New residential efficiency measures

Conservation Advisory Council
September 15, 2010

Energy Trust of Oregon

Preview

- EF 0.67 water heaters
- High performance windows
- Intermittent ignition gas hearth

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EF 0.67
water heaters

Energy Factor of Mid-Efficiency Water Heaters

Rheem model (not pictured) now available

AO Smith EFFEX ™

Bradford White - High EF Energy Saver Gas Water Heater

- Energy Factor measures the efficiency of residential water heaters.

- Mid-efficiency gas-fired water heaters have improved insulation, electronic ignition, and electronically controlled flue dampers to reduce heat loss.

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EF 0.67 gas storage water heaters

End Use: Gas storage water heaters

Scope: Second tier for water heaters w/ EF greater than or equal to 0.67.

Relationship to Other Incentive Offers: An incentive of $100 for water heaters with an EF greater than 0.67. It compares with a $35 incentive for water heaters with an EF greater than 0.62. An additional $150 incentive is available to water heater distributors until the end of 2010, and $100 beginning in 2011.

Description of the Measure: Energy Star will require an EF greater than or equal to 0.67 for gas storage water heaters beginning September 1, 2010.

Target Market: Contractors making them available for emergency replacements and an upstream incentive to distributors.

Savings, Economics, and Incentives: With an improvement from 0.58 EF to 0.67 EF, the water heater will use 29 fewer therms. The lifetime is 12 yrs. Incremental cost of water heaters with an EF > 0.67 is considered to average $250 when compared to a baseline model. The price difference is based on the Bradford White 0.67 model and AO Smith 0.70 model vs. standard 0.58 EF water heaters.

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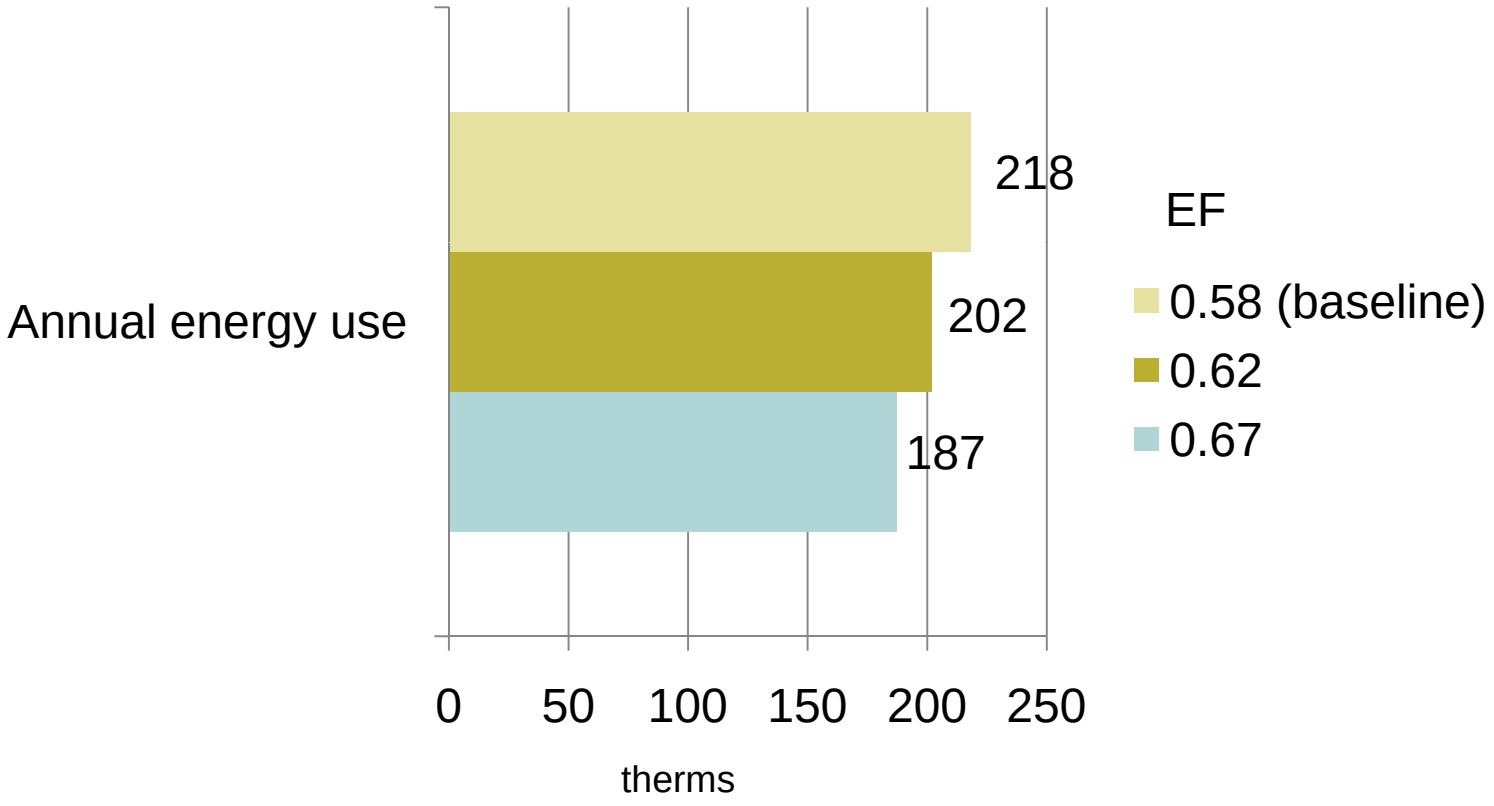
Annual energy use



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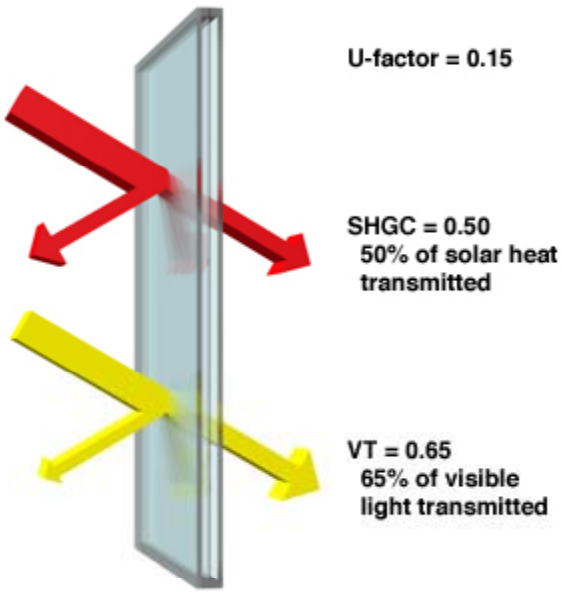
High performance windows

U-factor and R-factor



http://www.efficientwindows.org

- U-factor measures the thermal conductance of the window.
- Energy Trust defines high performance windows as a U-factor equal to or less than 0.22.
- High performance windows are equivalent to USDOE R5 windows.

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High performance windows

End Use: Replacement windows for existing single family and manufactured homes. New single family homes will use the Energy Performance Score.

Scope: Change the basis of the windows measure from a deemed savings amount to a savings amount dependent on the square footage of the glazing. Tier I, efficient windows, have a U–factor between 0.30 and 0.22. Tier II, high performance windows, have a U-factor less than or equal to 0.22.

Savings, Economics and Incentives: The incentive for U-factor less than or equal to 0.22 is $3.50 per sq ft. This is intended to create a market for the high performance windows. It compares to an incentive of $2.25 per sq ft for windows with a U-factor between 0.30 and 0.22.

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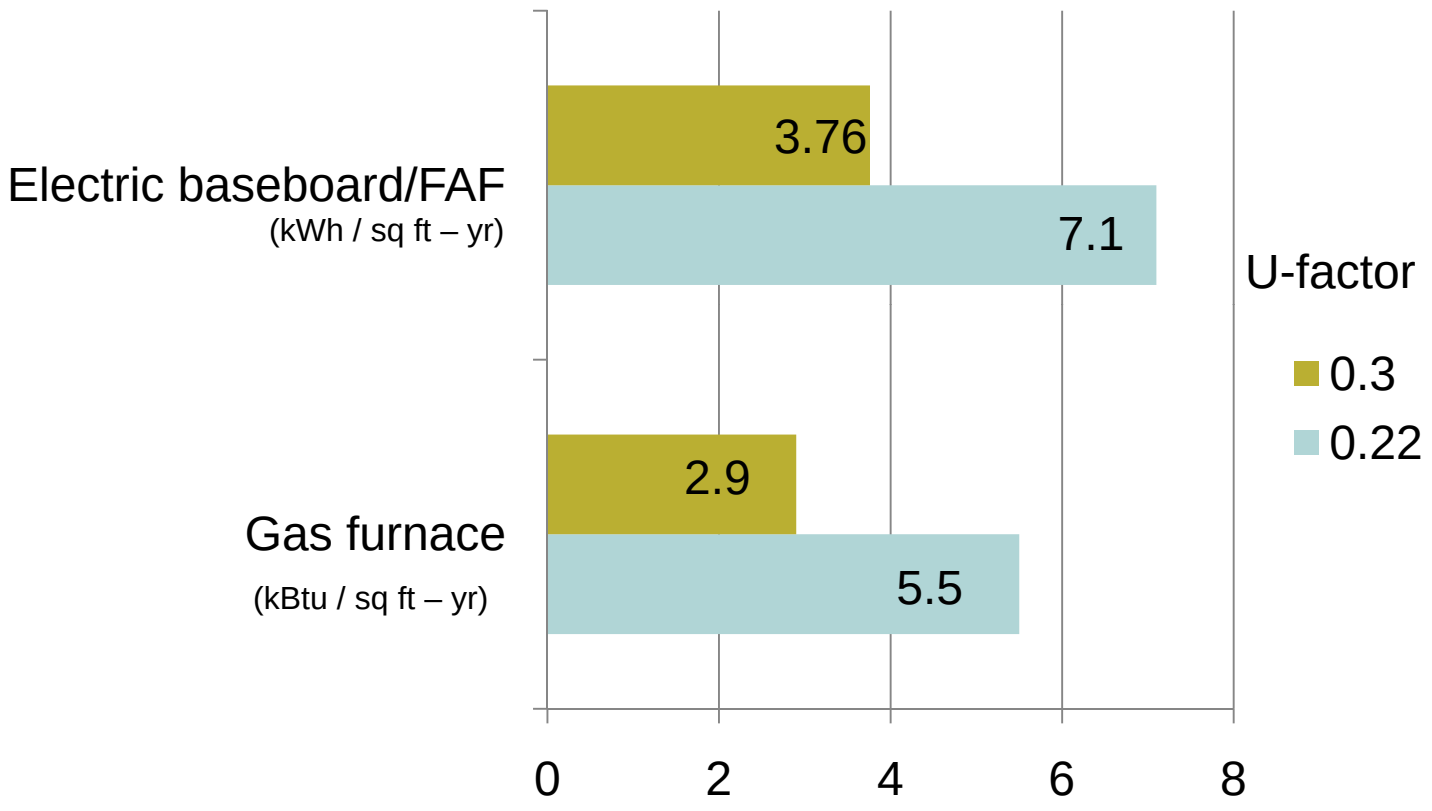
Energy savings



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Intermittent ignition gas hearth

Intermittent ignition gas hearth

End Use: Intermittent ignition systems for residential gas hearths for new and existing single family homes.

Scope: New and existing homes utilizing a fireplace. Target market is homes that use fireplaces as the primary heating source, characterized by a minimum of 20 hours of use per week during the heating season.

Details: In 2009 ETO offered a fireplace incentive based on models deemed efficient by the Canadian P4 test with standing pilot. That program is still available. Since then sufficient information has become available to estimate savings of hearths using intermittent pilot lights Since intermittent pilot lights are only lit when the hearth is in use estimates of hours of use lead to the 48 therms seen as the savings from using an intermittent pilot light over a standing pilot light.

Measure Analysis: 20 year measure life. Incremental cost is $120. ETO incentive is $100.

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Questions?

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