



Energy Trust & Cost Effectiveness

Trade Ally Forums
November 2017

What is a cost-effectiveness test?

- It's a Benefit/Cost Ratio (BCR) calculation that provides a Yes/No decision on whether an investment's benefits exceed its costs
 - Benefits must be greater than or equal to Costs over the life of the measure
- Per direction from OPUC, Energy Trust uses the Total Resource Cost Test and Utility Cost Test
 - Required to apply test at measure level (custom, prescriptive) and in annual report at program level

Total Resource Cost Test (TRC)

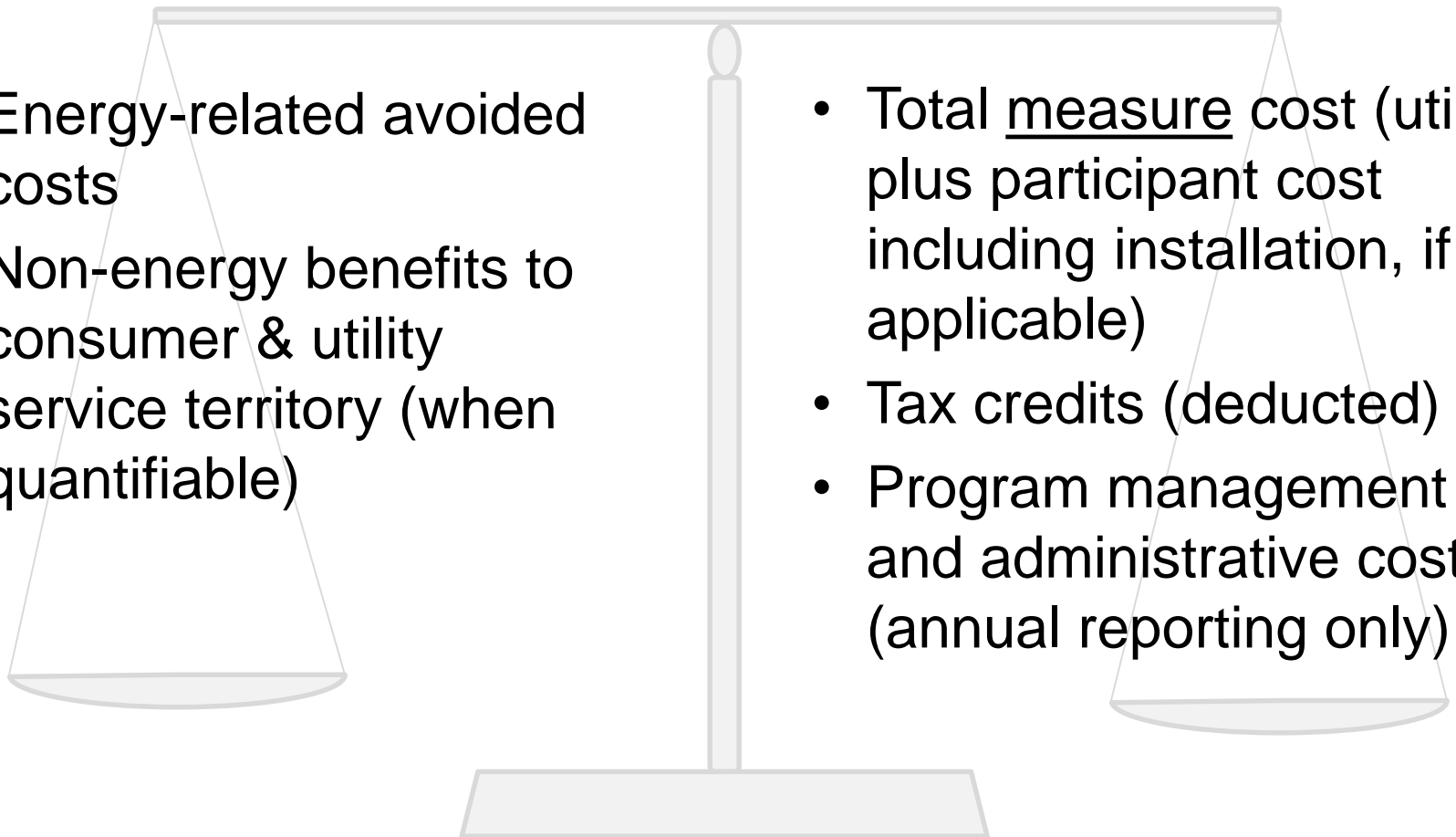
Will the total costs of energy in the utility service territory decrease?

Benefits

- Energy-related avoided costs
- Non-energy benefits to consumer & utility service territory (when quantifiable)

Costs

- Total measure cost (utility plus participant cost including installation, if applicable)
- Tax credits (deducted)
- Program management and administrative costs (annual reporting only)



Utility Cost Test (UCT)

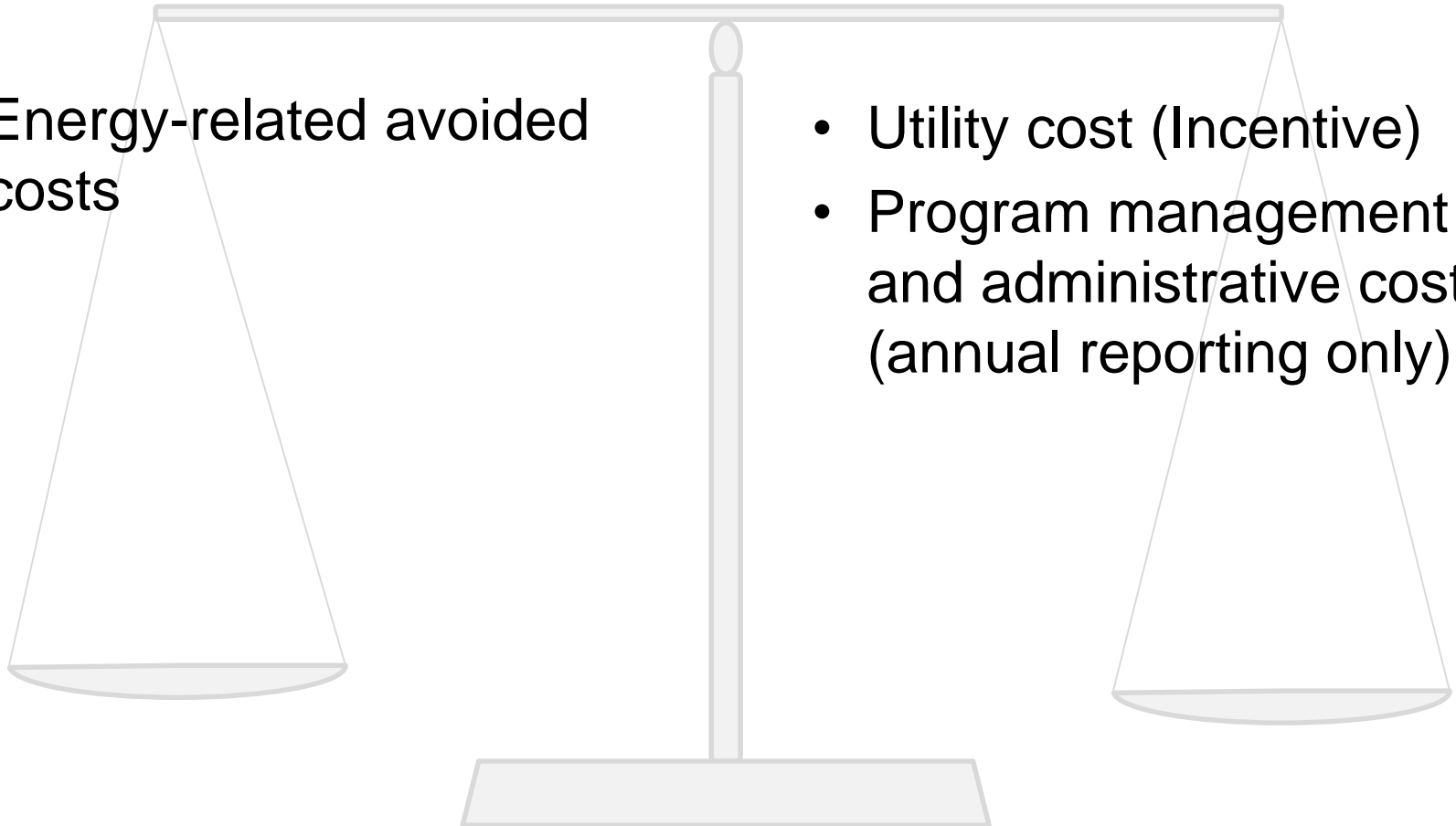
Is the utility cost of energy less?


Benefits

- Energy-related avoided costs

Costs

- Utility cost (Incentive)
- Program management and administrative costs (annual reporting only)





Residential Measure and Program Updates

Trade Ally Forums
November 2017

Overview

Regional impact

- Top performing measures
- Specialized Program Track participation

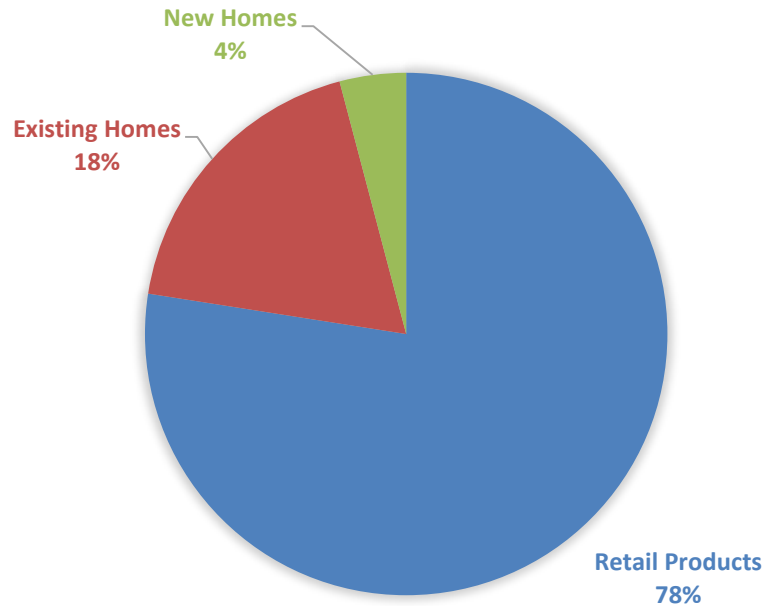
Residential program updates and measure changes for 2018



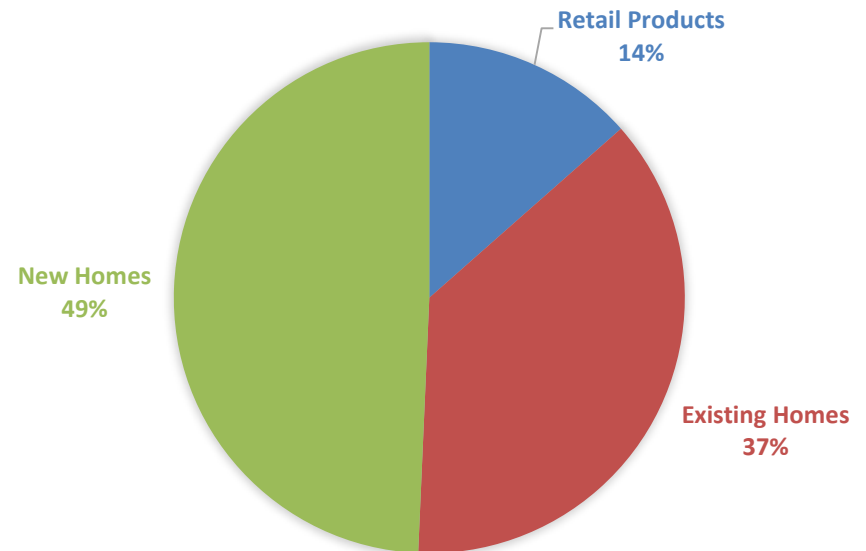
Regional Impact

Residential Savings

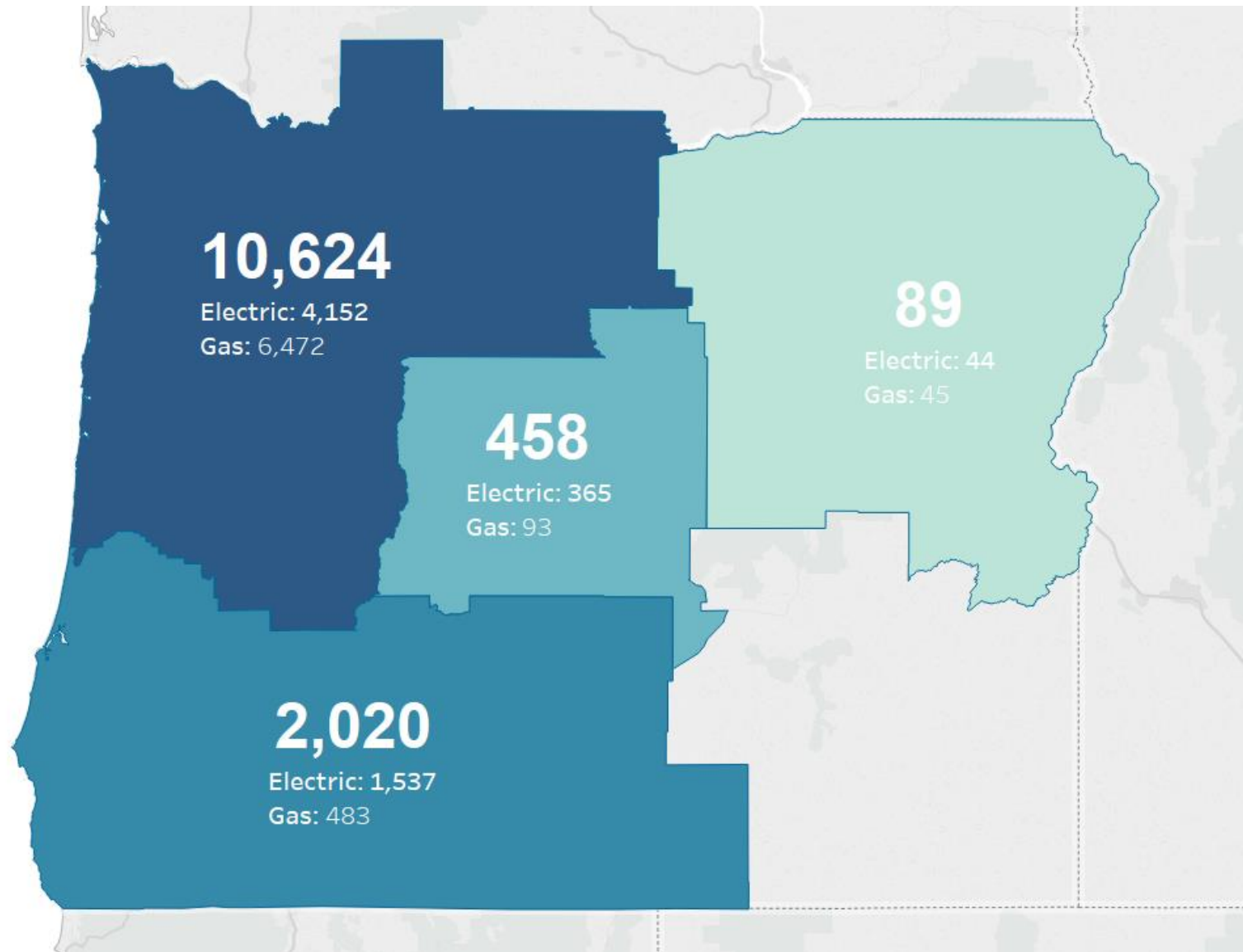
ELECTRIC SAVINGS



GAS SAVINGS



Home Retrofit Project Count



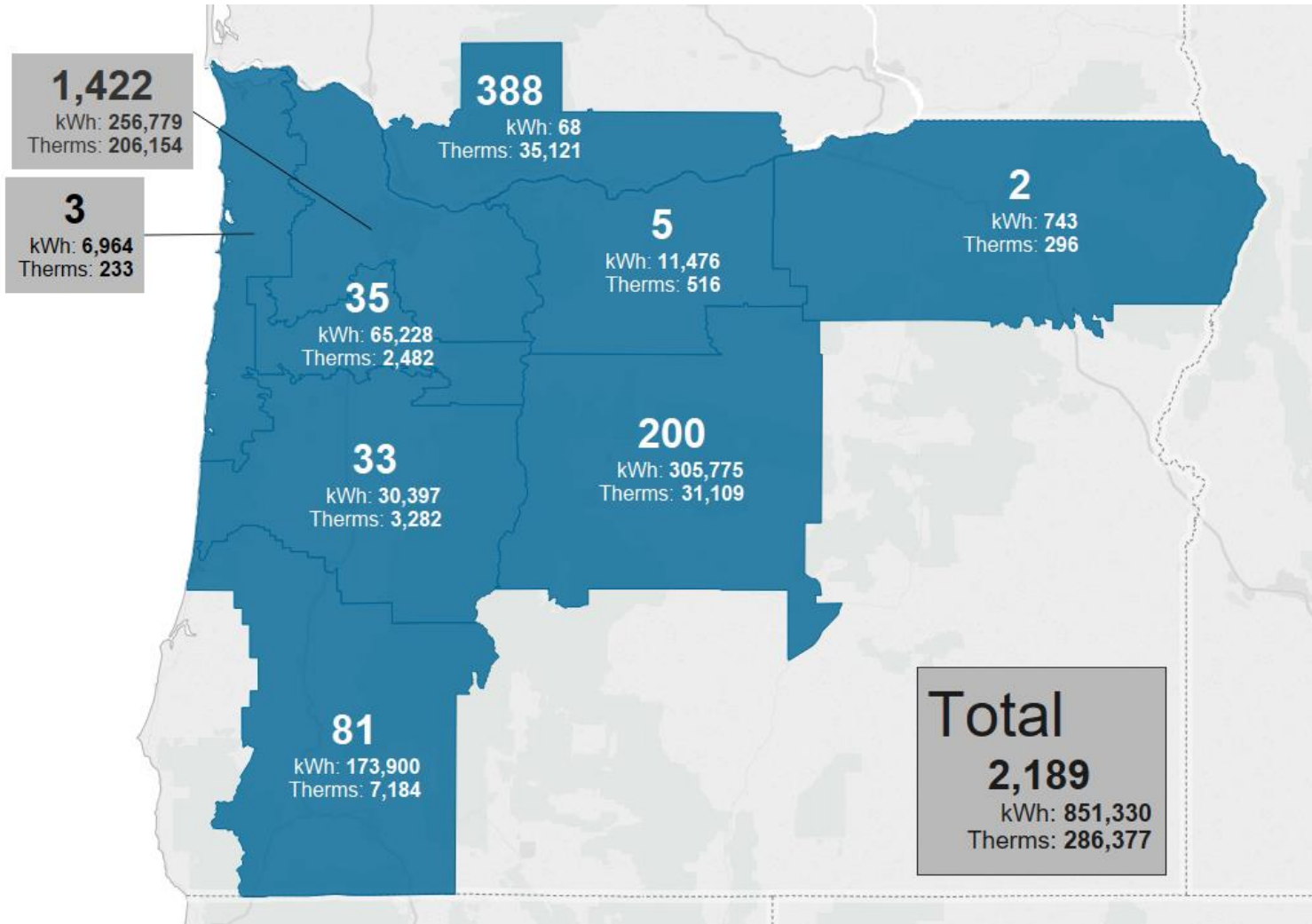
Central Oregon

Rank	Electric Measure	Project Count	kWh Savings	% of total kWh savings for the region
1	Ductless heat pump	131	351,414	54%
2	Heat pump rep.	19	97,284	15%
3	Heat pump upgrade	73	96,784	15%
4	Commissioning	55	39,347	6%

Rank	Gas Measure	Project Count	Therm Savings	% of total therms savings for the region
1	Windows	47	1,614	39%
2	Gas furnace	13	1,027	25%
3	Gas fireplace	10	587	14%
4	Ceiling insulation	10	481	12%



EPS Whole Home Regional Activity – Map



EPS Whole Home Regional Activity

Region	Quantity of Homes	kWh Savings	Therms Savings
Central	200	305,775	31,109
Columbia Basin	5	11,476	516
Mid-Willamette	35	65,228	2,482
North Coast	3	6,964	233
Northeast	2	743	296
Portland Metro	1,442	256,779	206,154
Southern	81	173,900	7,184
Southern Willamette	33	30,397	3,282
Southwest Washington	388	68	35,121
Total	2,189	851,330	286,377



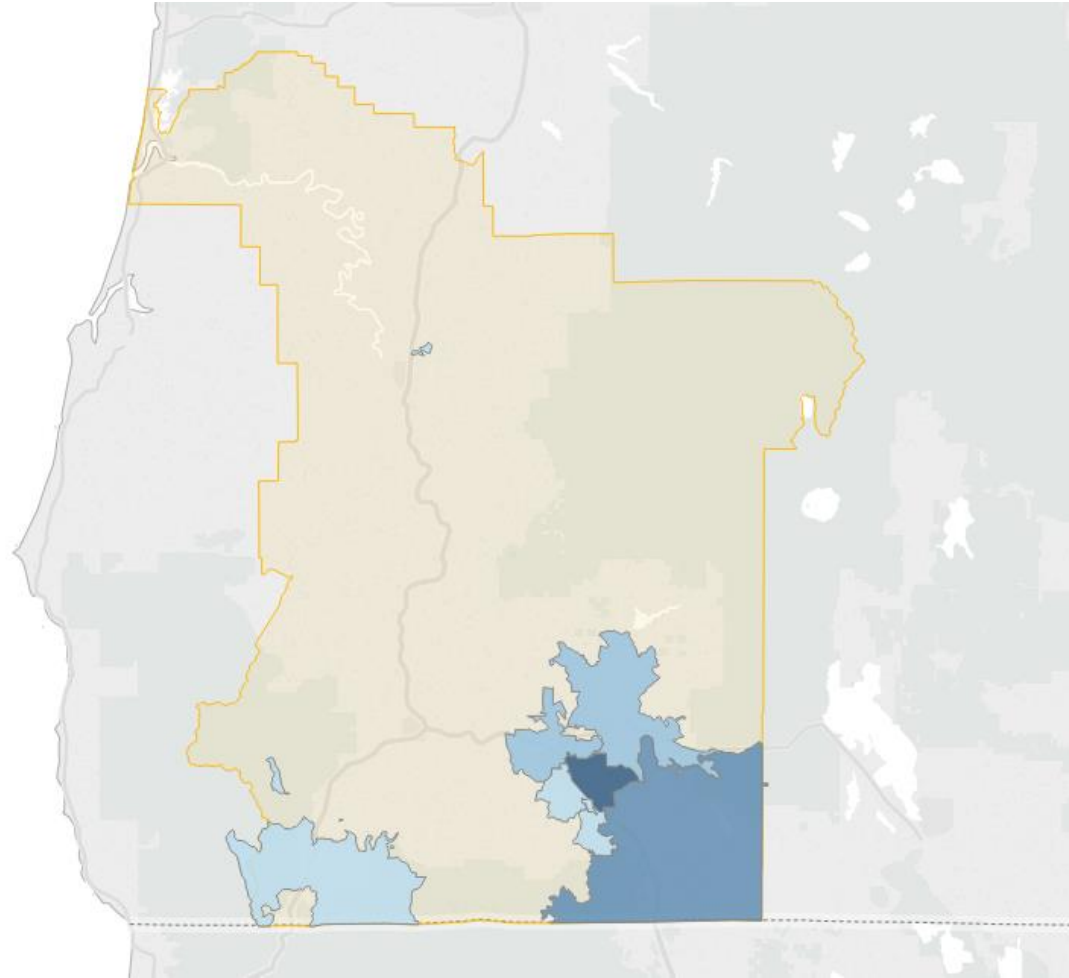
Southern Oregon

Rank	Electric Measure	Project Count	kWh Savings	% of total kWh savings for the region
1	Ductless heat pump	358	904,941	42%
2	Heat pump rep.	80	345,879	16%
3	Heat pump upgrade	259	322,450	15%
4	Commissioning	258	130,144	6%

Rank	Gas Measure	Project Count	Therm Savings	% of total therms savings for the region
1	Gas furnace	290	20,771	73%
2	Windows	77	2,435	9%
3	Ceiling insulation	34	2,346	8%
4	Duct sealing	36	1,176	4%



EPS Whole Home Activity– Southern Oregon



Specialized Program Tracks

Specialized Program Track	Trade Ally Enrollment	2017 Project Count
Savings Within Reach	146	824
Instant Incentives	198	2,489
Trade Ally Direct Install	50	1,008
Savings Within Reach On-Bill Repayment	103	74
Heat Pump On-Bill Repayment	57	39
SW Washington On-Bill Repayment	20	18



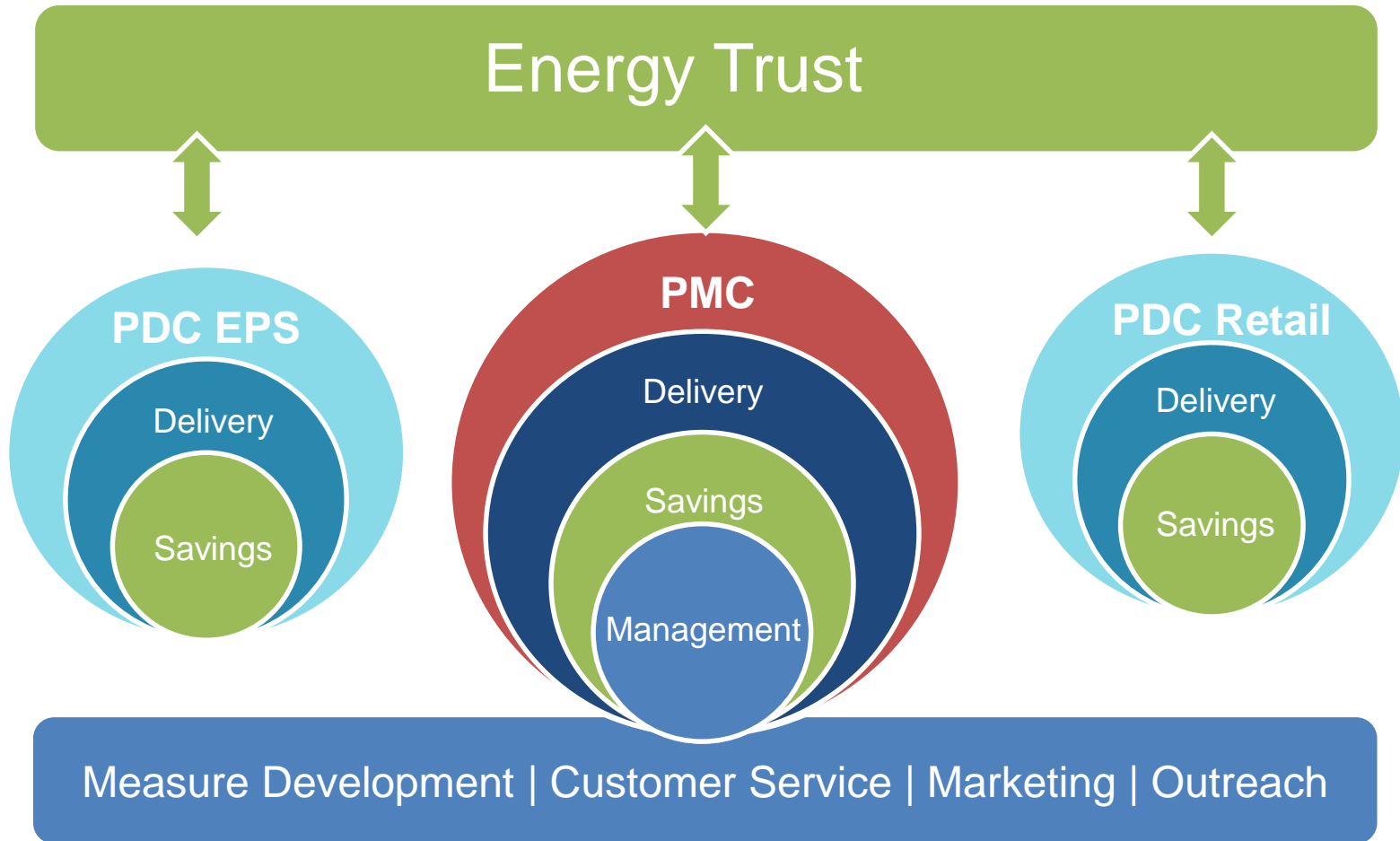
Southern Oregon

Specialized Program Track	Trade Ally Enrollments
Savings within Reach	49
Instant Incentives	44
Trade Ally Direct Install	6
Savings within Reach On-Bill Repayment	19
Heat Pump On-Bill Repayment	7

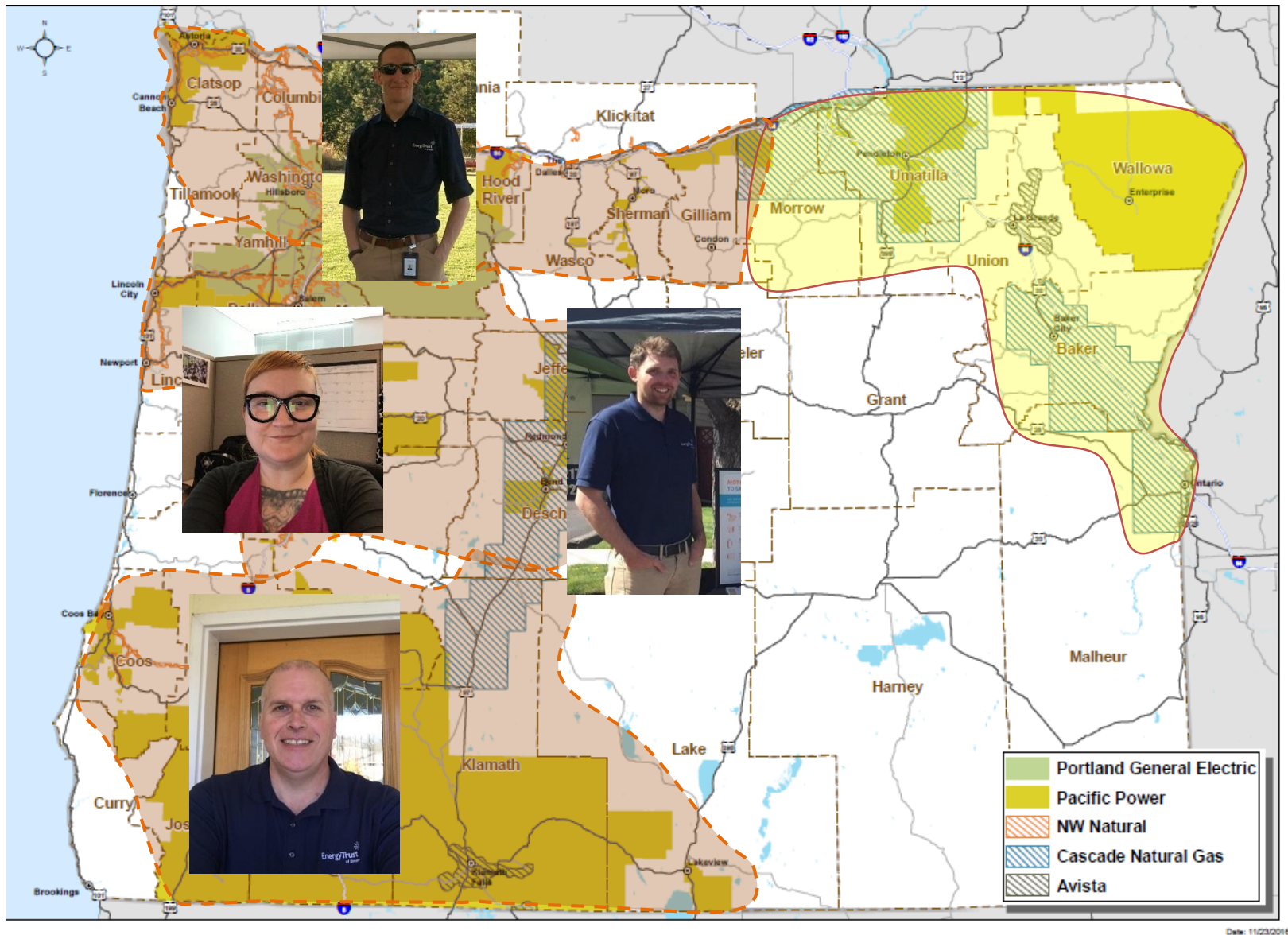


Residential Structure

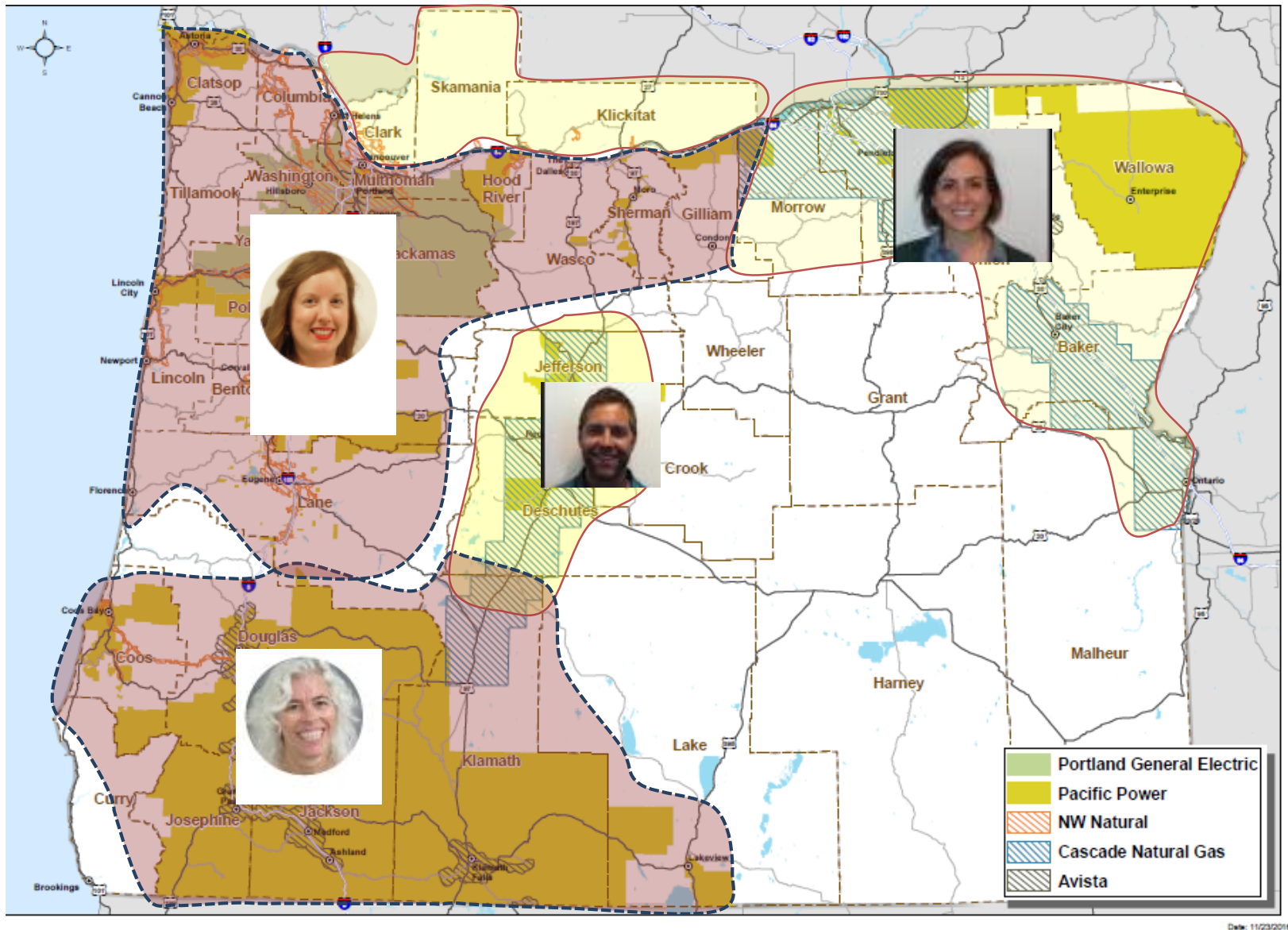
2018 Residential Program



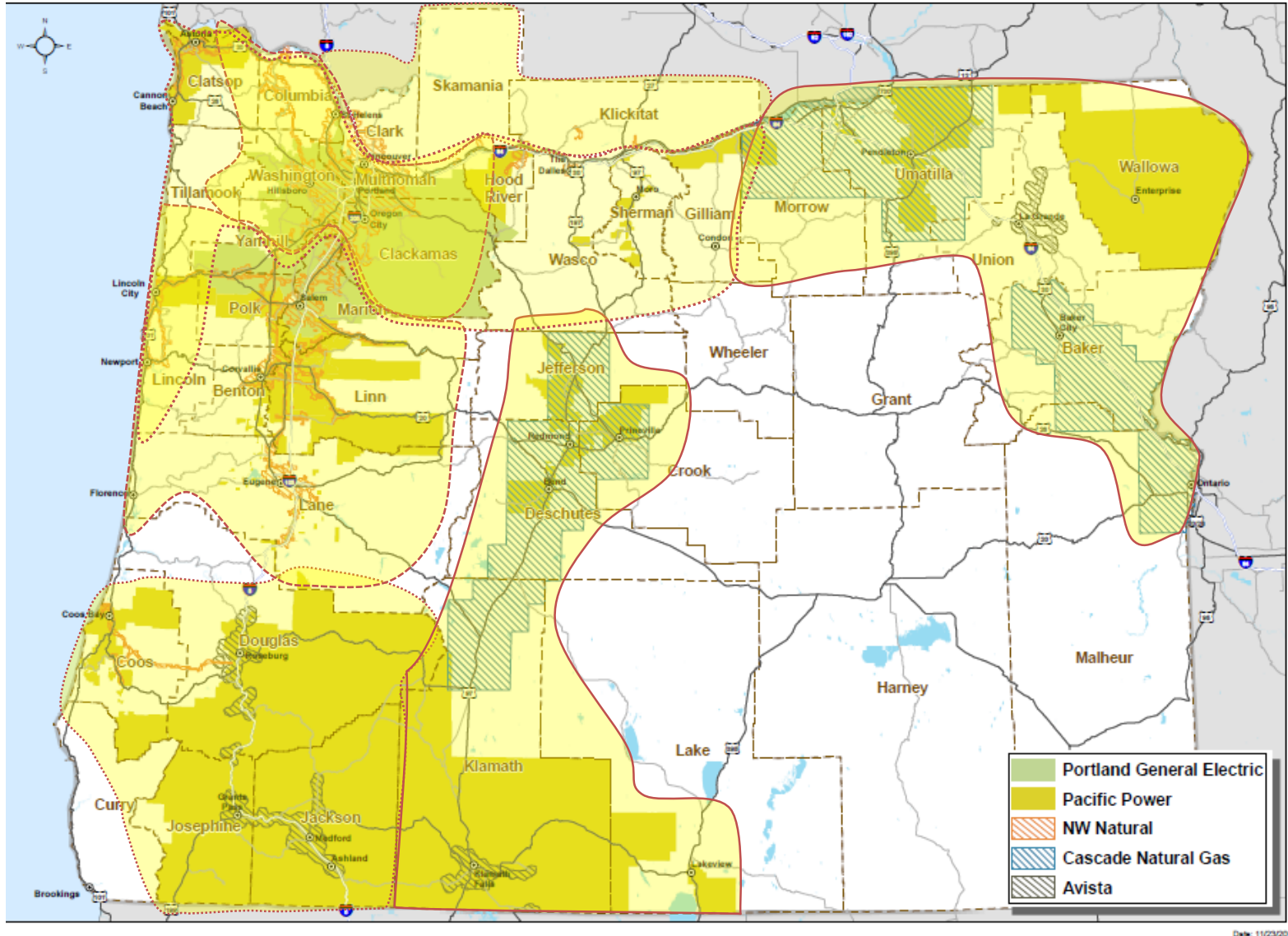
Retail Field Coverage



EPS Whole-Home Field Coverage



Residential Field Coverage Map



CLEAResult

CLEAResult

Residential Account Managers

Regional Photo Map



Kyle Kent
Regions 1, 3, 7, 12



Caryn Appler
Regions 10, 11



Eric Falk
Regions 3, 7, 12



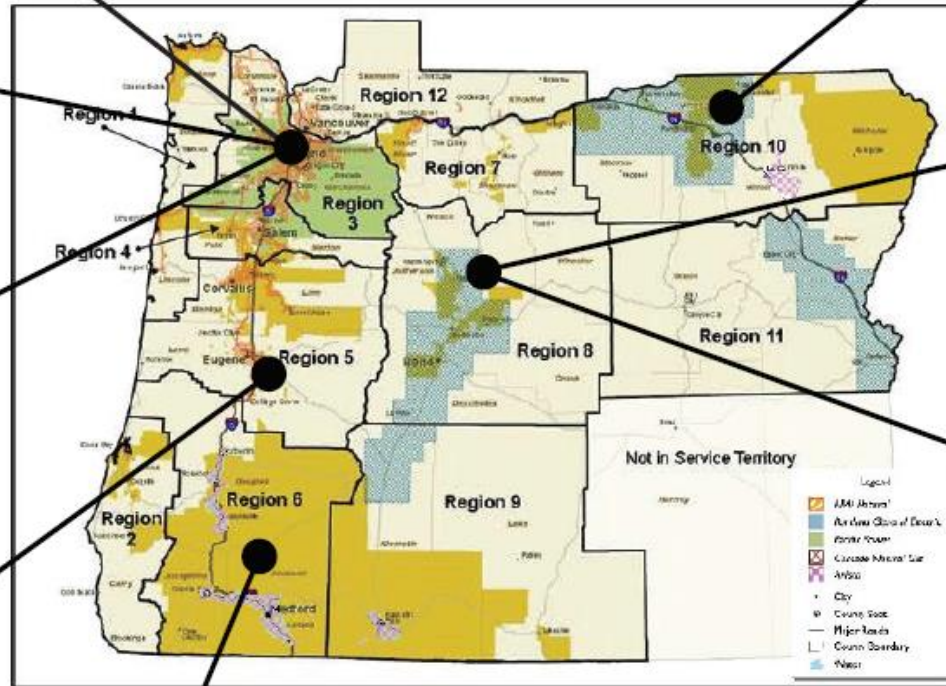
Adam Reese
Regions 1, 3, 7



Rick Flacco
Regions 1, 4, 5



Daniel Pierce
Regions 2, 6, 9



Mike Lillesand
Regions 8, 9
Field Supervisor



Mike McMillan
Regions 8, 9



Cameron Welch
Regions ALL

2018 Program Updates

Factors Influencing 2018 Measures

- Updated avoided costs
- Oregon Residential Energy Tax Credit (RETC) expiration
- New codes and standards
- Expiring exceptions
- Changing market conditions (e.g., LEDs)



Residential Measure Changes

Measure	Change	Current incentive	New incentive
Market rate furnaces (Avista)	Market assessment	\$200	Expires 3/31
New Homes Individual equipment incentives	Streamlined	\$100-\$500	Incorporated into EPS
EPS™ OR	Baseline reconfiguration	Variable	Variable



Residential Measure Changes

Measure	Change	Current incentive	New incentive
A-lamp LED, Trade Ally Direct Install	Decreased incentives due to changing market conditions	\$9	\$5.50
Reflector LED, Trade Ally Direct Install	Decreased incentives due to changing market conditions	\$15	\$8.75



Residential Measure Adjustments, Cont.

Measure	Change	Program	Current incentive	New incentive
Heat pump (replacing electric heat – eFAF or ER)	Reduced to 8.5 HSPF, simplify incentives, add multifamily	Residential/ multifamily (2-4 & side-by-side)	\$450-\$700	\$700
Heat pump (replacing heat pump)	Any efficiency, simplify incentives	Residential/ multifamily (2-4 & side-by-side)	\$250-\$500	\$250
Heat pump advanced controls	Simplify incentives, increase incentives	Residential/ multifamily (2-4 & side-by-side)	\$150	\$250

Residential Measure Adjustments, Cont.

Measure	Change	Program	Current incentive	New incentive
Heat pump (replacing electric heat – eFAF or ER) Savings Within Reach	Reduced HSPF, simplify incentives	Residential	\$750-\$1000	\$1000
Heat pump (replacing heat pump) Savings Within Reach	Changed requirements (financing available)	Residential	\$550-\$700	\$250
Gas water heater/ Heat pump water heater tier 1 & 2	Shifted to midstream 10/02/2017	Residential	\$100/\$150/\$300 (downstream)	\$100/\$150/\$300 (midstream)

Heat Pump (replacing eFAF or ER)

2017 details	2018 details
\$450-\$700	\$700
<ul style="list-style-type: none">• Two tiers HSPF 9.0 \$450, HSPF 9.5 \$700• Replacing electric forced air furnace, wall heater or ceiling heat	<ul style="list-style-type: none">• Removed the two tiers, one minimum 8.5+ HSPF requirement• Replacing electric forced air furnace, wall heater or ceiling heat• Incentive for most installations in homes will be increasing in 2018

Heat Pump (replacing a heat pump)

2017 details	2018 details
\$250 - \$500	\$250
<ul style="list-style-type: none">• Must be upgrading from an existing heat pump or replacing non-electric heat• Tiered incentives with different HSPF requirements of 9.0 or 9.5	<ul style="list-style-type: none">• Must install heat pump with electric auxiliary heat• Multi-fuel heating systems do not qualify• Projects must include an eligible thermostat programmed with a 35 degree lockout• No HSPF requirement• Participants completing PTCS or Check Me projects are eligible as long as they meet the other requirements However, PTCS or Check Me are not required for eligibility

2018 EPS Whole Homes changes

- Updated 2017 ORSC adopted October 1, 2017
 - Increased envelop minimums
 - Measure option tables have been updated
 - All lighting required to be 100% high-efficacy
 - 100% low-flow showerheads and toilets required
- 2018 EPS whole home offer will be available for verifiers and builders on January 1, 2018
- Builders and verifiers will be required to submit homes under the new code April 1, 2018



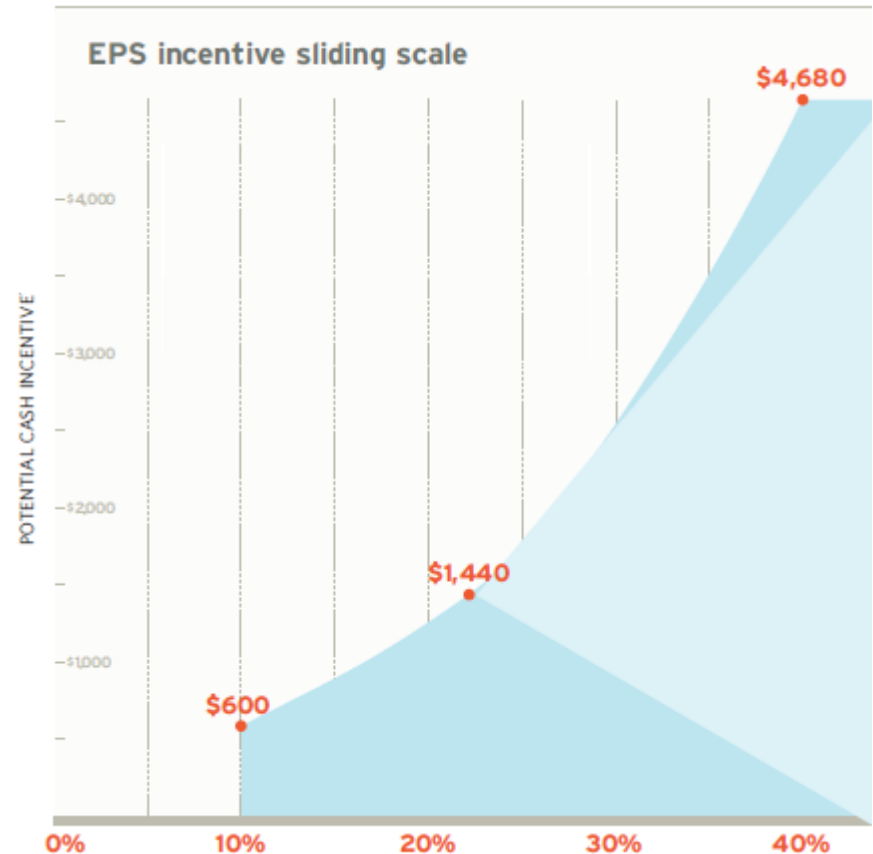
2018 EPS Whole Home changes

- Updated code baseline
 - Created two baselines (zonal and central systems)
 - Aligned with NEEA and RTF
- Restructured recommended paths to achieve above code
- Updated tools for 2018
 - REM/Rate version 15.3
 - Northwest Modeling Requirements
 - New 2018 User Defined Reference Home (UDRH)



2018 EPS incentive structure

- Same incentive range (\$600 to \$4,680)
- Same verifier incentive structure
- Based on percent improvement above code



Other new construction measure changes

- Equipment incentives: discontinued
- Small multifamily: discontinued





Thank You

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