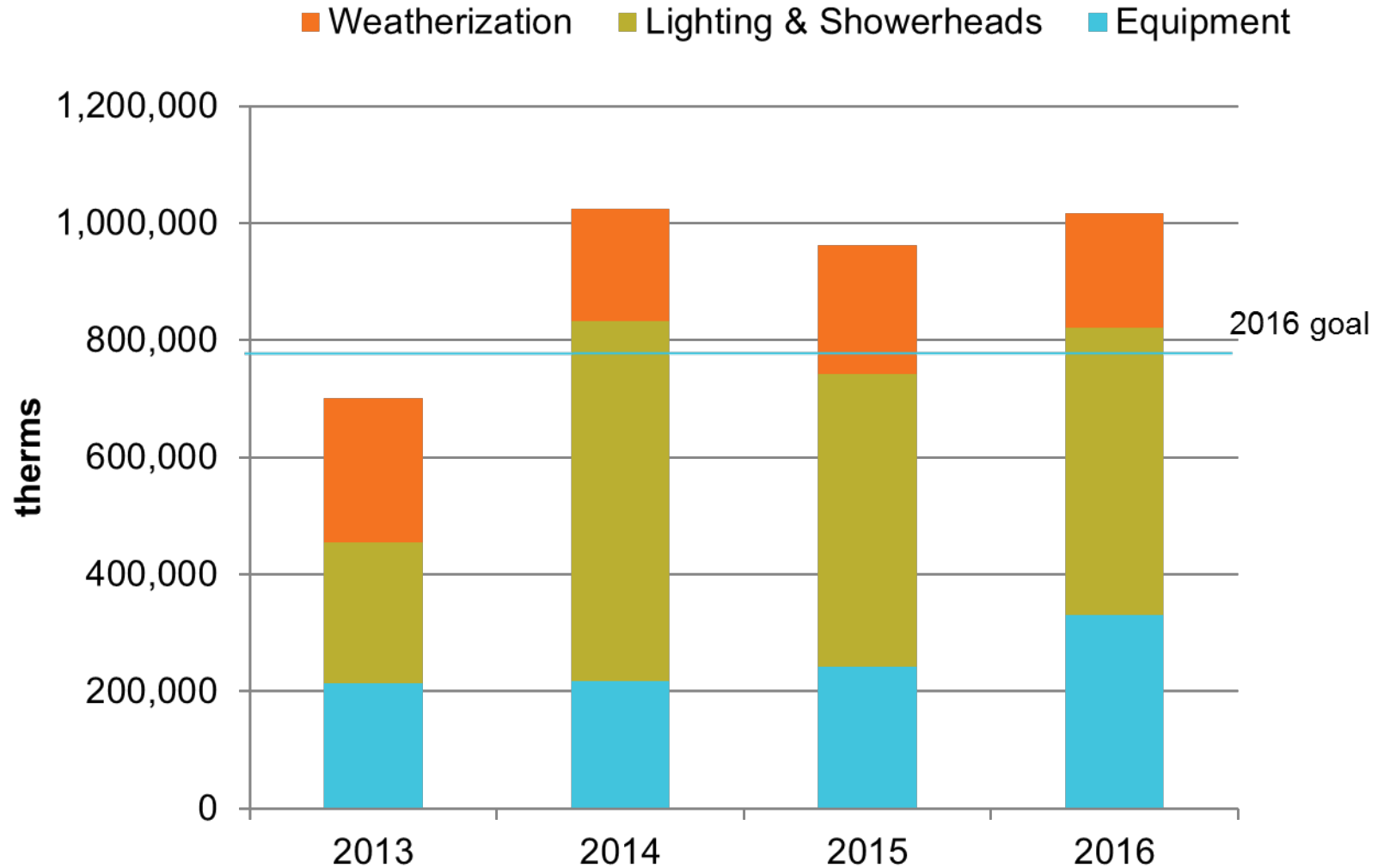
EPS New Homes Trends



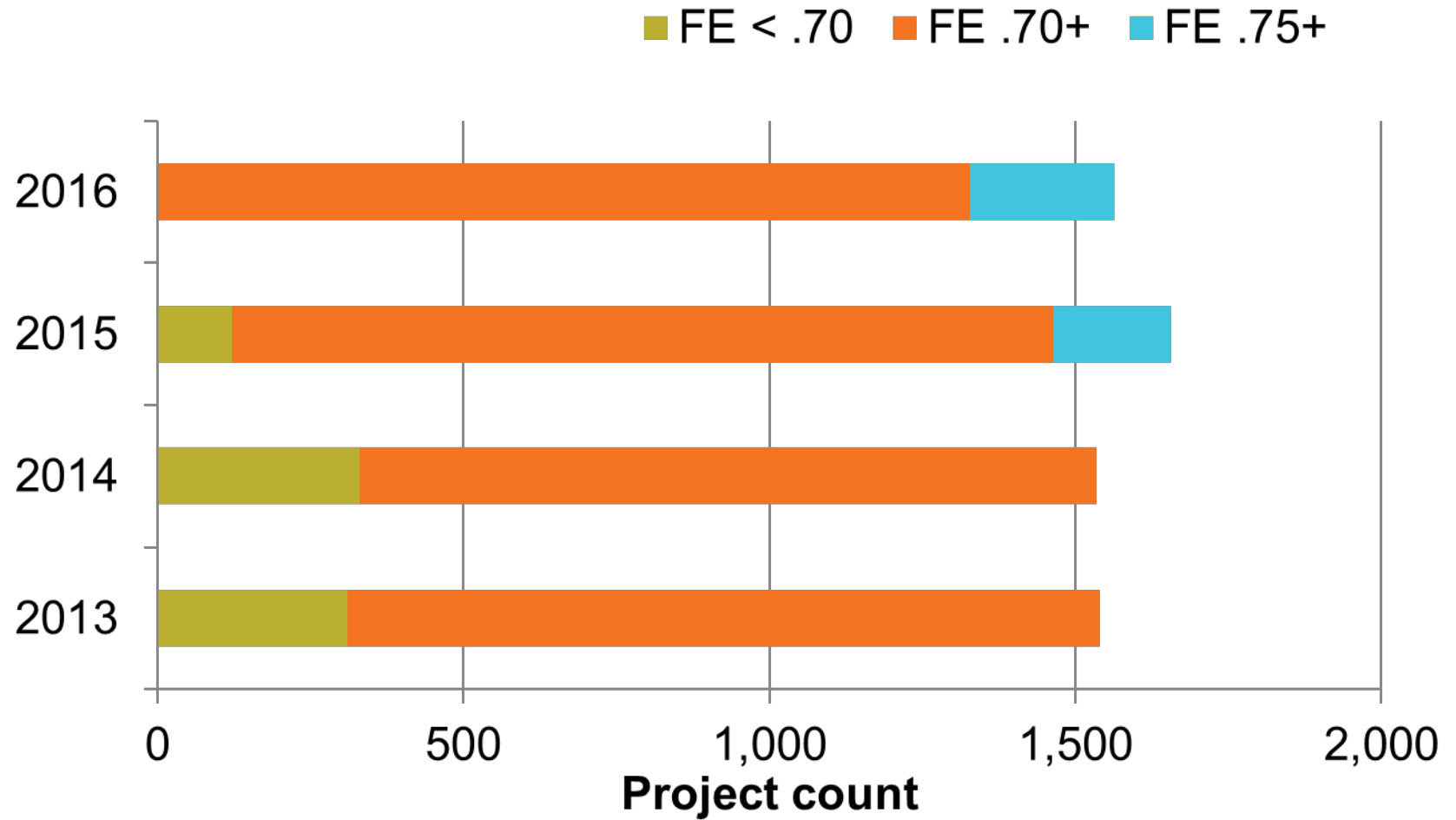
Existing Homes Trends—Electric



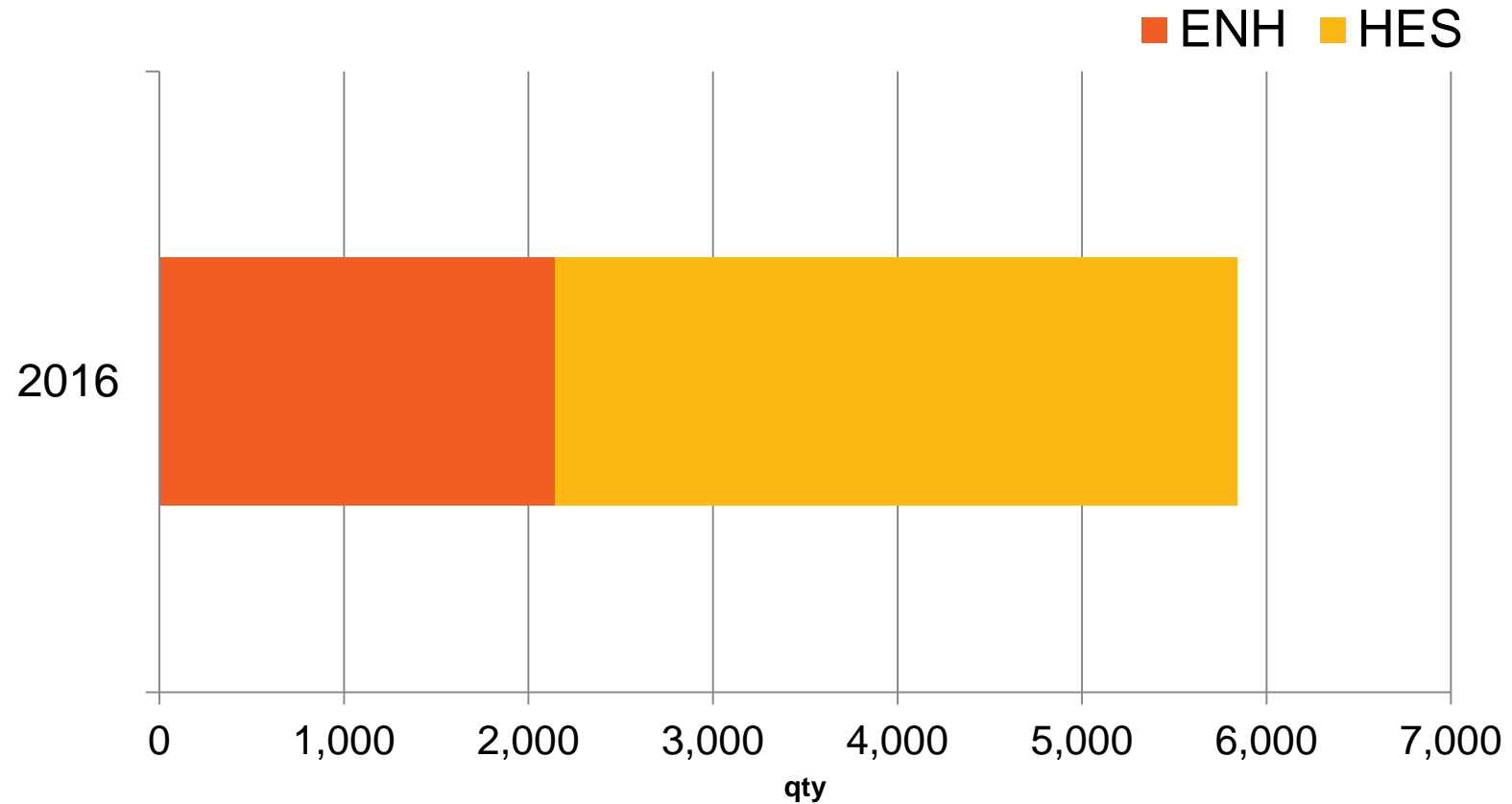
Existing Homes Trends—Gas



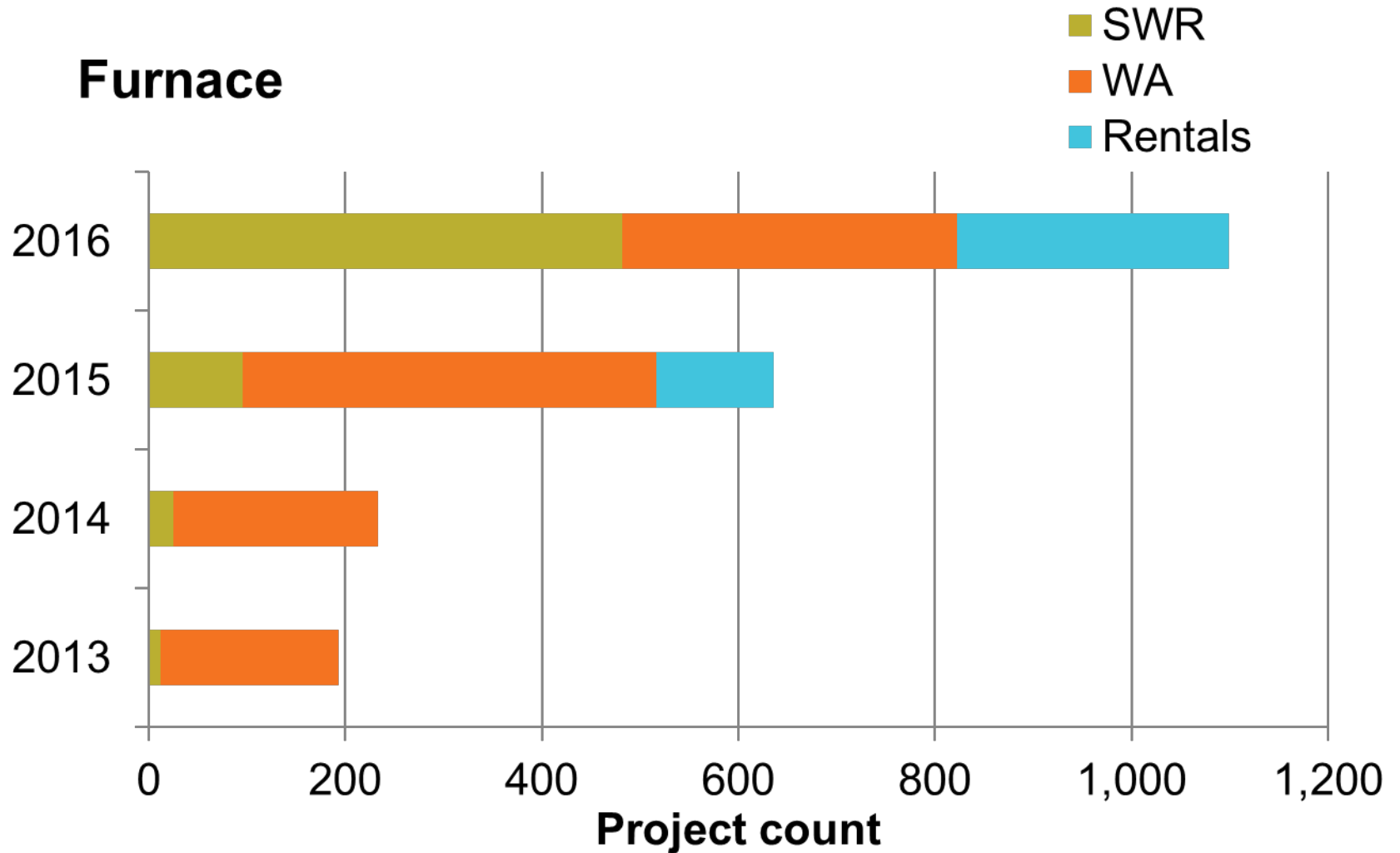
Gas Hearth Trends



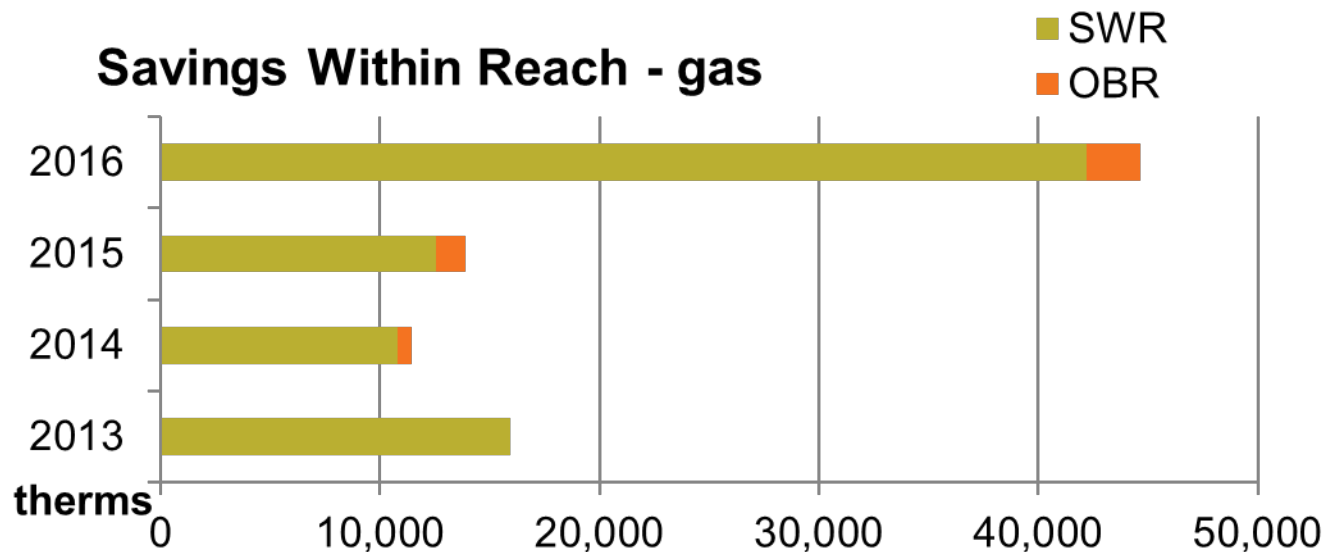
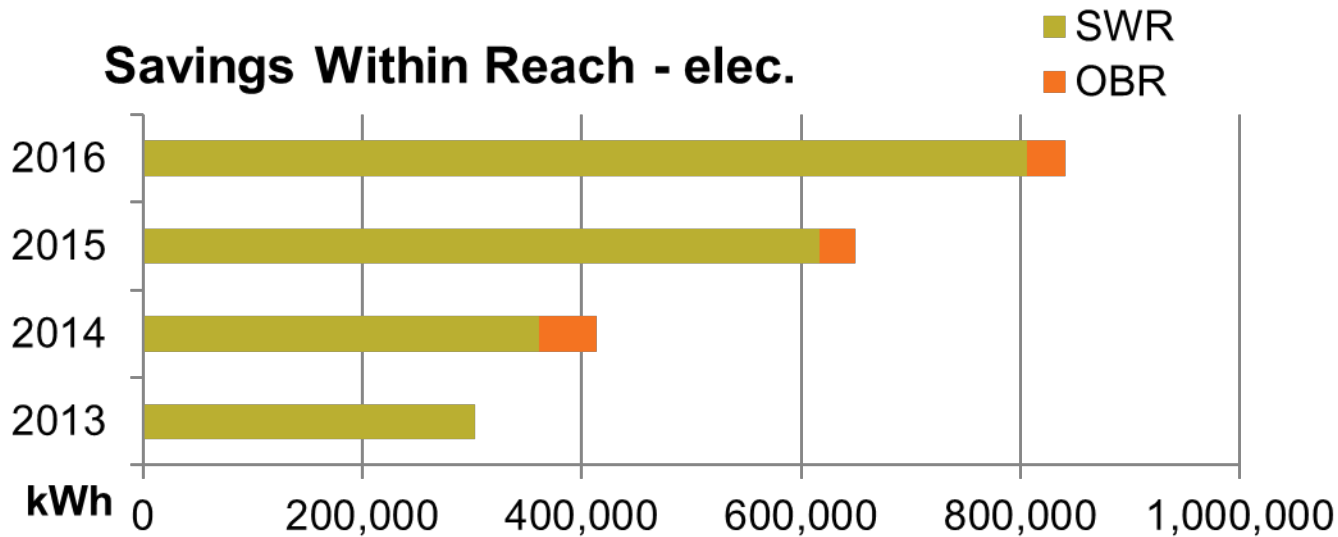
Gas Hearth (midstream) Trends



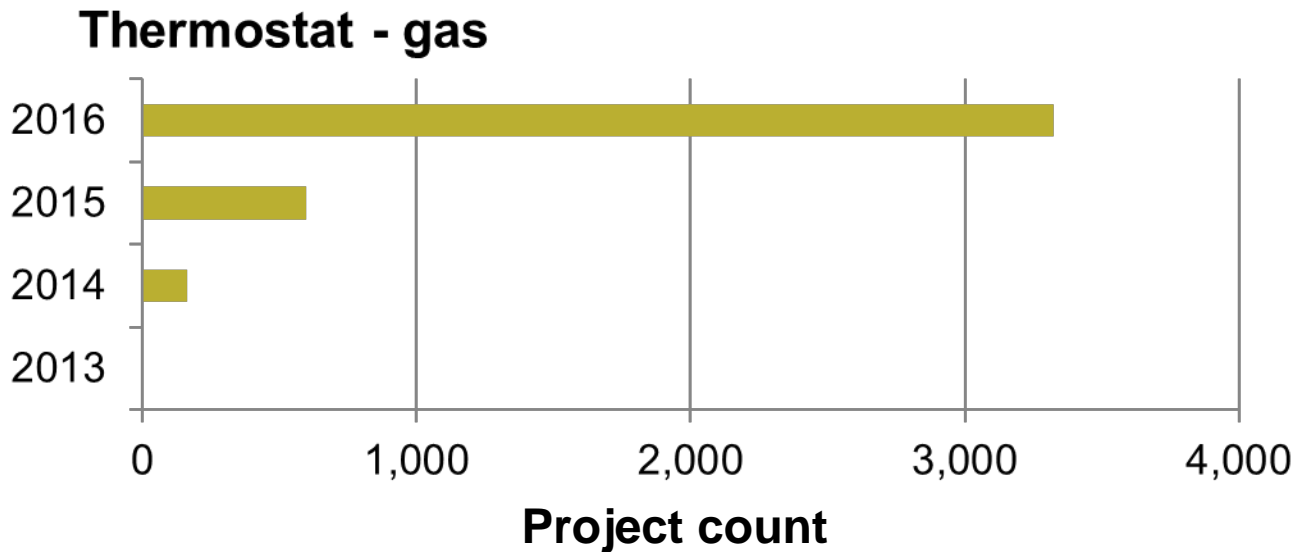
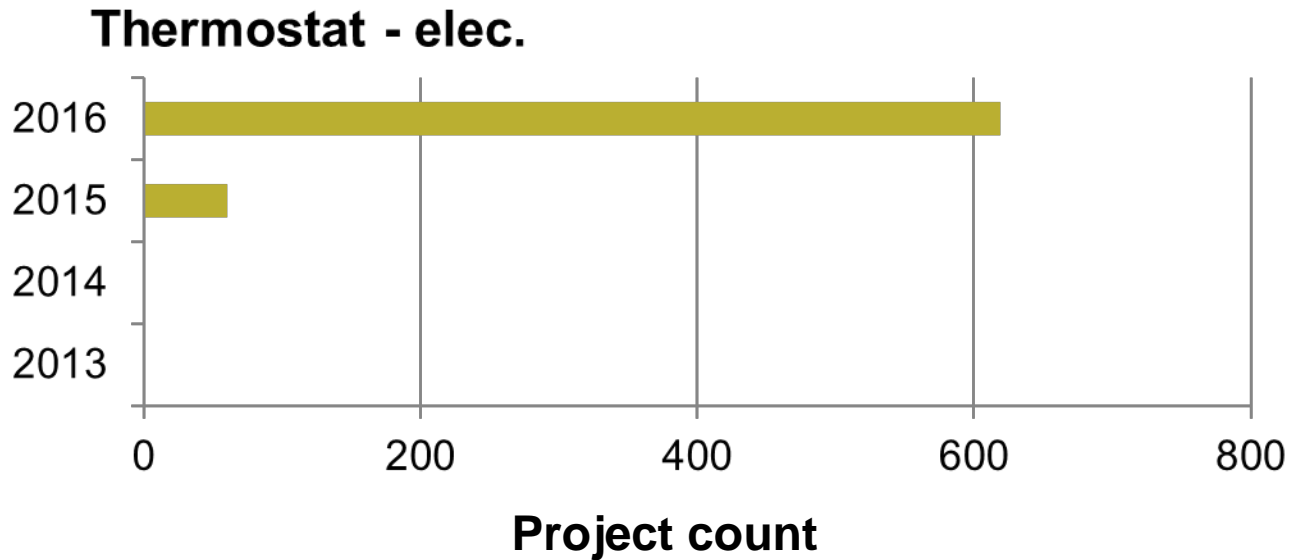
Gas Furnace Trends



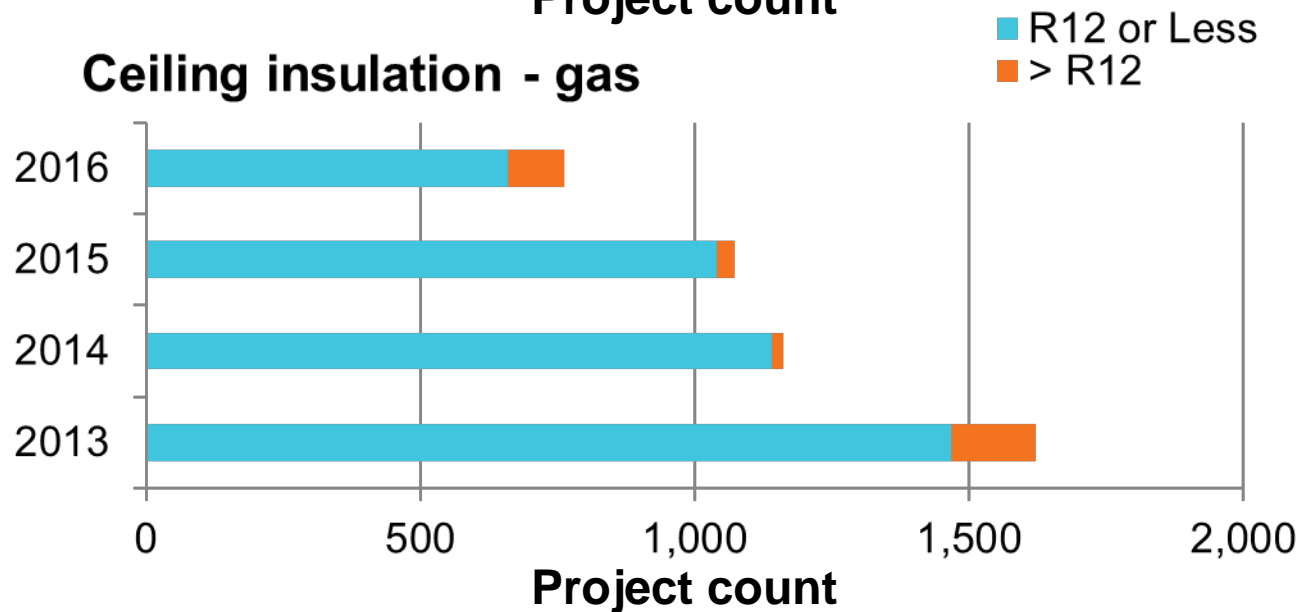
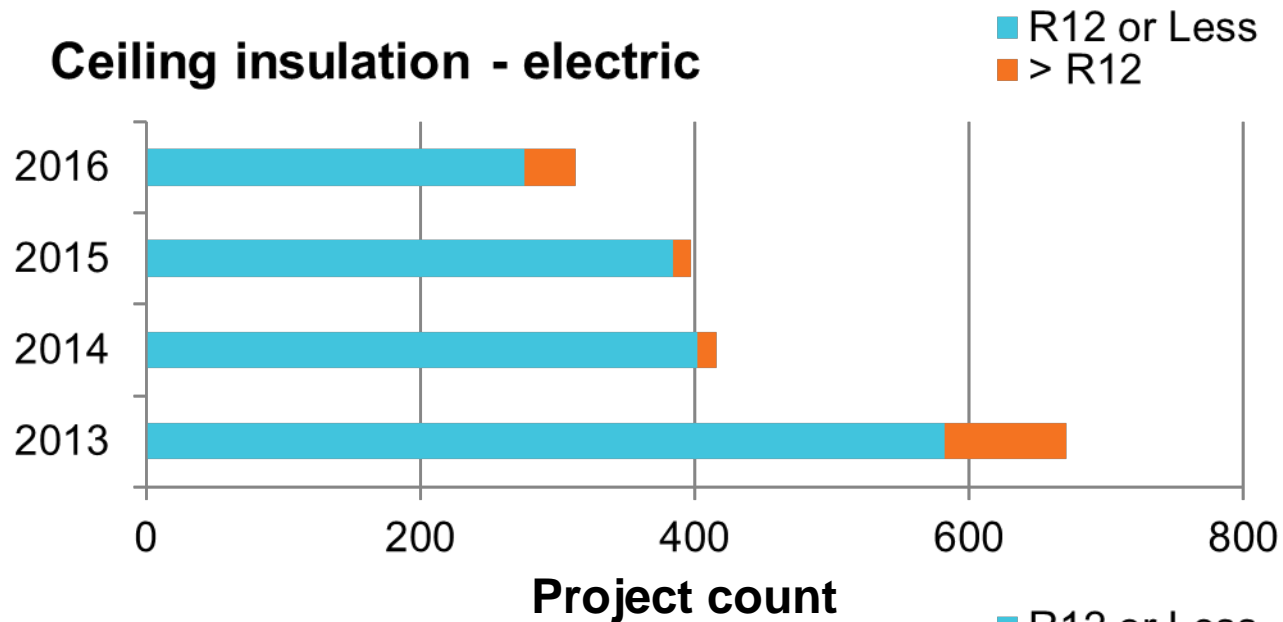
Savings Within Reach Trends



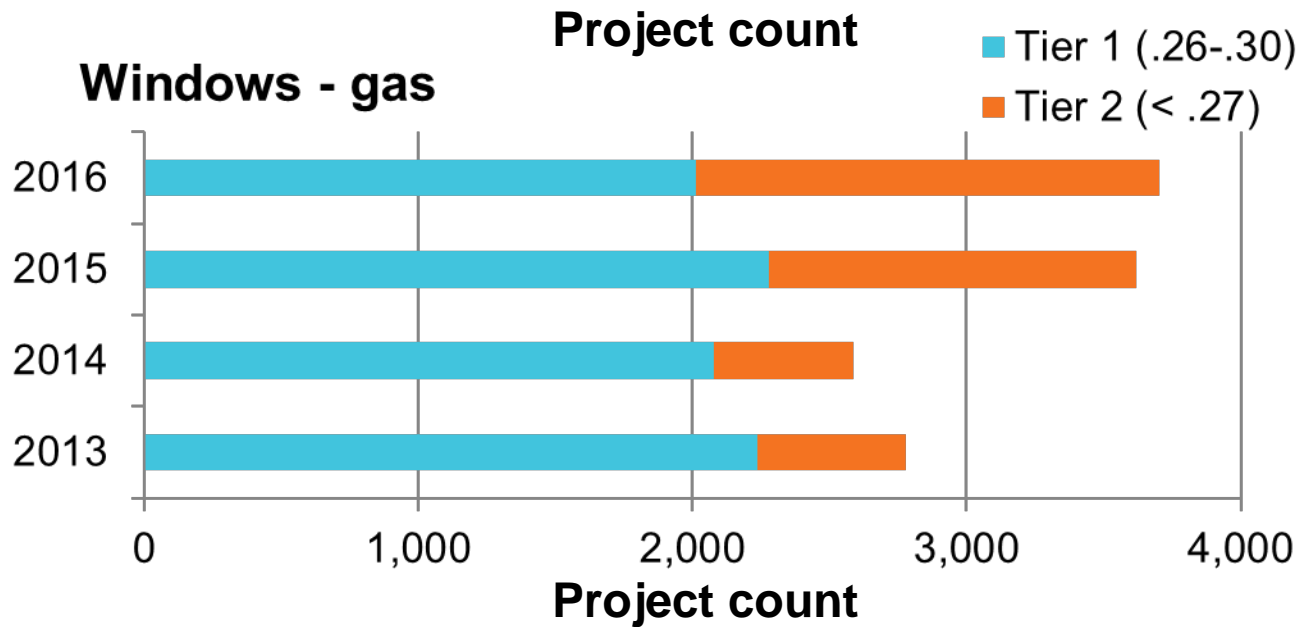
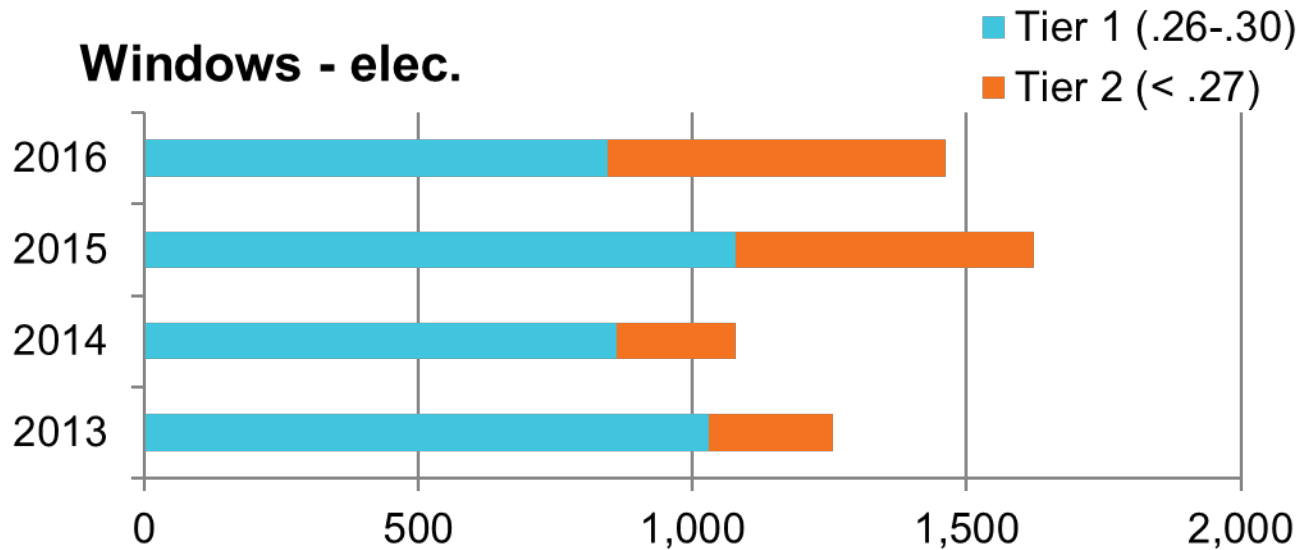
Thermostat Trends



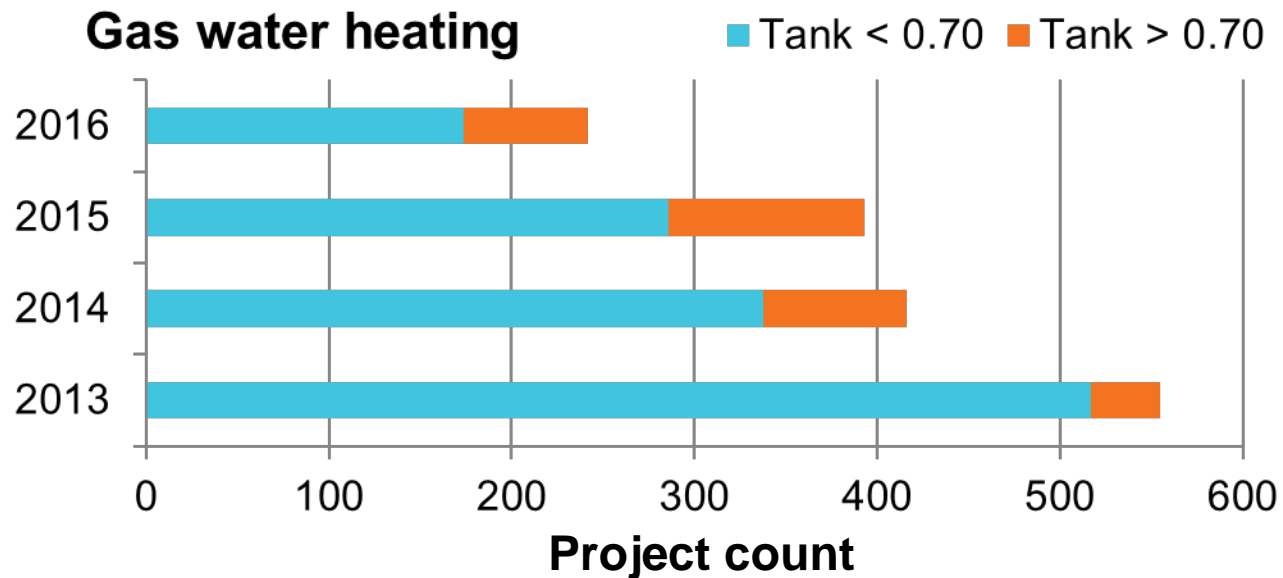
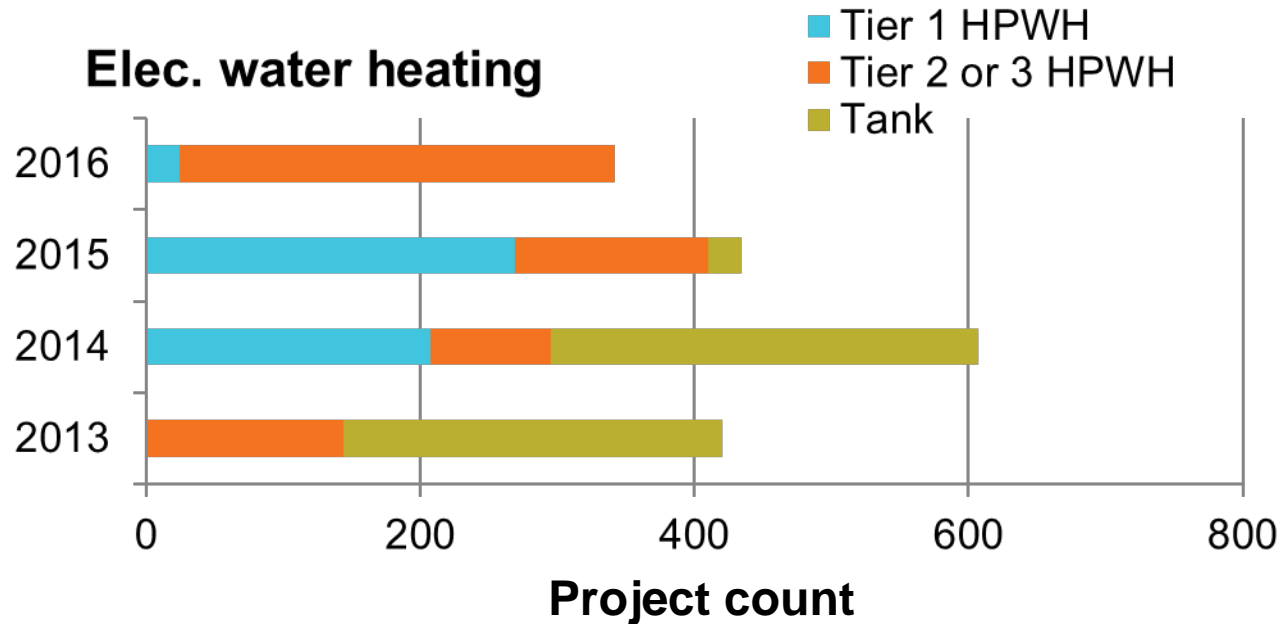
Insulation Trends



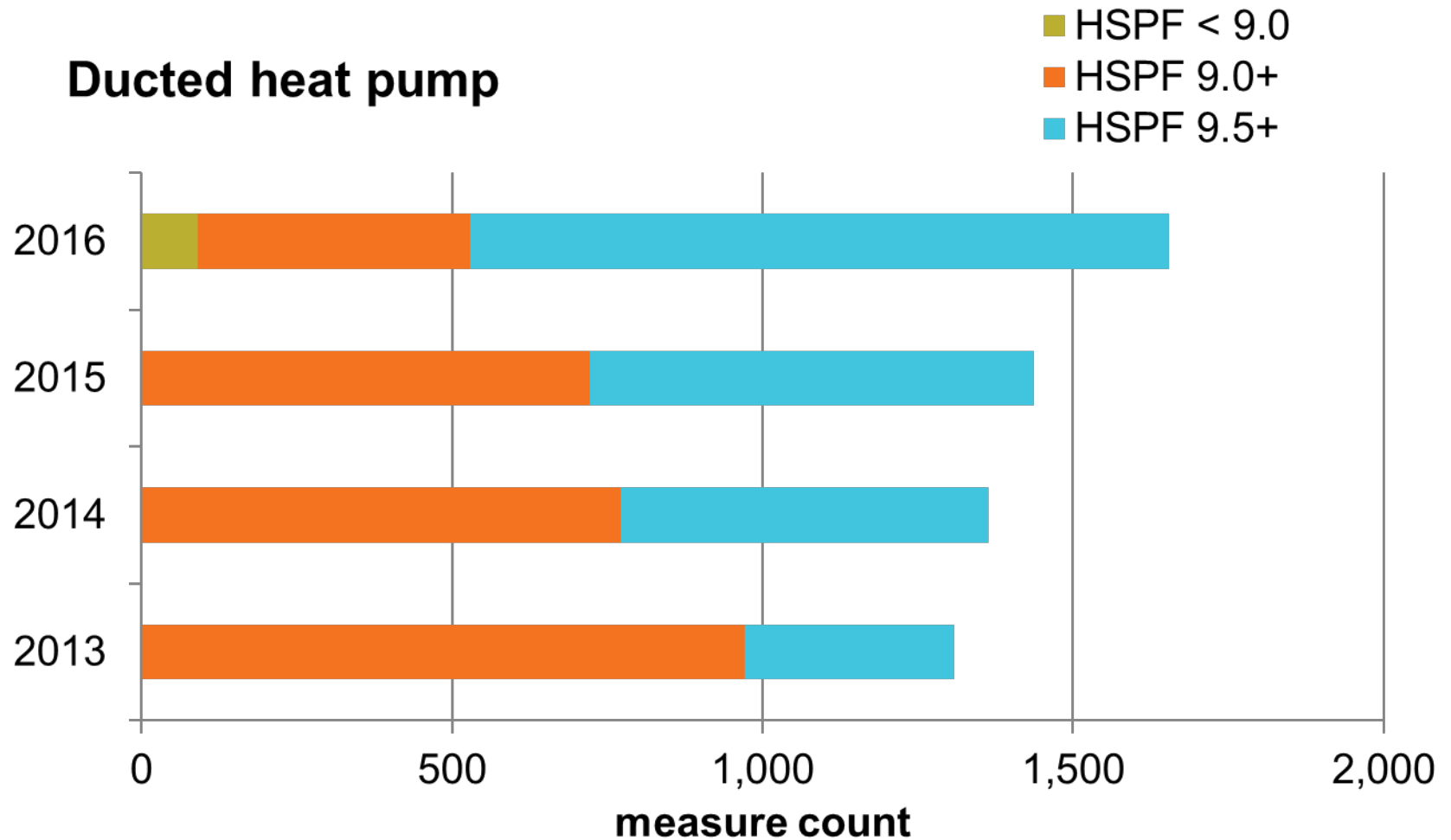
Windows Trends



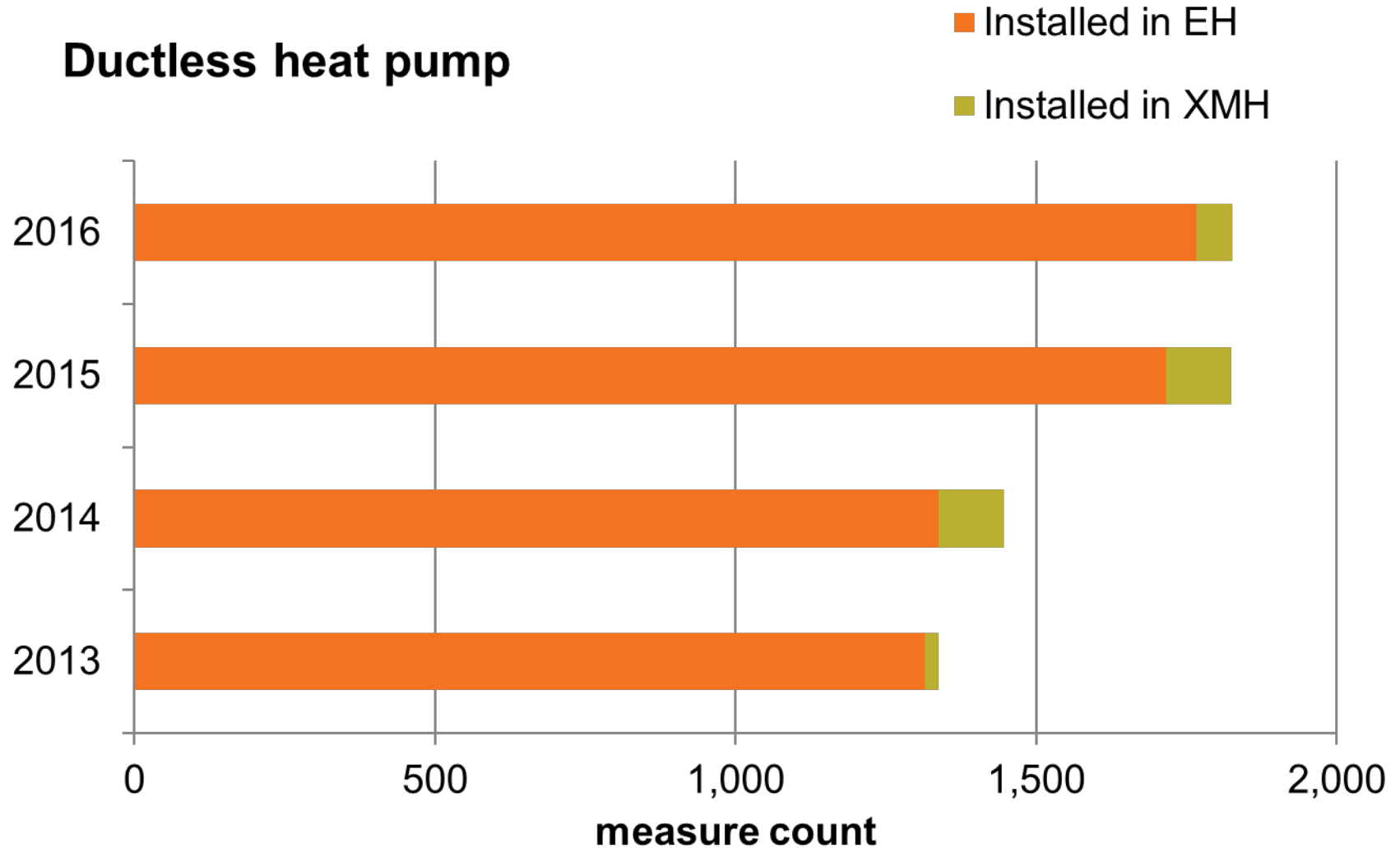
Water Heating Trends



Ducted Heat Pump Trends



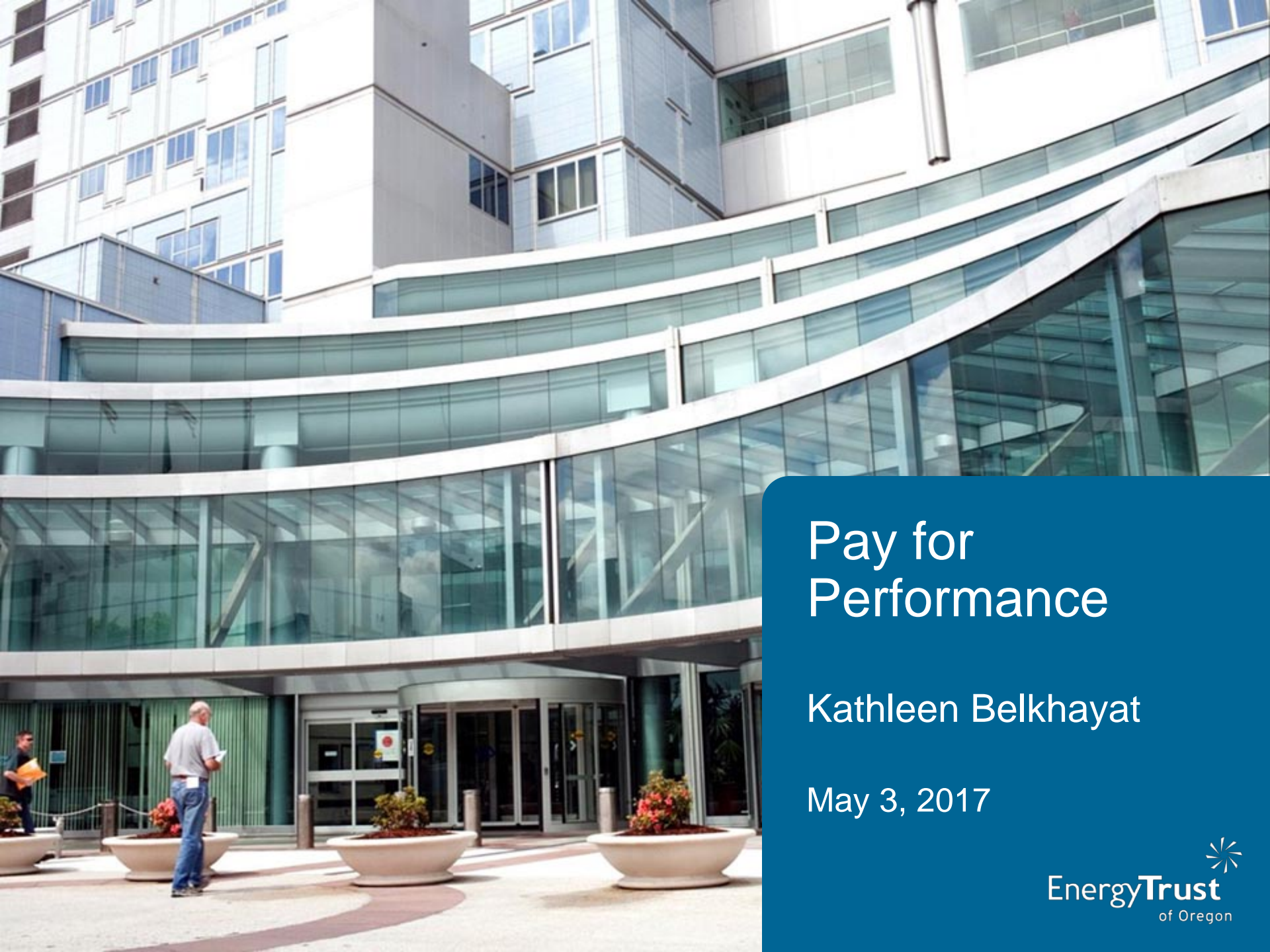
Ductless Heat Pump Trends





Thank You

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Pay for Performance

Kathleen Belkhatat

May 3, 2017

Pay for Performance Overview

- Measures: O&M, behavioral, and capital
- Incentives paid annually for 3 years-metered
- Service providers are key- contract between customer and contractor



Pay for Performance benefits

- Holistic approach; deeper savings
- High savings expectation
- Financial benefits: based on achieved savings



Pay for Performance Pilot- 2015

- One pilot participant
 - Office building
 - Energy Star certified
 - 240,000 square feet
 - 42 tenants
 - Mix of O&M and capital measures
- Service provider – existing customer relationship



1000 Broadway Building, Portland, OR

1000 Broadway Building

- 2015-2016 results
 - Energy Star score improved from 80 to 92
 - 16% savings (over 700,000 kWh each year)
 - Estimated \$65,000 energy cost savings annually
 - High customer satisfaction
- “This project was a win all around. We were able to hand off management of contractors to someone we trust, and we ended up improving efficiency, reducing wear and tear on equipment and saving a bunch of money.”
 - Kevin Brooks, chief engineer, 1000 Broadway

2017 Expansion

Challenges and Opportunities

- Recommendations from Evaluation:
 - PMC managed
 - Lower savings threshold
 - Integrate capital
 - Agreement with customer and with PfP Ally
- Baseline

One offering; two options

O&M	Capital (includes O&M)
\$0.05/kWh	\$0.10/kWh
\$0.60/therm	\$1.20/therm
Capped at 200% of 1 st year incentives	Capped at 150% of 1 st year incentives
$\leq 50\%$ of savings from capital	$> 50\%$ of savings from capital

Pay for Performance Ally requirements

- Experience with:
 - Retrocommissioning
 - Energy analysis
 - Energy Trust projects
 - Regression modeling



- And demonstrated work product for the above

Building Eligibility

Requirements

- Retail, office or grocery
- 85% conditioned floor area in the above use type
- >50,000 square feet
- 80% occupancy

Ideal candidate

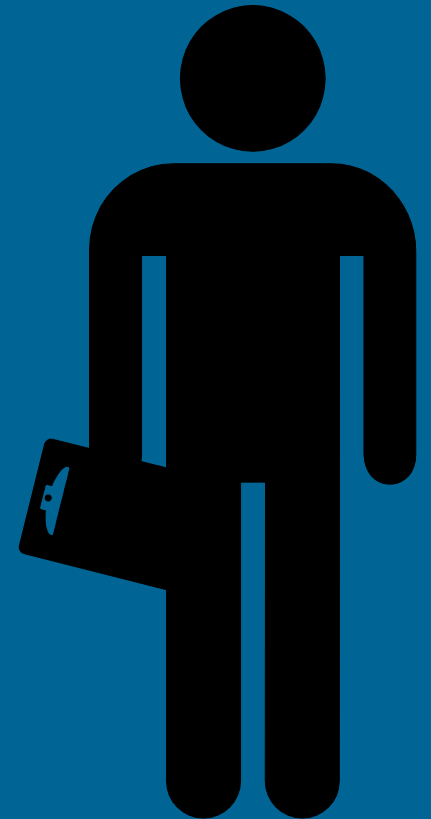
- Savings potential of 5-20%
- Existing metering exclusive to building
- No major changes planned & consistent operations

Responsibilities

Pay for Performance Ally	Energy Trust
Customer recruitment	Customer outreach
Identification of site and customer attributes	Review eligibility
Development of an Energy Reduction Plan	Plan and measure review
Application (with customer)	Documentation review
Install/implement measures	Post-Install verification
Model development	Model review
Final savings report	Report review & incentive check

Project Qualification steps

1. PfP Allies approved
2. Allies put together an Energy Reduction Plan
3. Energy Trust selects up to 6 projects



Project implementation steps

1. Energy Trust and customer sign Incentive Application
2. Ally installs/completes measures
3. PfP Ally provides monthly calls & quarterly savings forecasts
4. Final savings report (each year)



2017 Pilot Timeline goal

- PfP Ally Training: May
- Enrollment: June/July
- Installations begin: late 2017
- Savings begin: 2018





Thank You

Kathleen Belkhatat

Program Manager –
Energy Performance Management

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503-445-2475



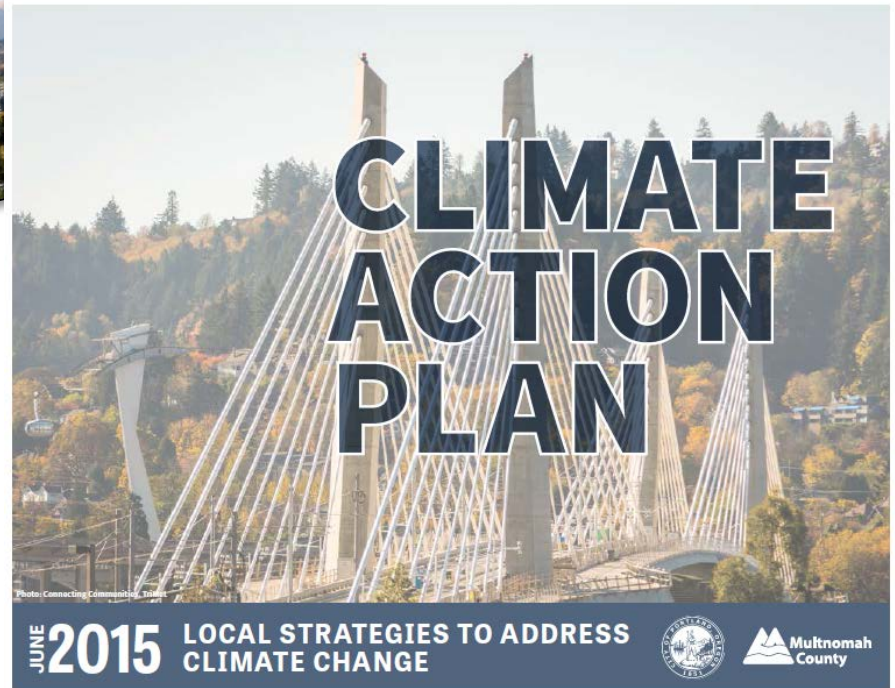
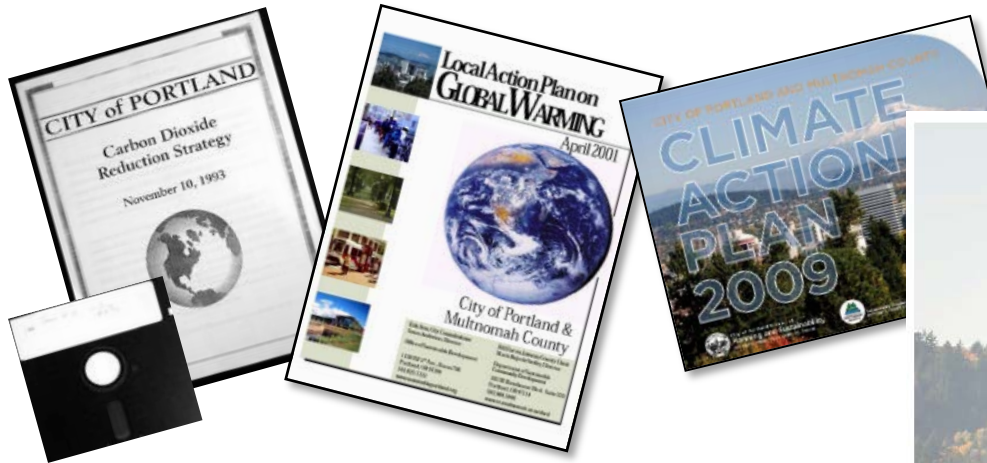
Portland Home Energy Score

Andria Jacob, Bureau of Planning and Sustainability

**Energy Trust of Oregon
Conservation Advisory Council**

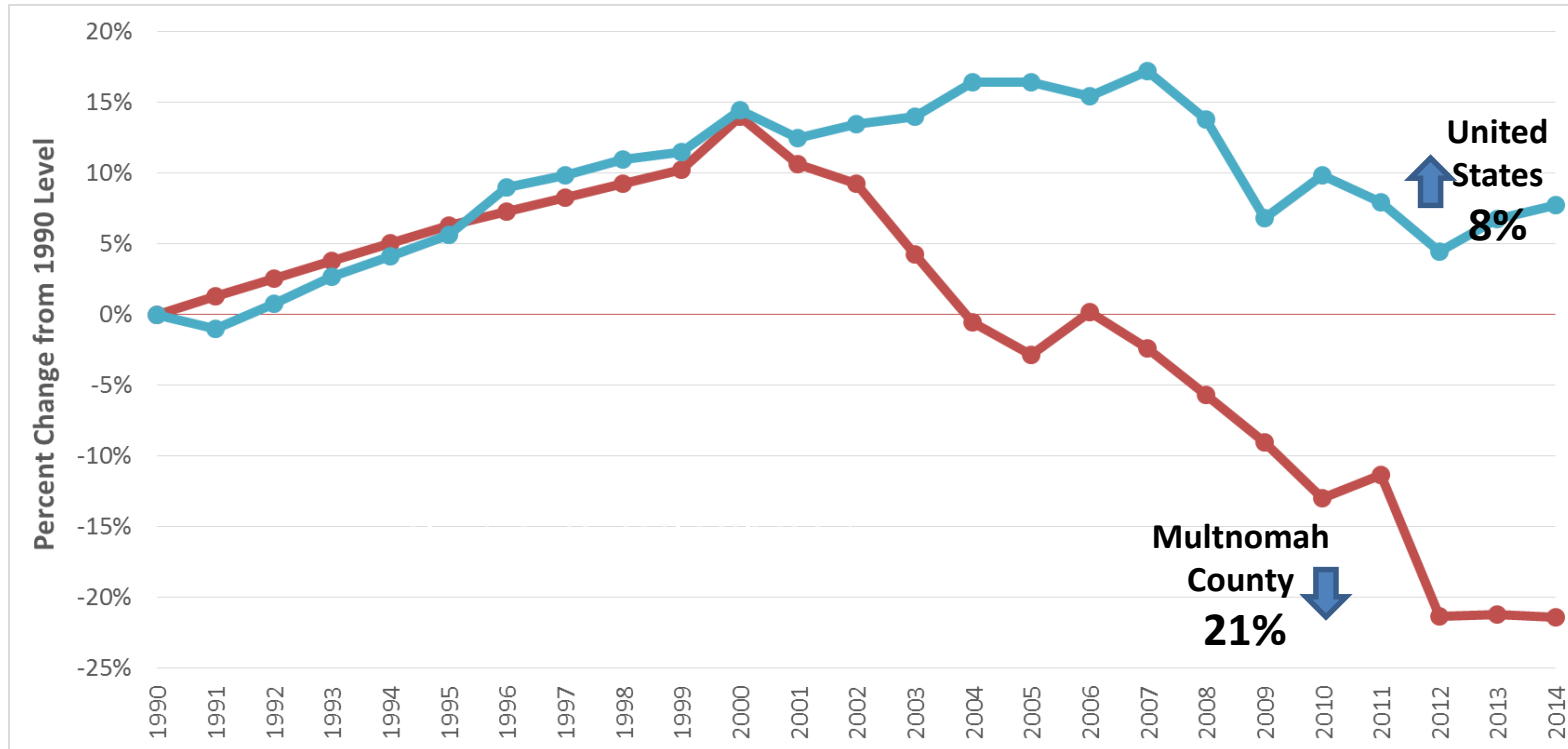
May 3, 2017

Legacy of Leadership

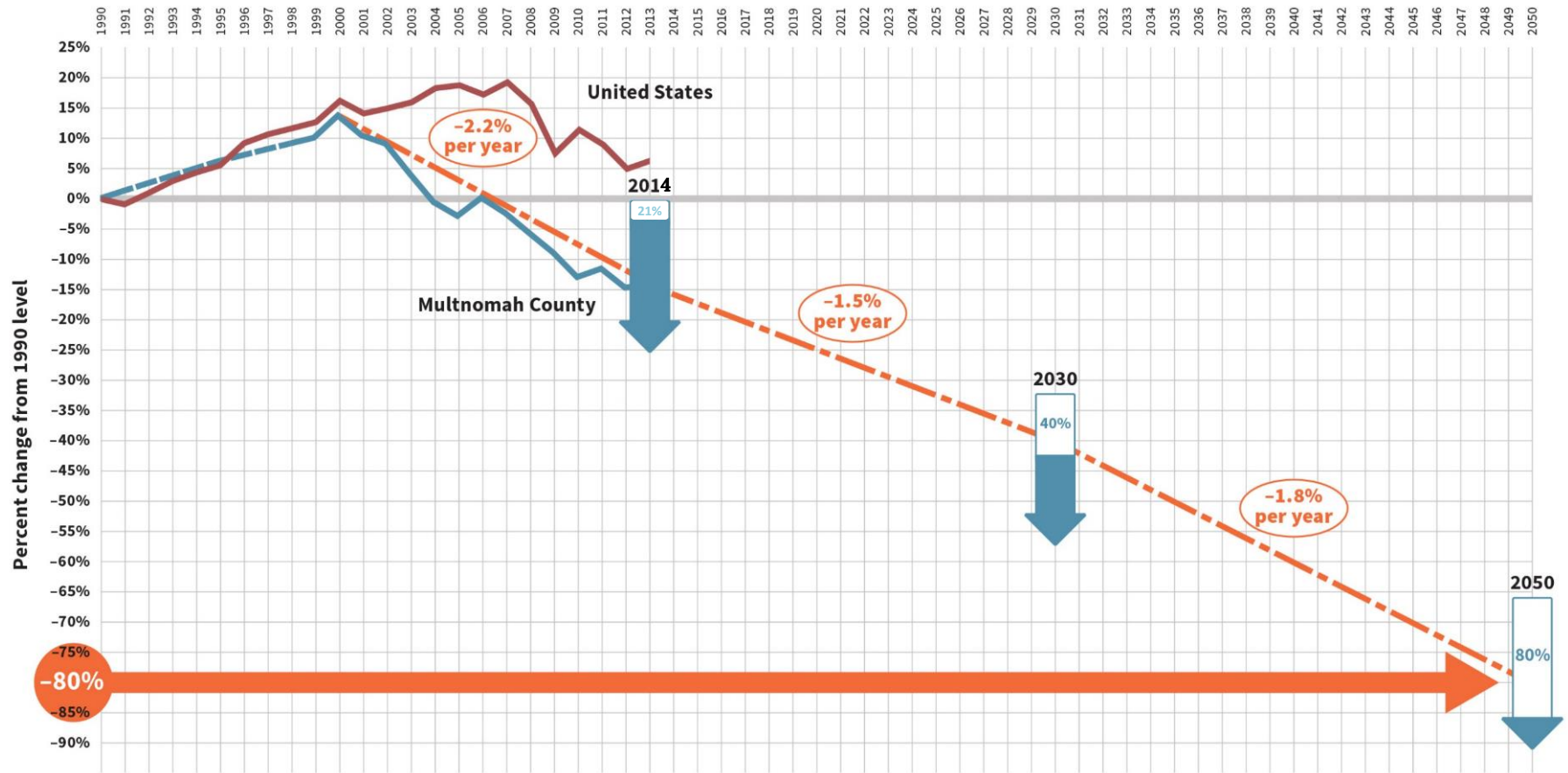


We're on Our Way...

Carbon Emissions Trend

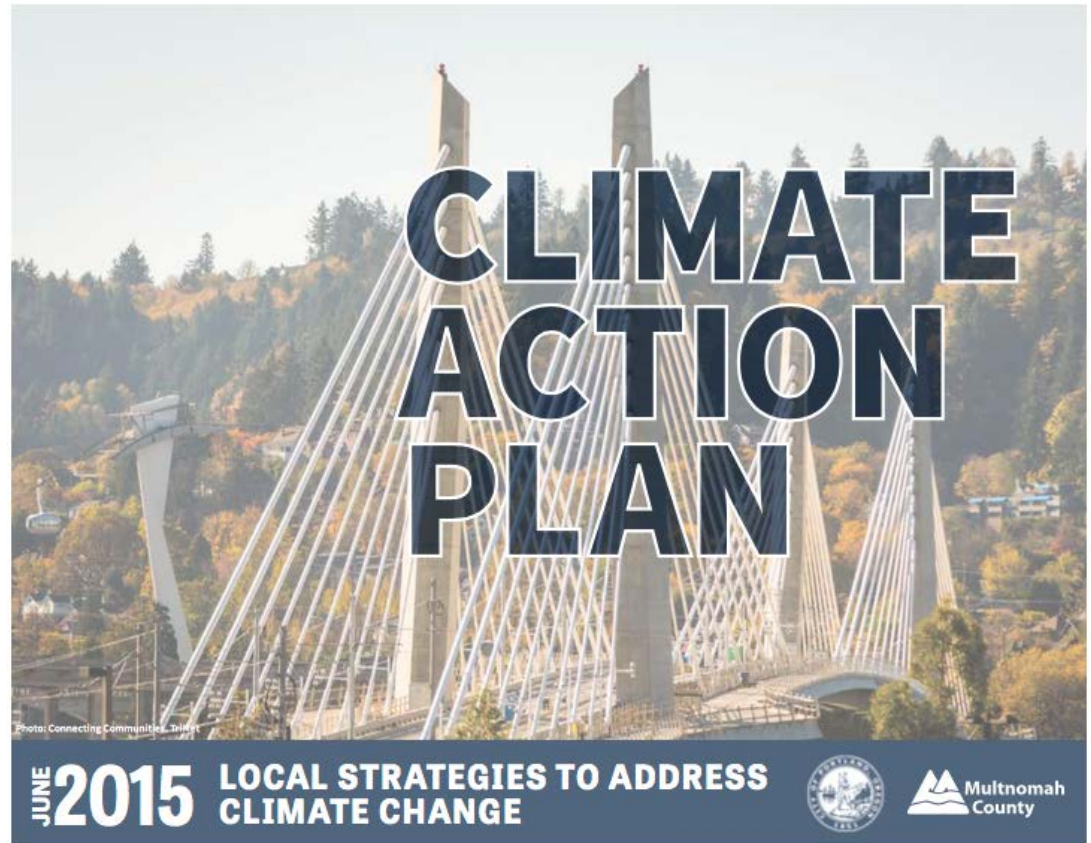


...But We Still Have Work to Do



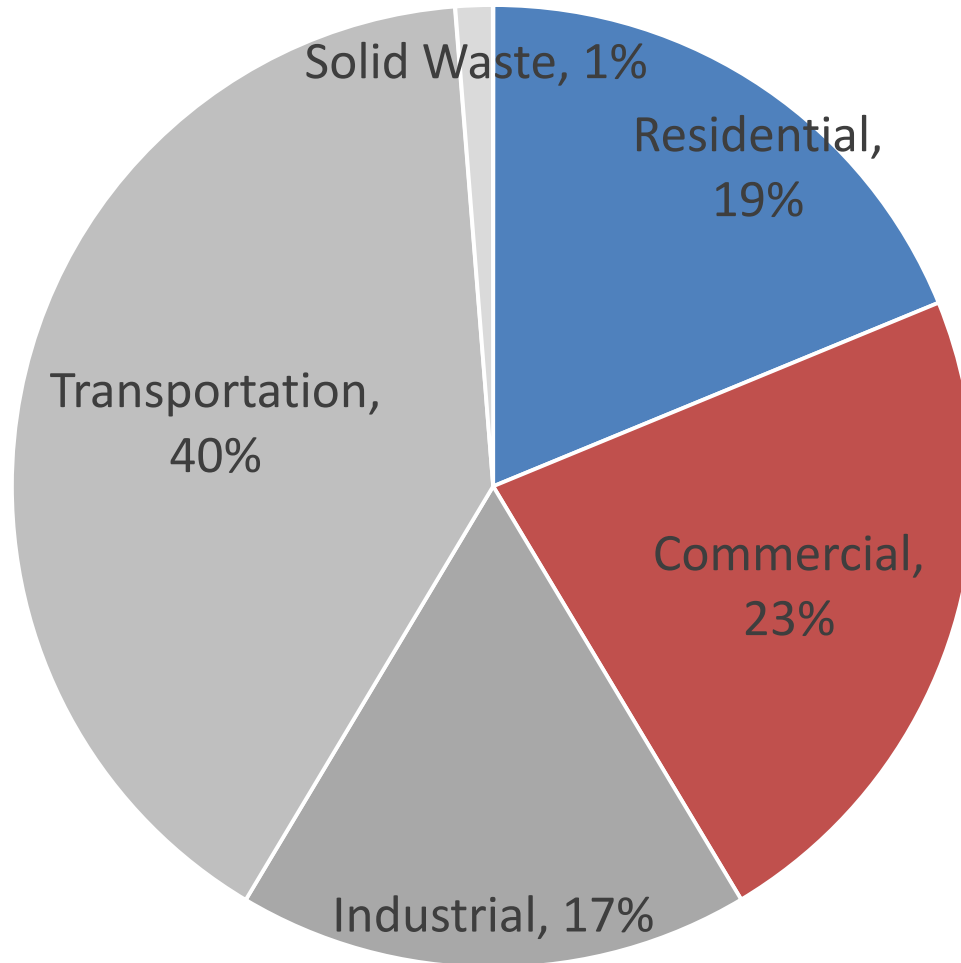
Objective 1

Reduce energy
use from
existing
buildings
25% by 2030

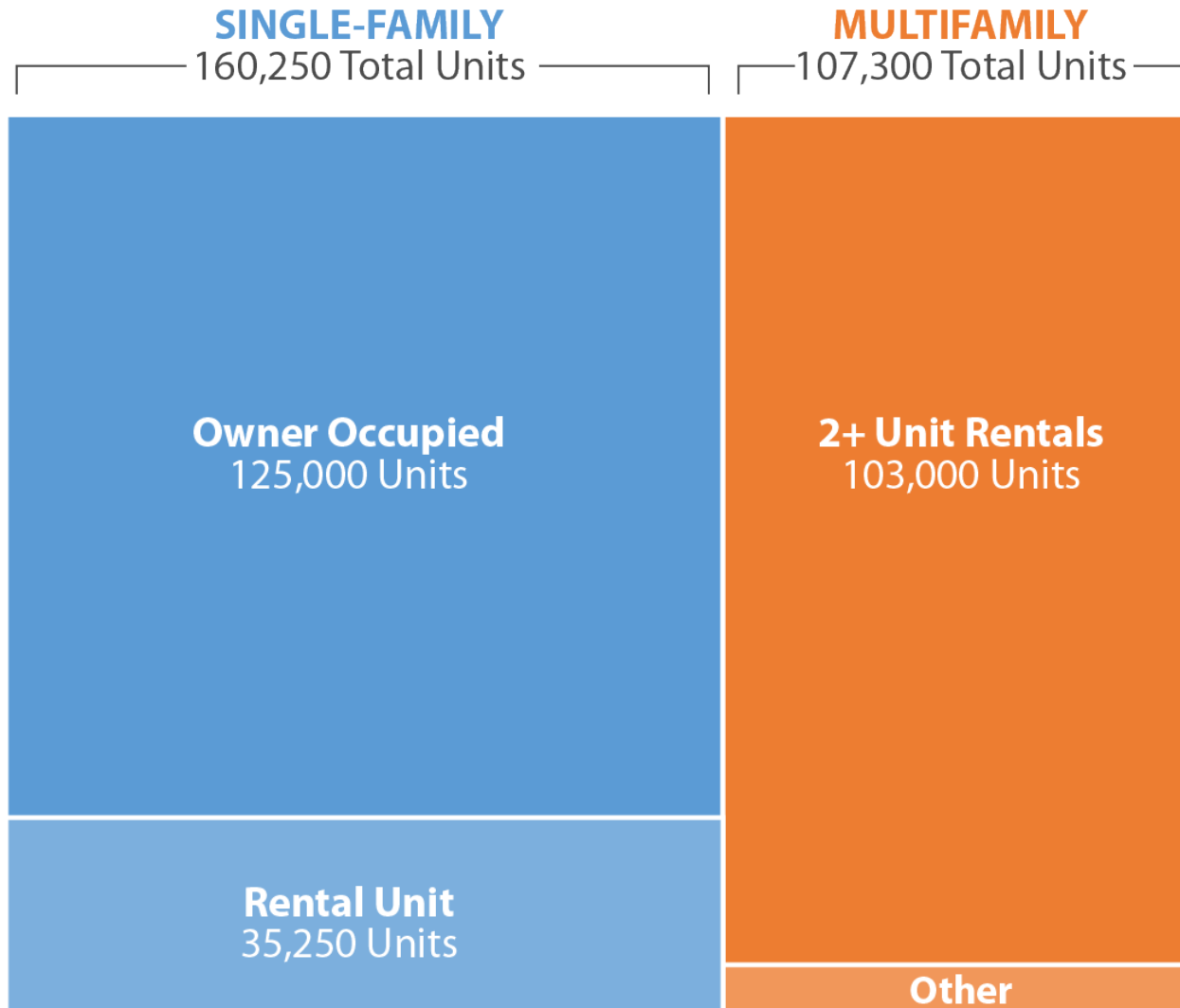


Carbon Emissions by Sector

(for Multnomah County, 2014)



Portland Housing Units



Climate Action Plan Priority

Action 1B

Require **energy performance ratings** for all homes so that owners, tenants and prospective buyers **can make informed decisions** about energy costs and carbon emissions





Attachment 0-4

ACME PLASTICS EMPLOYEE EVALUATION

Job Title: _____
Employee's Name: _____ Date of Evaluation: _____
Employment Site: _____ Work Days Covered by Evaluation: _____
Supervisor's Name: _____
During the following scale, please rate the employee's progress. Comments and/or explanations would be helpful.

5	4	3	2	1
Excellent (100%)	Outstanding (80-99%)	Satisfactory (70-79%)	Fair (60-69%)	Needs Improvement (below 59%)

EMPLOYEE FOUNDATION SKILLS

DEMONSTRATED	NEEDED	EXPLANATION
BASIC SKILLS FOR THE JOB		
Reading:		Can read and interpret manuals, memos, messages and other written material.

Scores, ratings and labels are how we
COMMUNICATE





**PARENTS STRONGLY
CAUTIONED**

PG-13

**EXTENDED SEQUENCES
OF INTENSE FANTASY
ACTION VIOLENCE, AND
FRIGHTENING IMAGES**

Some Material May Be Inappropriate for Children Under 13



®

Nutrition Facts

Serving Size 1/2 cup (115g)

Servings Per Container About 4

Amount Per Serving

Calories 250 **Calories from Fat** 130

% Daily Value*

Total Fat 14g **22%**

Saturated Fat 9g **45%**

Cholesterol 55mg **18%**

Sodium 75mg **3%**

Total Carbohydrate 26g **9%**

Dietary Fiber 0g **0%**

Sugars 26g

Protein 4g

Vitamin A 10% **Vitamin C** 0%

Calcium 10% **Iron** 0%

* Percent Daily Values are based on a 2,000 calorie diet.



U.S. Government

Federal law prohibits removal of this label before consumer purchase.

ENERGYGUIDE

Dishwasher
Capacity: Standard

Whirlpool Corporation
Models: DU1055XTV, DU1061XTV,
DU1300XTV, DU1301XTV,
DU1345XTV

Estimated Yearly Operating Cost
(when used with an electric water heater)

\$33



Cost Range of Similar Models

313 kWh

Estimated Yearly Electricity Use

\$26

Estimated Yearly Operating Cost
(when used with a natural gas water heater)

Your cost will depend on your utility rates and use.

- Cost range based only on standard capacity models.
- Estimated operating cost based on four wash loads a week and a 2007 national average electricity cost of 10.65 cents per kWh and natural gas cost of \$1.218 per therm.
- For more information, visit www.ftc.gov/appliances. (PIN W10254964 Rev. A)



Compare this vehicle to others in the **FREE FUEL ECONOMY GUIDE** available at the dealer.

CITY MPG
23

Actual Mileage will vary with options, driving conditions, driving habits and vehicle's condition. Results reported to EPA indicate that the majority of vehicles with these estimates will achieve between 19 and 27 mpg in the city and between 26 and 35 mpg on the highway.



1993 CANARY 2.0 LITER
L4 ENGINE FUEL INJECTED
AUTO 3 SPD TRANS CATALYST
FEEDBACK FUEL SYSTEM

Estimated Annual Fuel Cost:

\$850

HIGHWAY MPG
30

For Comparison Shopping,
all vehicles classified as
COMPACT
have been issued mileage ratings
ranging from 1 to 31 mpg city
and 16 to 41 mpg highway.



But labeling for

BUILDINGS

is uneven and mostly non-existent

Requirement for Existing and New Homes

Information disclosed

- Home energy performance report (defined by state law)

Regulated party

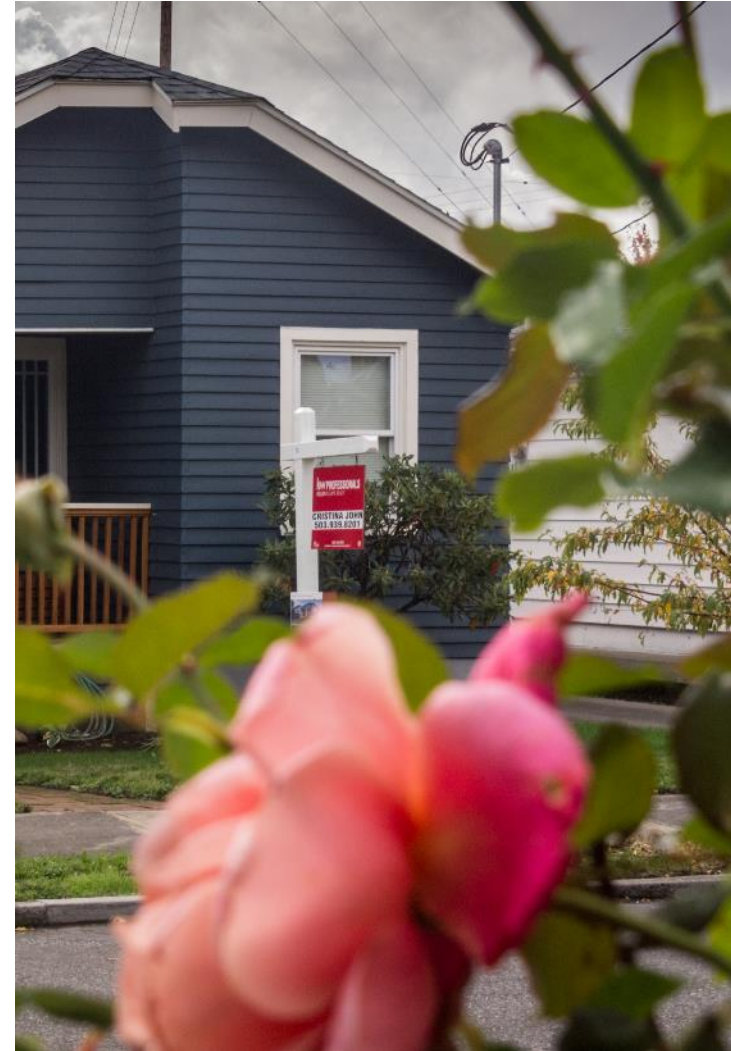
- Seller or homebuilder

Time of disclosure

- At or before listing

Recipient of disclosure

- Real-estate listings, prospective buyers, the City





[Your State] Home Energy Score

1234 Your Road,
Your Town, YS 00000

SCORE
TODAY

3

Average Home Score

Higher
energy
use

1

2

3

4

5

6

7

8

9

10

Lower
energy
use

SCORE TODAY

Estimated annual energy cost:

\$1,600

Score basis:

80 MBTU

SCORE WITH
IMPROVEMENTS

Potential annual energy cost:

\$1,239

Score basis:

49 MBTU

The U.S. Department of Energy's [Home Energy Score](#) assesses the energy efficiency of a home based on its structure, heating, cooling, and hot water systems.

Address: 12345 Honeysuckle Lane
Smithville, AR 72466



Repair now: These improvements will save you money, conserve energy, and improve your comfort now

Estimated utility bill savings (\$/year)

Attic 1 / Increase attic floor insulation to at least R-49

187

Ducts 1 / Add insulation around ducts in unconditioned spaces to at least R-6

71

Ducts 1 / Have your ducts professionally sealed to reduce leakage

171



Replace later: These improvements will help you save energy when it's time to replace or upgrade

Estimated utility bill savings (\$/year)

Furnace 1 / Pick one with an ENERGY STAR label

106

Central Air 1 / Pick one with an ENERGY STAR label

80

Water heater / Pick one with an ENERGY STAR label

34



With these improvements
reduce your home's carbon
footprint by: **27%**



The Home Energy Score recommendations for efficiency improvements are based on selected data from the home's assets, not information from a complete energy audit. When making energy related upgrades, homeowners should consult with a certified energy professional or other technically qualified contractor to ensure proper sizing, installation, safety, and adherence to code.

Exemptions

- Foreclosure sales
- Short sales
- Sales at public auction
- Senior mortgage is in default
- Oregon Property Tax Deferral for **Disabled and Senior Citizens** program participants
- Income at or below **60 percent of median household income**
- **Waiver** for high performance new homes using **EPS or HERS ratings.**



Benefits to Portlanders

- ✓ Better insight into the full costs of owning a home.
- ✓ Ability to compare energy costs and performance between homes.
- ✓ Knowledge of home improvements in advance of purchase.
- ✓ Access to specialized mortgage products.
- ✓ Long-term household savings from an energy-efficient home.

Next Steps for 2017

April - May

Rulemaking for compliant Home Energy Performance Report (Scorecard design).

April – August

Low income program development, rulemaking on other program components, database development, system testing, and home energy assessor network training and onboarding

October - November

Report to City Council on market readiness and low income program

January 1, 2018

Home Energy Score Policy takes effect.

For more information:
portlandoregon.gov/bps/homeenergyscore

Questions?
andria.jacob@portlandoregon.gov





EXPANDING DIVERSITY

BUILDING A CULTURE OF INCLUSION AND DIVERSITY TO EFFECTIVELY SERVE ALL CUSTOMERS

“

It is diversity that drives innovation. A diversity of perspectives, of industries, of cultures. When we bring together these different perspectives, we have a far better chance of breaking new ground.

”

Frans Johansson,
Founder of
The Medici Group

We believe our differences make us stronger

Energy Trust of Oregon strives to create a culturally attentive organization with diverse employees and contractors who contribute a range of perspectives, experiences, skills and ideas to how we work, our programs and our services. We believe our differences make us stronger and spark more creativity and innovation.

Diversity is reflected in the individuals who work for and with Energy Trust, as well as the many types of people and places we serve, from families to farmers, from small businesses to large industrial manufacturers, and from the Willamette Valley to rural communities.

We embrace all values, experiences and backgrounds of the people, businesses and organizations we work with, including:

- Cultures, races, religions, national origins, ethnicity, sexual orientation, gender and gender identity or expression, age, abilities and disabilities
- Geographic locations
- Business sizes and types
- Languages spoken
- Life and work experiences and perspectives

Oregon is growing

According to Oregon's Office of Economic Analysis, our state population is expected to increase by 500,000 to 4.3 million in 2020. Migration to Oregon is projected to contribute nearly two-thirds of that population growth.

And growing more diverse

With this growth, the demographics of our residents are changing faster than most other states. Today, 22 percent of Oregonians belong to a minority race or ethnic group, and that percentage is expected to grow.

These trends indicate that we need to engage an even more diverse population now and in the future—as customers, contractors, employees and beneficiaries of the services we provide.

We're already on the path

Our commitment to diversity is reflected in our efforts to expand participation throughout the state and to reach all types of customers. In 2015, our outreach efforts engaged more first-time participants and rural and small customers. Small businesses made up an increasing portion of overall participation, twice as many homeowners completed our online Home Energy Review than the prior year, and 5,000 affordable housing apartments were served. We know there is more work to be done.



WHAT DOES SUCCESS LOOK LIKE?

When diversity is an integrated part of who we are and how we conduct our business, Energy Trust will be more innovative and better positioned to meet our future goals. If we are successful, we will:

- Be better equipped to serve all eligible customers
- Work with more and different contractors
- Grow results
- Expand procurement opportunities
- Recruit, hire and support a more diverse workforce
- Gain competitive and strategic insights and perspectives
- Improve employee retention in a competitive economy
- Weave this into the fabric of who we are

OUR DIVERSITY ACTION PLAN

We are committed to fostering a culture of inclusion and diversity to effectively serve all customers. To do so, we are focused on three main areas for improvement, each with corresponding targeted actions. All three areas are consistent with our energy and operations goals in our 2015-2019 Strategic Plan.

Area 1: Organizational development

Building momentum, culture and organizational capacity to design and deliver energy generation and savings to customers:

- Invest in a culture and environment that is welcoming of diverse employees
- Continue broadening recruiting, hiring and retention through internships and mentorships
- Pursue more diverse board, Conservation Advisory Council and Renewable Energy Advisory Council member composition

Area 2: Market and customer insights

Learning and applying market and customer insights to ensure our capability to reach and engage customers:

- Conduct research to better understand characteristics of participants and non-participants
- Provide guidance and resources for more culturally appropriate marketing, communications, website and customer service tools
- Conduct focus groups with diverse communities
- Deepen partnerships to learn more about reaching diverse customers and trade ally contractors

Area 3: Business operations

Leveraging contracts and procurements to expand capacity to serve customers:

- Broaden procurement and contracting approaches to fully engage with diverse contractors, consultants, vendors and others, and encourage them to bid on opportunities
- Identify opportunities to support innovative approaches in business operations and programs
- Leverage our Trade Ally Network, and pursue opportunities to identify and support trade allies that speak languages other than English
- Identify strategic alliances and partners to support and expand efforts



Calling all perspectives

We have a much greater chance of success if we are able to incorporate as many perspectives as possible. To join the conversation, contact Michael Colgrove, executive director, at michael.colgrove@energytrust.org.

Quarter	Date	Budget, Plans and Savings Outcomes	Program design/ strategy	New and Changing Measures and Incentives	Planning	Evaluation
Q1	8-Feb	2016 Preliminary Results	New Buildings: Innovation, VRF statis and LLLC launch (both are pilots); HVAC general landscape	measure changes - 2017 overview	Residential HVAC opportunity scan	
Q1	8-Feb					
Q1	8-Feb					
Q1	15-Mar					
Q1	15-Mar					
Q1	15-Mar					
Q2	3-May	State legislative update (Hannah/Jay)				
Q2	3-May					
Q2	3-May					
Q2	3-May					
Q2	21-Jun	State legislative update (tent.)	Business customer Reports			
Q2	21-Jun		Cannabis production results to date and 2017 strategy			
Q2	21-Jun		New Buildings: Program-wide progress update, with more refined focus on codes changes (2015 IECC baseline and what it means, and 2018 IECC for reach code), ahead of Energy Trust 2018 budget and action planning. Should co-present with NEEA, Ken Baker. Residential Lighting market update (tentative timing, August could work)	MF windows revisit	Residential Pilots Update -- 2017 efforts, 2016 results	
Q2	21-Jun					
Q2	21-Jun					
Q3	2-Aug	2017 Q2 Dashboards	Industrial Scoping Tool demo	C&I Lighting, tool update		
Q3	2-Aug	2018 Action Plans - Budget concepts	Commercial (EB, PE, MF): Lighting Good Better Best offering a tiered incentive structure to drive deeper efficiency.			
Q3	2-Aug					
Q3	6-Sep		Residential Sector RFP update (tentative)	PlannedResidential Measure Adjustments for 2018		Evaluation factors, other net to gross adjustments for 2018
Q3	6-Sep					
Q3	6-Sep		Existing Buildings: SmartWatt status update, explore go-forward strategy of status quo, retract, expand.			
Q4	20-Oct	2017 Q3 Dashboards		PlannedResidential Measure Adjustments for 2018		
Q4	20-Oct	R1 Budget and Action Plans				
Q4	20-Oct					
Q4	15-Nov	R2 Budget changes				
Q4	15-Nov					
Q4	15-Nov					