Energy Trust of Oregon

Home Energy Solutions
Existing Homes
2007 Program Modifications

February 21, 2007

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Trade Ally Feedback

- Tiered incentives for insulation are complex and open to gaming
- Contractor spiffs for trade allies should be added to customer incentive
- Continue $50 payment for a duct leakage test
- Provide a $300 incentive for faced duct insulation
- Create an air sealing test incentive for contractors
- Add duct leakage and duct sealing incentive to multiplex and multifamily programs
- Create an attic ventilation incentive

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Trade Ally Feedback

- Develop an incentive for gas hearth
- Increase window incentives to cover incremental cost of U-.30 window
  - Meet minimum window U-Value .30 on an overall weighted U-Value average
- Trade ally to assist customers with Tax Credit paperwork
  - Provides differentiation
- Minimum jobs per year requirement to be a Trade Ally

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Recommended Modifications

- **Combine gas and electric incentives**
- **Tiered incentive not recommended for insulation measures**
  - **Insulation measures (attic, wall and floor) paid per square foot for all building types**
    - **No incentive cap**
- **Contractor spiffs eliminated (duct & air sealing)**
  - **Dollars allocated to appropriate measure incentives**
- **Air sealing test added at $50 level and duct sealing test maintained at $50**

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Recommended Modifications

- SF window incentives increased from $2.00 to $2.25 sq. ft.
- Gas hearth incentive at minimum 80% AFUE
- No incentives for attic ventilation since required in program Weatherization Specification Manual
- SF measure packages added with enhanced incentives
- Minimum of 5 measures completed in a calendar year to remain on active trade ally list; must also have completed Participation Agreement and appropriate insurance assignment on file with PMC

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Recommended Modifications

- **Bundled Incentives**
  - **Thermal Package**
    - **Air sealing and thermal measures combo – all available insulation measures and air sealing - $150 Bonus**
  - **Heat Pump Upgrade Package**
    - **HSPF 8.5 EER 12 or better, commissioning, and performance tested/sealed ducts - $300 bonus**
  - **Gas HVAC Package**
    - **Premium Gas HVAC Package**

      - Furnace at 90%-94% AFUE and performance tested/sealed ducts - $100 bonus
    - **Super Efficient Gas HVAC Package**

      - Furnace at 95+ AFUE and performance tested/sealed ducts - $125 bonus

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Trade Ally Performance, 2006

- 29 qualified trade allies installed under 5 measures
- Easy to accrue 5 measures if work is done under the program (insulation jobs tend toward 2-3 measures per job)

Number of measures installed bin	Number of companies in bin
0-4	29
5-19	31
20-49	27
50-99	14
100+	15

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Window Discussion – Overall U-Value versus Individual Window U-Value

- **Increase minimum U-Value for windows in single family homes to U-Value .30**
  - **Be consistent with BPA, RTF, and other regional entities**
  - **Increase incentive to $2.25 per square foot**
- **Weighted average of overall window U-Value versus per window U-Value**
  - **Program is successfully on a per window U-Value**
  - **May add administrative time to determine overall if trade allies only provide individual window U-Values for calculation**
  - **Supplying overall U-Value only could lead to need for more quality control**

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SF Attic/Ceiling Insulation

Existing R-value bin		Square Foot Attic/Ceiling Bins					Grand Total
		0-499	500-999	1000-1499	1500-2000	2000+	
0-11	Average of Measure Incentive	$190.92	$262.47	$262.22	$299.38	$202.55	**$258.87**
	Average of Measure sq. ft.	325.8	780.6	1,219.6	1,668.6	2,309.3	**1,145.4**
	Count of Measures	94	351	410	183	65	**1103**
12-18	Average of Measure Incentive	$214.56	$291.30	$209.18	$216.74	$233.47	**$228.65**
	Average of Measure sq. ft.	340.7	802.5	1,239.7	1,672.5	2,468.3	**1,314.7**
	Count of Measures	17	73	174	91	29	**384**
Total Average of Measure Incentive		**$194.54**	**$267.44**	**$246.41**	**$271.93**	**$212.09**	**$251.07**
Total Average of Measure Sq. ft.		**328.0**	**784.3**	**1,225.6**	**1,669.9**	**2,358.4**	**1,189.2**
Total Count of Measures		**111**	**424**	**584**	**274**	**94**	**1487**

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SF Attic/Ceiling Insulation

Existing R-value bin	Proposed incentive per sq. ft.[1]	Square Foot Attic/Ceiling Bins					Weighted average incentive
		0-499	500-999	1000-1499	1500-2000	2000+	
0-11	$0.25	$81.44	$195.14	$304.90	$417.16	$577.33	$285.61
12-18	$0.20	$68.14	$160.50	$247.94	$334.51	$493.66	$262.43

1-Methodology includes incentive rate (on a per sq. ft. basis) times the average sq. ft. in each sq. ft. bin
N=1487

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SF Floor Insulation

Existing R-value Bin		Square Foot Floor Insulation Bins					
		0-499	500-999	1000-1499	1500-2000	2000+	Grand Total
0	Average of Measure Incentive	$142.87	$206.80	$208.62	$211.08	$226.95	**$199.40**
	Average of Measure sq. ft.	254.6	761.1	1,226.6	1,676.3	2,394.6	**1,088.3**
	Count of Measures	160	285	366	156	63	**1030**
1-11	Average of Measure Incentive	$138.59	$199.25	$225.00	$200.00		**$178.47**
	Average of Measure sq. ft.	282.5	856.5	1,160.0	1,630.0		**718.9**
	Count of Measures	6	6	2	1		**15**
>=11	Average of Measure Incentive	$152.30	$220.04	$200.00	$200.00	$250.00	**$193.63**
	Average of Measure sq. ft.	261.8	652.5	1,304.4	1,787.5	2,264.0	**957.6**
	Count of Measures	5	4	5	2	1	**17**

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SF Floor Insulation

Existing R-value bin	Proposed incentive per sq. ft.[1]	Square Foot Floor Insulation Bins					Weighted average incentive
		0-499	500-999	1000-1499	1500-2000	2000+	
0	$0.45	$114.58	$342.48	$551.99	$754.31	$1,077.55	$488.86

(1)Methodology includes incentive rate (on a per sq. ft. basis) times the average sq. ft. in each sq. ft. bin
N=1062

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SF Wall Insulation

Existing R-value bin		Square Foot Wall Insulation Bins					Grand Total
		0-499	500-999	1000-1499	1500-2000	2000+	
0	Average of Measure Incentive	$147.97	$205.38	$203.62	$204.69	$204.54	**$195.32**
	Average of Measure sq. ft.	264.8	786.1	1,200.0	1,675.8	2,436.5	**999.8**
	Count of Measures	108	238	208	64	28	**646**
1-11	Average of Measure Incentive	$150.00	$191.87			$200.00	**$185.12**
	Average of Measure sq. ft.	300.0	741.0			2,000.0	**904.6**
	Count of Measures	1	3			1	**5**
>=11	Average of Measure Incentive					$200.00	**$200.00**
	Average of Measure sq. ft.					2,147.0	**2,147.0**
	Count of Measures					1	**1**
Total Average of Measure Incentive		**$147.99**	**$205.21**	**$203.62**	**$204.69**	**$204.23**	**$195.04**
Total Average of Measure sq. ft		**265.2**	**785.5**	**1,200.0**	**1,675.8**	**2,405.9**	**1,000.9**
Total Count of Measures		**109**	**241**	**208**	**64**	**30**	**652**

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SF Wall Insulation

Existing R-Value bin	Proposed incentive per sq. ft.[1]	Square Foot Wall Insulation Bins					Weighted average total
		0-499	500-999	1000-1499	1500-2000	2000+	
0	$0.30	$79.45	$235.82	$359.99	$502.74	$730.96	$297.56

1-Methodology includes incentive rate (on a per sq. ft. basis) times the average sq. ft. in each sq. ft. bin
N=656

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SF/MF Windows

	Single Family			Multifamily		
	U-values			U-values		
	.32	<.32	**Grand Total[1]**	.31/.32	<=.30 Total	**Grand Total[1,2]**
Average of Measure cost	$4,111	$5,819	**$5,379**	$46,665	$52,955.52	**$48,508.76**
Count of Measure (n)	58	167	**225**	41	17	**58**
Average of Measure sq. ft.	139.35	174.58	**165.50**	2086.54	2267.94	**2139.71**
Average of Delta U	0.58	0.65	**0.63**	0.83	0.83	**0.83**
Average of Existing U-Value	0.848	0.890	**0.878**	1.138	1.138	**1.138**
Average of Final U-Value	0.320	0.301	**0.306**	0.314	0.299	**0.310**
Average of Measure Incentive	$174.44	$349.24	**$304.18**	$5,942.40	$6,252.48	**$6,033.28**

(1)Totals of Averages are weighted averages, totals of counts are sum of those counts
(2) MF --This data excludes Portland Tower #255. If this tower's numbers were included, many averages would have drastically been changed as follows: In the <=.30 category, Avg msr cost =$160,105 (+202% difference), Avg sqft=4521.39 (+99%), Avg final U=0.298, Avg msr incentive $13,043.45 (+109%).
Grand totals: **Avg msr cost=$81,274 (+68%), Avg sqft=2829.37 (+32%), Avg final U=0.309, Avg Incentive=$8,108.82 (+34%)**

SF/MF Windows

Single Family				Multifamily[2]		
	U-values			U-values		
	.32	**<.32**		**.31/.32**	**<=.30**	
Weighting of splits	35%	74%	**Weighted Avg Total**	71%	29%	**Weighted Avg Total**
Current Incentive amt:	$1.25	$2.00	**$1.92**	$2.80	$2.74	**$2.78**
Current avg incentive:	$174.44	$349.24	**$304.18**	$5,942.40	$6,252.48	**$6,033.28**
Projected Incentive amt:	**<= U-.30**	$2.25	**$2.25**	$2.50	$3.00	**$2.65**
Projected Incentive[1]	**100%**	**$372.38**	**Avg. sq. ft. ---- $372.38**	**$5,216.34**	**$6,803.82**	**$5,681.64**
n=225 Projects				n=58 Projects		

(1) Methodology: (weighted avg U-value split) * (projected incentive per sqft bin) * avg sqft per U-val bin

(2) MF -- With the Portland Center data, the values would have changed as follows: <=.30 U-val weighting: 31%, current incentive: $2.75, Current avg incentive: $13,043.45 (+109%), projected incentive: $13,564.17 (+99%); WA Totals would have been affected as follows: current avg incentive: $8,108.82 (+34%), projected incentive: $7,763.13 (+37%)

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SF Air Sealing

CFM reduction bin	Average CFM reduction	Weighting	Current incentive per CFM reduction bin	Proposed measure incentive
100-499	289.9	41.2%	$ 0.50	$ 144.97
500-999	756.2	30.9%	$ 0.50	$ 378.09
1000-1499	1197.6	15.2%	$ 0.50	$ 400.00
1500-1999	1809.6	6.1%	$ 0.50	$ 400.00
2000+	3127.6	6.7%	$ 0.50	$ 400.00
WA SF total	***852.86***	***100.0%***	***$ 0.50***	***$ 288.12***

n=165

Cap=$400

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SF Duct Sealing

CFM reduction bin	Average CFM reduction	Weighting	Current incentive per CFM reduction bin	Proposed measure incentive
100-499	287.9	53.5%	$ 1.00	$ 287.89
500-999	691.5	34.1%	$ 1.00	$ 400.00
1000-1499	1147.0	7.4%	$ 1.00	$ 400.00
1500-1999	1748.6	3.3%	$ 1.00	$ 400.00
2000+	2738.0	1.7%	$ 1.00	$ 400.00
WA SF total	***578.63***	***100.0%***	***$ 1.00***	***$ 340.01***

n=299 **Cap=$400**

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