

Achieving a Better Home Energy Rating System (HERS®) Score

Rmax Envelope First Residential Energy Solution | HERS® Savings Comparison

66

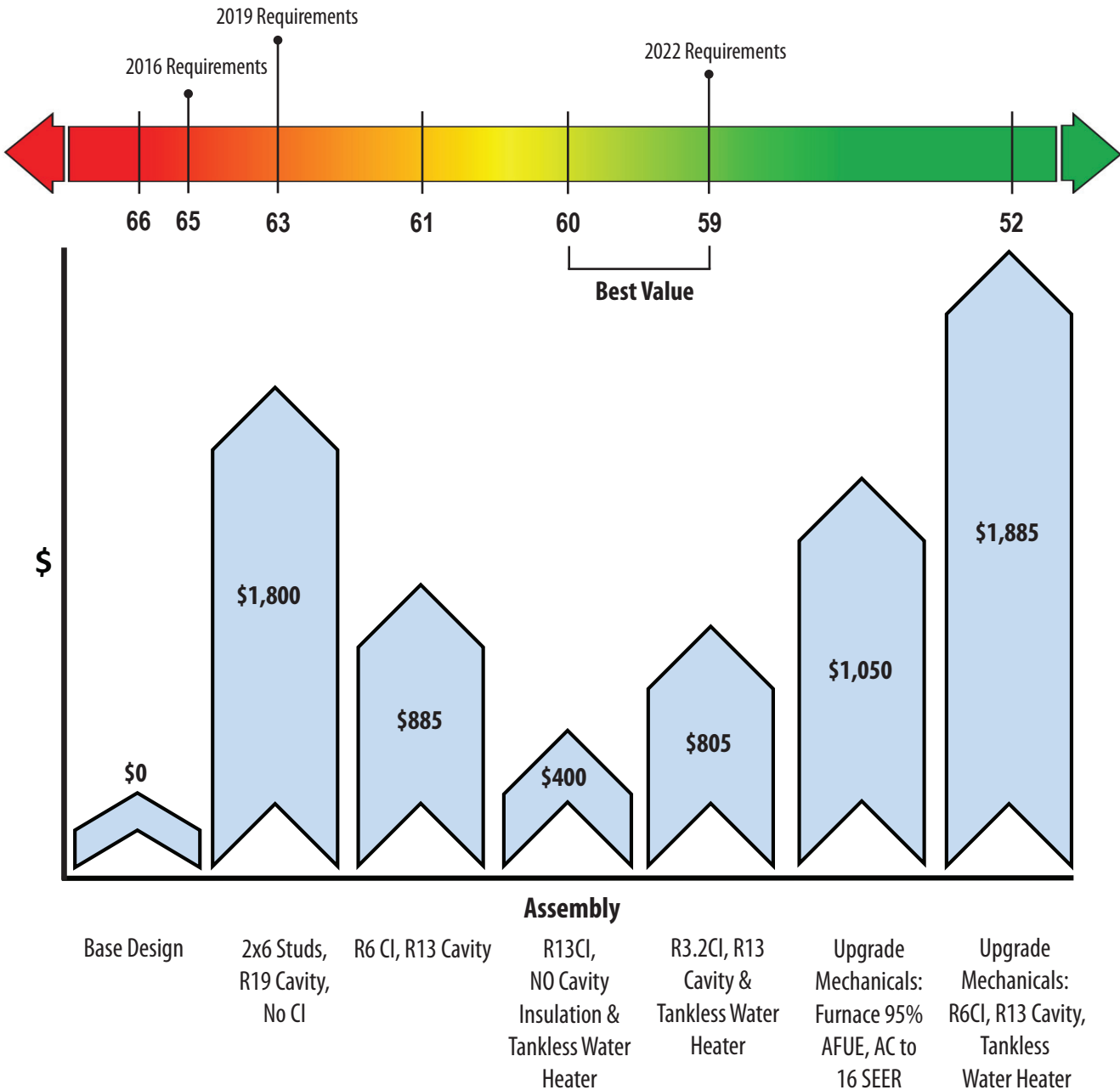
52

60



Building Performance. Energy Savings. Rmax Envelope First. HERS® Savings Comparison

Changes in the residential building codes are driving home builders to re-think their approach to improving HERS® performance. Our experience and analysis show that the Envelope First approach is the most cost effective way to meet current and future codes.



Achieving HERS® of 60 and Below

Case Study – Model Homes in Texas using REM/Rate™

Base House: 2800 Sqft - Climate Zone 3

- Walls: 2x4, Grade 1 R13 FG Batt, 70 sheets of structural sheathing (fiber board)
- Attic: R38 blown FG
- HVAC: Programmable thermostat, sealed ducts, 4CFM/100sf
- Appliances: High efficiency
- Lighting: 75% CFL
- Mechanicals: 80% AFUE furnace, 14 seer AC, 50 gallon water heater, mechanical ventilation 110W
- Orientation: Worst case
- Air Leakage: 4 ACH
- HERS® Score: 66

Model	Description	Cost Estimation
I	Upgrade furnace to 95% AFUE	\$650
	Upgrade AC to 16 seer	\$100
	Strategic air sealing, 3 ACH	<u>\$300</u>
	HERS: 59	\$1,050
II	Replace sheathing with R3.2 Rmax	\$555
	Replace water heater with tankless	\$250
	Minimal air sealing, 3 ACH	<u>\$0</u>
	HERS: 59	\$805
III	Remove all stud cavity insulation	(\$2,120)
	Install 2" (R13) foam sheathing	\$2,270
	Replace water heater with tankless	\$250
	Minimal air sealing, 3 ACH	<u>\$0</u>
	HERS: 60	\$400
IV	Replace sheathing with R6 foam sheathing	\$885
	Minimal air sealing, 3 ACH	<u>\$0</u>
	HERS: 61	\$885
V	Increase studs to 2x6	\$800
	Add FG Batt, R19	\$450
	Replace water heater with tankless	\$250
	Strategically air seal, 3 ACH	<u>\$300</u>
	HERS: 63	\$1,800

The three lowest cost solutions to approach a HERS® score of 60 include using continuous insulation with structural Polyiso. Cost effective ways to achieve below 60 must include continuous insulation because mechanicals alone are too expensive, see below example. This scenario meets 2022 requirements.

VI	Replace sheathing with R6 foam sheathing	\$885
	Upgrade AC to 16 seer	\$100
	Upgrade furnace to 95% efficiency	\$650
	Replace water heater with tankless	\$250
	Minimal air sealing	<u>\$0</u>
	HERS: 52	\$1,885



Improving Your Design.

For warranties, limitations and conditions refer to Rmax Sales Policy and applicable warranties. All documents are located at www.rmax.com. For technical and sales support, email rmax@rmax.com or call (800) 527-0890.

Proudly Made and Engineered in the U.S.A.



Rmax Sales Offices and Plant Locations

Central:

13524 Welch Road
Dallas, Texas 75244

Phone: 972-387-4500
Fax: 972-387-4673
Toll Free: 1-800-527-0890

East:

1649 South Batesville Road
Greer, South Carolina 29650

Phone: 864-297-1382
Fax: 864-234-7548
Toll Free: 1-800-845-4455

West:

210 Lyon Drive
Fernley, Nevada 89408

Phone: 775-575-4849
Fax: 775-575-5035
Toll Free: 1-800-762-9462

E-mail us at rmax@rmax.com or visit our website www.rmax.com

