2014 Residential Measure and Incentive Changes

Conservation Advisory Council

November 20, 2013

EnergyTrust of Oregon

Recap of October CAC presentation

2014 Measure and Incentive Changes:

- HPWH, Tier 1 added
- SWR incentive design
- Addition of HSPF 9.5 tier heat pump incentive
- Removal of gas air sealing as stand alone measure

Focus today on outstanding questions:

- Savings Within Reach new incentive design review
- Heat pump tier added
- Decision making process for air sealing measure
  - Air sealing cost trend drivers
  - Recommendation: Continue air sealing in electric heated homes

Savings Within Reach

SWR Insulation Incentives

Measure	2013 Incentive	2014 Incentive
Ceiling insulation	$550/site	$.50/sq. ft.
Wall insulation	$550/site	$.50/sq. ft.
Floor insulation	$550/site	$.40/sq. ft.

- Updated Avoided costs
- Adjusted incentive structure to promote parity in home size and align with savings potential and installation costs

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SWR Insulation Incentives

	Small House (%20)	Medium House(%50)	Large House (%80)
2013 SWR Incentive	$1,650	$1,650	$1,650
2014 SWR Incentive	$ 811	$1,335	$1,709
Standard Prescriptive Incentive	$ 487	$ 808	$1,020

- Incentive scenarios calculated based upon a home which installs average quantities of Ceiling, Wall and Floor insulation

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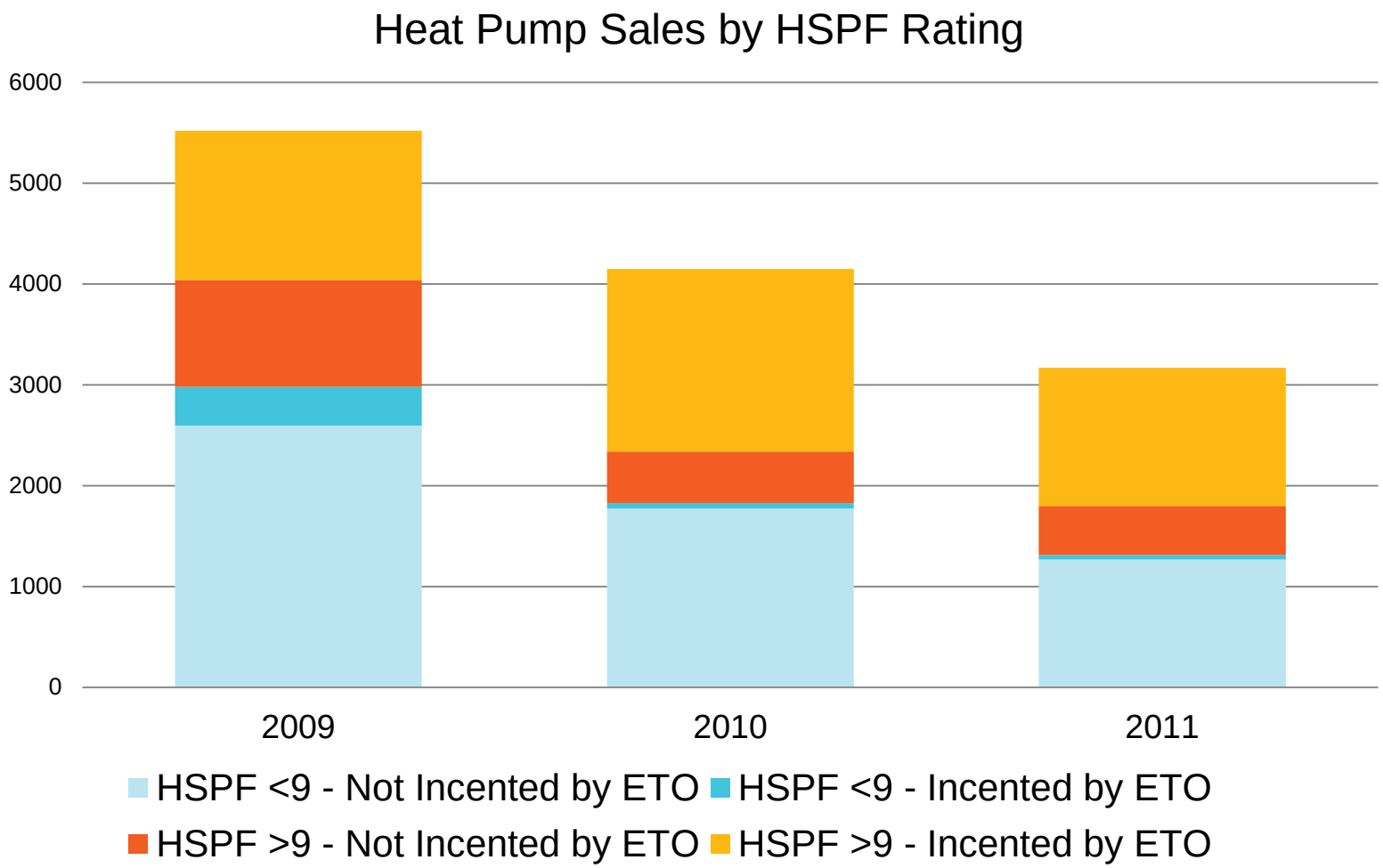
Heat Pumps

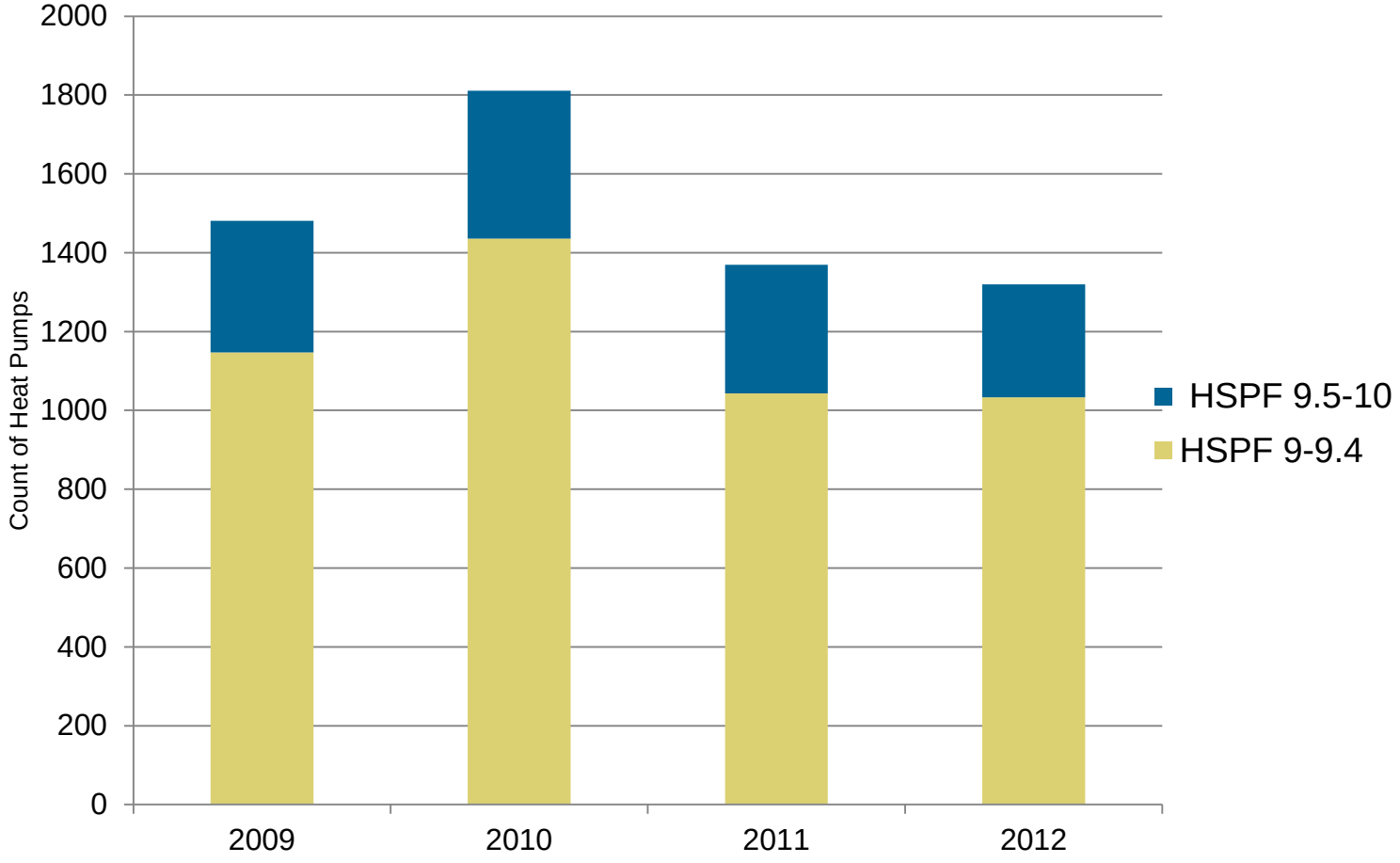
Heat Pump Market Analysis

Total Oregon Market



Energy Trust Heat Pump Incentives

Energy Trust Incented Heat Pumps, HSPF 9.0+



Energy Trust Heat Pump Incentives

With Market Baseline of 8.5 HSPF

Measure	Cost / Savings	Efficiency Level	2014 Incentive	$/kWh levelized Utility Cost
Upgrade from *existing* HP or replacing *non-electric* heat	Incremental cost and savings above baseline	9.0 HSPF	$250*	$0.042
		9.5 HSPF	$500	$0.036
Upgrade from *electric* FAF or baseboard	Full cost and savings	9.0 HSPF	$450*	$0.015
		9.5 HSPF	$700	$0.012

* No change from 2013

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Air Sealing

Air Sealing

Decision to Remove:

- Review of cost effectiveness docket
- Measure societal cost test results, exceptions review
- Replacing gas stand alone measure with pilot
- Electric measure decision

Increasing cost trends:

- Volume by gas/electric
- Cost by program track over time
- Program requirements impacts

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Review of CE Exceptions Docket

Timeline, UM1622:

- October 2012, 1st exception request
- 2nd request led to July 2013 order

Current Status:

- Reprieve on CE until October 2014
- Actively reviewing all current measures*
  - If not CE, 1) remove, 2) rework, 3)exception justification
- Goal = cost effective measures/programs
- Spring OPUC workshops
- July 1, 2014 report to OPUC

* Not just residential; all sectors gas and electric

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SCT B/C ratios from 1st exception (Oct 2012):

MEASURE	SCT BCR	STATUS
Ceiling insulation	0.7	Adjust eligibility
Floor insulation	0.4	Adjust eligibility
Wall insulation	0.4	Adjust eligibility
Duct sealing	0.2	**Removed 1/1/13**
Air sealing	**0.3**	**Pending evaluation**
Solar thermal	0.9*	Exception through 10/14
0.67 EF water heater	0.5	Exception through 10/14
Multifamily boilers	Custom, some below 1	Exception through 10/14
Gas homes program	0.6 or 0.7**	Exception through 10/14

*With non-energy benefit proxy.
**Rough estimate; includes program management, admin. and support.

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Revised Air Sealing B/C Ratio (Oct 2013):

Measure	Measure Life	Annual kWh Savings	Annual Therm Savings	Total Cost*	ETO Incentives	Non-Energy Benefits	Utility BCR	Societal BCR	Customer Payback (yrs.)
Air Sealing, Gas Heat	20		30	**$ 1,249**	$ 150	$ -	**1.41**	**0.17**	**43.45**
Air Sealing, Elec. Heat	20	1,218		**$ 1,154**	$ 150	$ -	**8.47**	**1.10**	**8.55**

- Evaluation results show higher savings, 115%
- Project costs continue to increase, ~ 3x original
- SCT BCR = 0.17, gas heated homes
- Exceptions review for gas measure:
  - No evidence of significant NEBs
  - No evidence of influence towards cost improvement
  - Exception for consistency with other programs not helping overall CE situation

➢ Recommendation to remove gas air sealing stand alone measure

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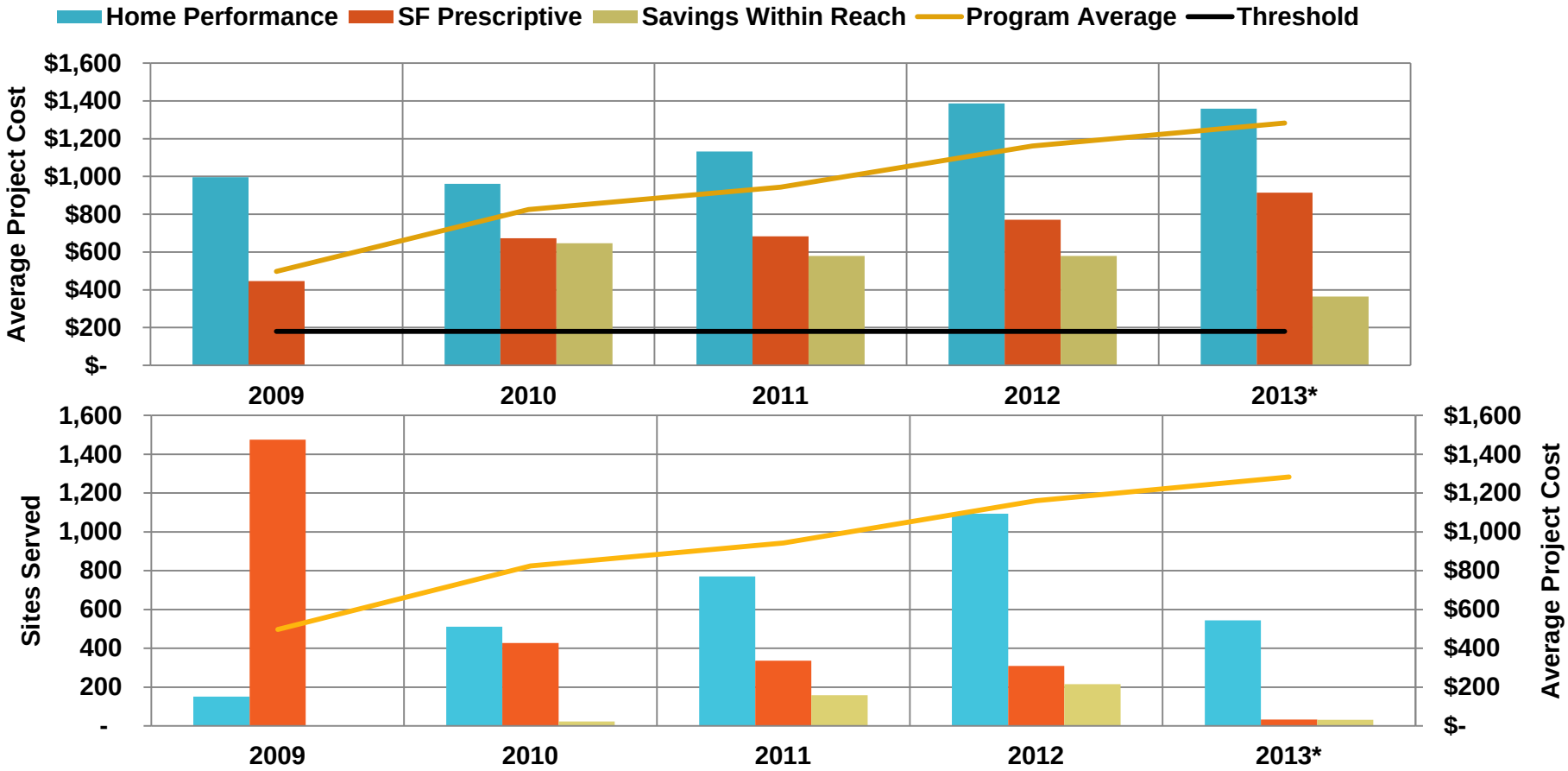
Gas Air Sealing Cost/Volume Trend



* Year to date

Why Have Costs Increased?

Historical Incentives and Requirements

	Gas		Electric		
Year	Average Cost	Incentive	Average Cost	Incentive	Program Requirements
2008	$796	1$ per CFM reduction up to $400	$528	1$ per CFM reduction up to $400	Minimum 200 CFM reduction. Air Leakage Test - Pre and Post. Incentive cannot exceed cost.
2009	$498		$655		
2010	$825	50% of Cost up to $275	$811	50% of cost up to $400	Minimum 300 CFM reduction. Air Leakage Test - Pre and Post. Incentive cannot exceed cost.
2011	$943		$822		
2012	$1,161		$981		
2013	$1,283	$150	$1,078	$150	Pre condition >/= 9ACH. Minimum 500 CFM reduction. Air Leakage Test - Pre and Post. Incentive cannot exceed cost.

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Why Have Costs Increased? (Continued)

We don't fully know, there are potentially multiple influences…

- Performance-based activity transferred from prescriptive to HPwES track
- ASHRAE
- ARRA
- Modeling tools
- EEAST/On Bill Repayment (OBR) impacts
- Others?

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Review of Air Sealing Status

Energy Trust Recommendation:

- Maintain electric only air sealing as stand alone measure
- Remove air sealing as a stand alone measure for gas heated homes, not cost effective
- Develop concept for prescriptive pilot combining air sealing with insulation measures in 2014

Questions and Discussion