

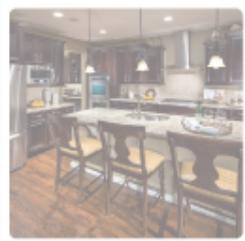
Win – Win – Win Strategies



Introductions

CR Herro, VP Environmental Affairs

CR.Herro@MeritageHomes.com



Overview of Meritage Homes

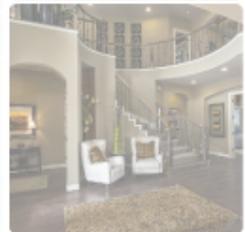
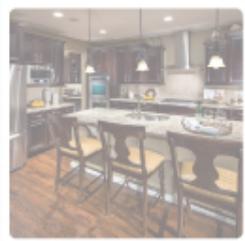
- 7th largest homebuilder by 2015 U.S. closings
 - 9 states, 21 markets, 254 communities
 - Headquartered in Scottsdale, AZ
- Leader in energy-efficient homebuilding

Key Statistics – 2015:

- 6,522 homes closed
- Revenue up
- Profits down
- Driven by increasing cost in the industry



How do typical customers buy a home?



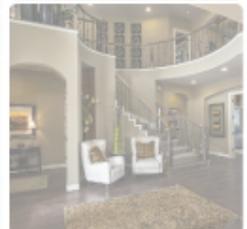
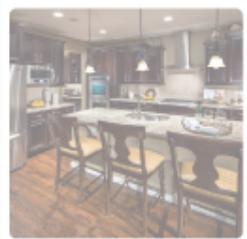
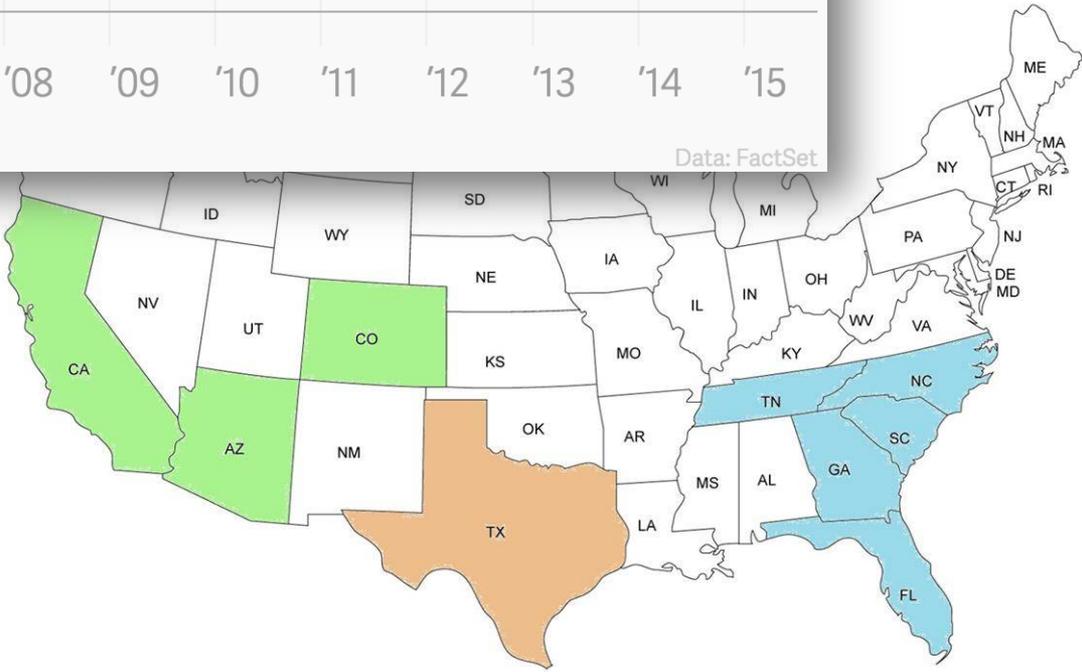
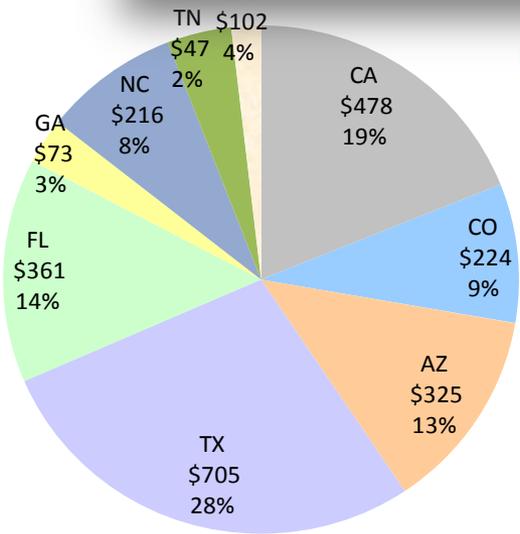
The Mother of Invention

US housing building permits, annual rate



Quartz | qz.com

Data: FactSet



Customer Priorities

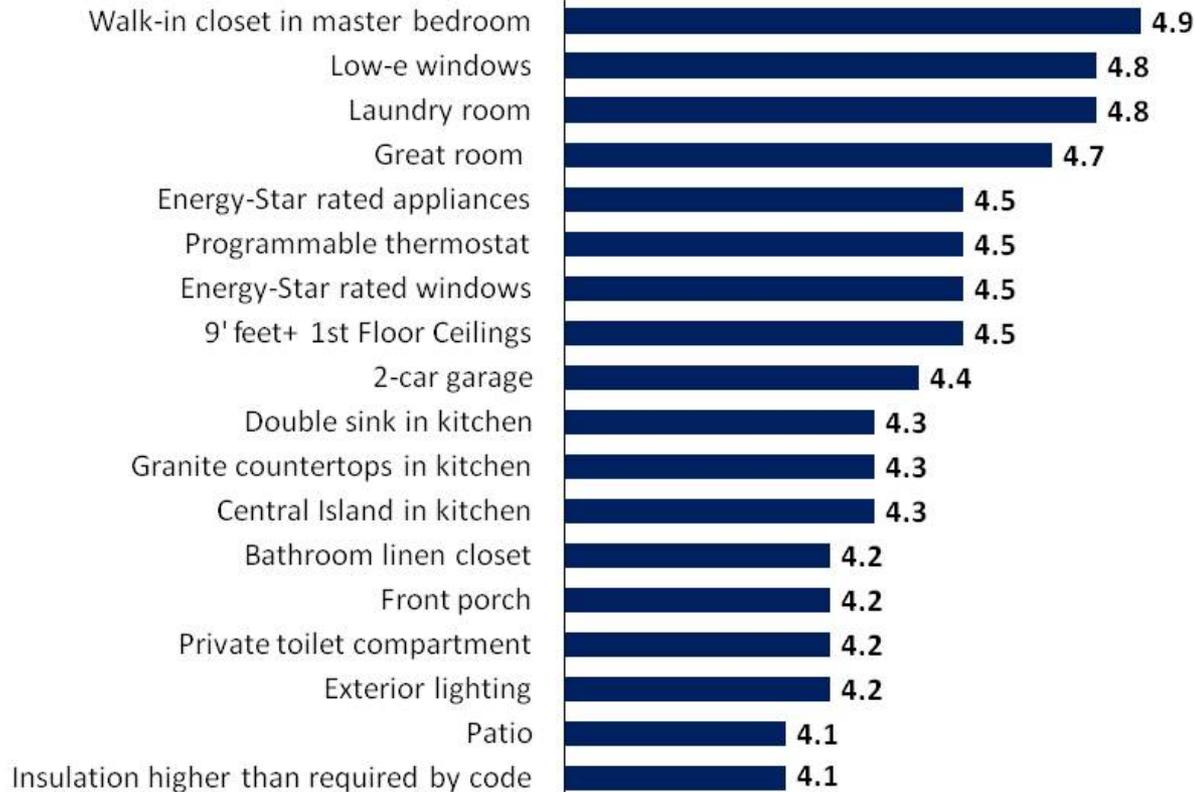
- Location
- Price
- Floor Plan
- ?



“Green” features climbing the scale of top features desired

MOST LIKELY Features in Typical Single-family Home in 2014

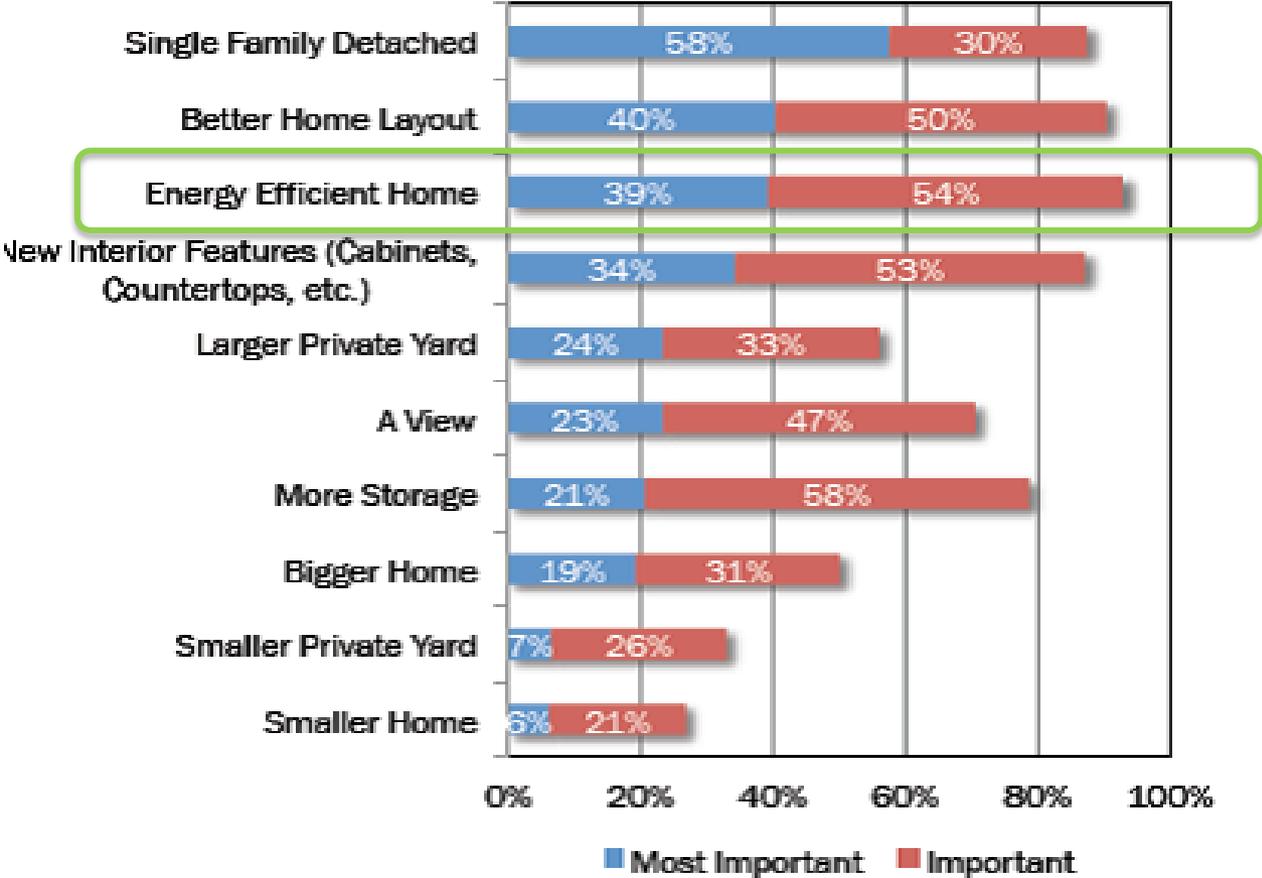
(1=Not at all likely, 5=very likely; avg. rating)



Source: NAHB EcHP Group, HMI Survey, December 2013.

Consumer Choice drives change

Rate the importance of the following when purchasing your next home:





81%

say higher energy efficiency would cause them to choose one new home over another.



ENERGY STAR. The simple choice for energy efficiency.



84%

think energy-efficient homes are healthier homes.

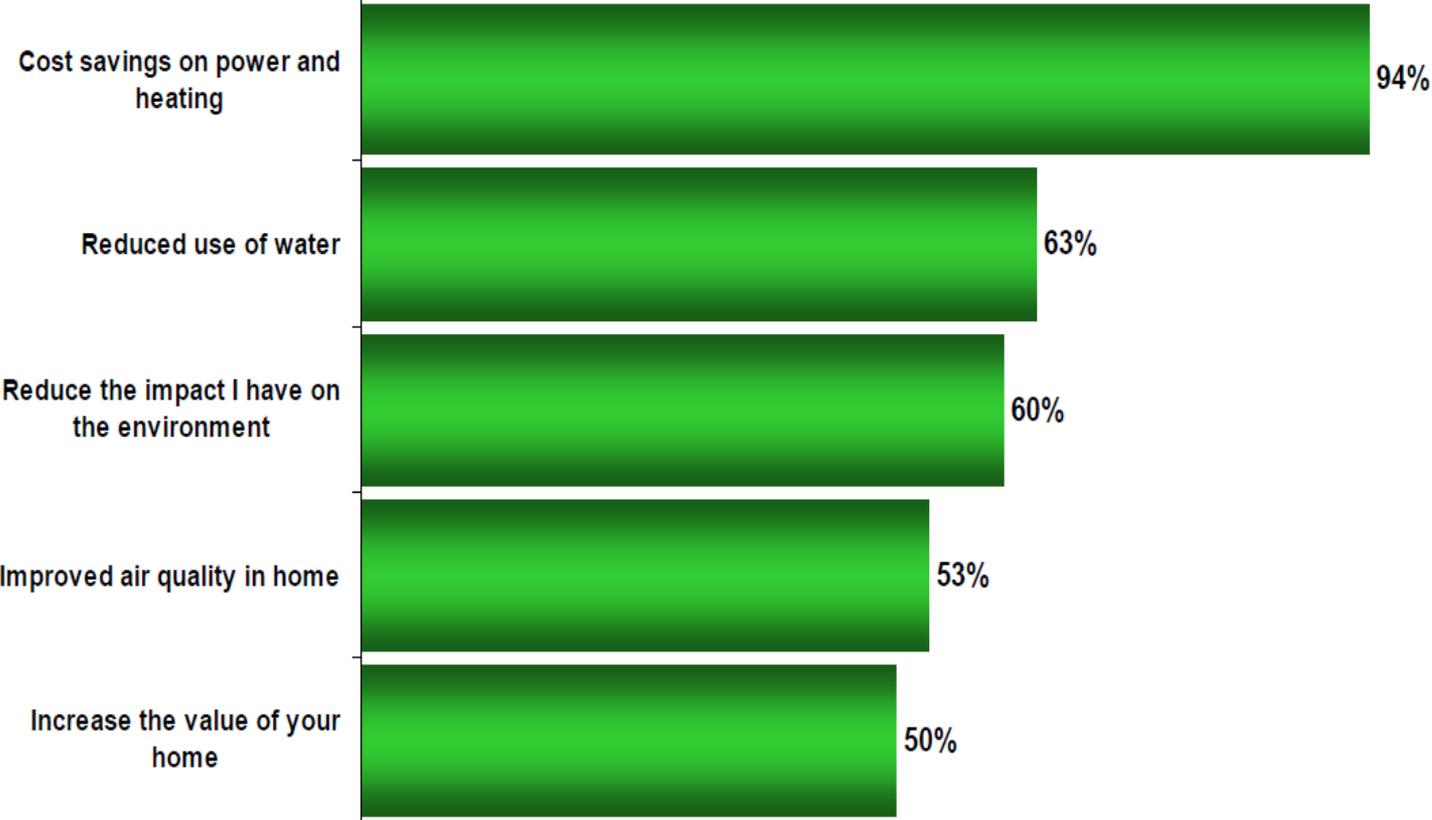


EPA Shelton^{Grp}

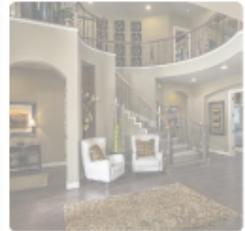
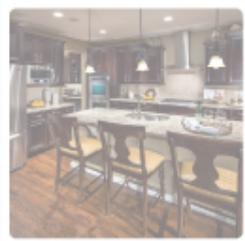


Benefits, not Features

TOP 5 REASONS TO BUY GREEN HOME / MAKE GREEN IMPROVEMENTS TO HOME



Setting New Expectations





ENERGY PERFORMANCE RATING

ENERGY SAVING FEATURES

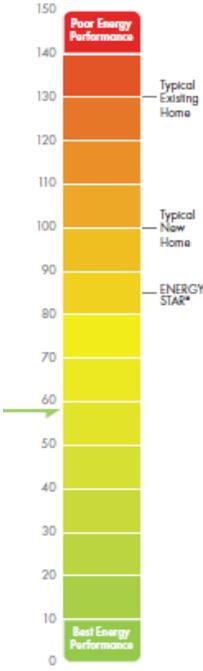
The Salida 4032

HOW THIS SCORE IS DETERMINED.

Home Energy Rating System, or simply HERS, is a scoring system set by the Residential Energy Services Network (RESNET) to measure a home's energy efficiency and determine if it meets ENERGY STAR guidelines. The lower the HERS Index, the more energy efficient a home is.*

This home exceeds ENERGY STAR® Guidelines. **59**

Plan	Salida 4032
Living Area	2,246 sq.ft.
HERS Score (Home Energy Rating)	59



- 5 Years: >\$7,000
- 10 Years: >\$15,000
- 20 Years: >\$37,000
- 30 Years: >\$65,000

More Solar: We use a better solar platform that produces over four-times more energy, and advanced features that heat your water, heat and cool your air, manage fresh air, and allow remote energy management from anywhere in the world through a computer or smart phone.

More Health: We include EPA Indoor Air plus features such as low VOC paints and finishes, better home air filtration and circulation, a fresh air management system, and advanced thermostats. The result is reduced pollution, allergens, and dirt which make your home more comfortable, cleaner and better for the whole family.

More Comfort: We use industry leading spray foam insulation which seals the building twenty-five times better than standard insulation, reducing leaks, drafts, and wasted energy. It will also make the home quieter, more comfortable, and cleaner.

More Sustainability: We include EPA WaterSense faucets, showers, toilets, irrigation controllers, and ENERGY STAR Appliances, reducing your water consumption by 50%, with no sacrifice in lifestyle or performance.

More Savings: With an unprecedented level of energy efficiency throughout our homes, our total HERS score in this community is as low as **XX**, reducing home energy consumption by up to **XX%** in these homes.

Energy performance for **The Salida 4032.**

This Meritage home performs at a HERS score of **59**. This equates to a **55%** energy use reduction compared to a typical new home.

Save **\$115/mo.** in home energy bills.*

55% ENERGY SAVINGS*

Scan this code with your smart phone to see how Meritage is changing the way homes are built.



*Each 1-point decrease in the HERS Index corresponds to a 1% reduction in energy consumption compared to the HERS 2006 ICC Reference Home. This a home with a HERS Index of 60 is 55% more energy efficient than the HERS Reference Home. Specifications based on the 2006 International Energy Conservation Code. For more information visit www.enrguide.gov and www.enrgreen.gov. "Meritage Green" is a trademark of Meritage Homes Corporation, which describes certain features and criteria designed to make homes more economically sustainable over the long-term and reduce energy consumption and the resulting environmental impact. Actual savings may vary and may depend in part on occupant behavior, timing and/or fluctuating costs of energy usage, and actual climate zone conditions. All referenced energy savings, water reduction and advanced air reduction information is based on data published by the EPA and DOE. Plans, dimensions, features, specifications, materials and availability of homes or communities are subject to change without notice or obligation.



Get the best energy value possible in energy-efficient SRP PowerWise Homes™, as featured by Meritage Homes.

General Information:

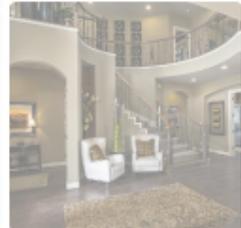
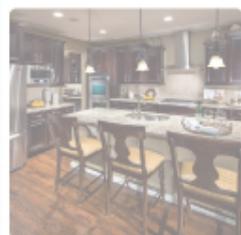
Conditioned Area: 1640 sq.ft
 House Type: Single Family Detached
 Bedrooms: 3

Annual Estimated Energy Use

	Lyon's Gate	New to Code	Average Resale
Heating	\$ 49	\$ 101	\$ 194
Cooling	\$ 320	\$ 645	\$ 987
Hot Water	\$ 2	\$ 254	\$ 266
Lights / Appliances	\$ 517	\$ 599	\$ 608
Photovoltaics	(\$ 347)	(\$ 0)	(\$ 0)
Service Charge	\$ 180	\$ 180	\$ 180
Total	\$ 720	\$1,779	\$2,235

Your actual costs may be higher or lower than those illustrated, depending on individual lifestyle, number of persons living in the house and SRP's fuel cost adjustment factor. SRP reviews the adjustment factor every six months, with any change made effective on July 1st and/or November 1st

Residential Green and Energy Efficient Addendum



 AI Reports [®] Form 820.03*	Client File #:	Appraisal File #:	
	Residential Green and Energy Efficient Addendum		
	Client:		
	Subject Property:		
City:		State:	Zip:
Additional resources to aid in the valuation of green properties and the completion of this form can be found at http://www.appraisalinstitute.org/education/green_energy_addendum.aspx			

ENERGY EFFICIENT ITEMS				
The following items are considered within the appraised value of the subject property:				
Insulation	<input type="checkbox"/> Fiberglass Blown-In <input type="checkbox"/> Foam Insulation <input type="checkbox"/> Cellulose <input type="checkbox"/> Fiberglass Batt Insulation			R-Value:
	<input type="checkbox"/> Other (Describe): <input type="checkbox"/> Basement Insulation (Describe): <input type="checkbox"/> Floor Insulation (Describe):			<input type="checkbox"/> Walls <input type="checkbox"/> Ceiling <input type="checkbox"/> Floor
Water Efficiency	<input type="checkbox"/> Reclaimed Water System (Explain):		<input type="checkbox"/> Cistern - Size: Gallons	Location:
	<input type="checkbox"/> Rain Barrels - #:		<input type="checkbox"/> Rain Barrels Provide Irrigation	
Windows	<input type="checkbox"/> ENERGY STAR [®]	<input type="checkbox"/> Low E <input type="checkbox"/> High Impact <input type="checkbox"/> Storm	<input type="checkbox"/> Double Pane <input type="checkbox"/> Triple Pane	<input type="checkbox"/> Tinted <input type="checkbox"/> Solar Shades
Day Lighting	<input type="checkbox"/> Skylights - #:	<input type="checkbox"/> Solar Tubes - #:	<input type="checkbox"/> ENERGY STAR Light Fixtures	<input type="checkbox"/> Other (Explain):
Appliances	ENERGY STAR Appliances: <input type="checkbox"/> Range/Top <input type="checkbox"/> Dishwasher <input type="checkbox"/> Refrigerator <input type="checkbox"/> Other:		Water Heater: <input type="checkbox"/> Solar <input type="checkbox"/> Tankless (On Demand) Size: Gal.	Appliance Energy Source: <input type="checkbox"/> Propane <input type="checkbox"/> Electric <input type="checkbox"/> Natural Gas <input type="checkbox"/> Other (Describe):
	HVAC (Describe in Comments Area)		<input type="checkbox"/> High Efficiency HVAC - SEER: <input type="checkbox"/> Programmable Thermostat	<input type="checkbox"/> Heat Pump <input type="checkbox"/> Wind <input type="checkbox"/> Thermostat/Controllers <input type="checkbox"/> Passive Solar <input type="checkbox"/> Radiant Floor Heat <input type="checkbox"/> Geothermal
Energy Rating	<input type="checkbox"/> ENERGY STAR Home <input type="checkbox"/> HPwES (Home Performance with ENERGY STAR) <input type="checkbox"/> Other (Describe):			<input type="checkbox"/> Indoor Air PLUS Package <input type="checkbox"/> Energy Recovery Ventilator Unit
				<input type="checkbox"/> Certification Attached

Advantages of advanced features:

- **Low Utility Costs (Energy Label)**
- **Healthier** (VOCs, Merv 8, SPF, Sealed attic ...)
- **More Comfortable** (Low e2 windows, SPF, Conditioned attic, TStat...)
- **Cleaner** (Merv 8, SPF, sealed attic...)
- **Quieter** (Low e2 Windows, SPF, sealed attic ...)
- **Safer** (SPF, sealed attic, water management, Low Vocs)
- **Not Economically Reproducible in Resale**
- **Municipal Partnerships (Development Time)**
- **Appraisal Value / Underwriting Value / Resale Value**

Portents of the Future

Homes to the Power of **ZERO**



What is the DOE Zero Energy Ready Home™ Label?

It is a Symbol of Excellence for energy savings, comfort, health, quality, and durability met by a select group of leading builders meeting U.S. Department of Energy Guidelines.

What is a Zero Energy Ready Home?

It is a high-performance home so energy efficient, all or most annual energy consumption can be offset with renewable energy. In other words, it's the Home of the Future.

A Symbol of Excellence



This graphic comparison chart demonstrates relative performance of this DOE Zero Energy Ready Home to existing homes (built between 1990 and 2010) and ENERGY STAR Certified Homes. Actual performance may vary.



McKinsey Energy Efficiency Report

- The research shows that the US economy has the potential to reduce annual non-transportation energy consumption by roughly 23, eliminating more than \$1.2 trillion in waste—well beyond the \$520 billion upfront investment that would be required. The reduction in energy use would also result in the abatement of 1.1 gigatons of greenhouse-gas emissions annually—the equivalent of taking the entire US fleet of passenger vehicles and light trucks off the roads.

Cash Flow Analysis Example: 4.6 kW system in AZ

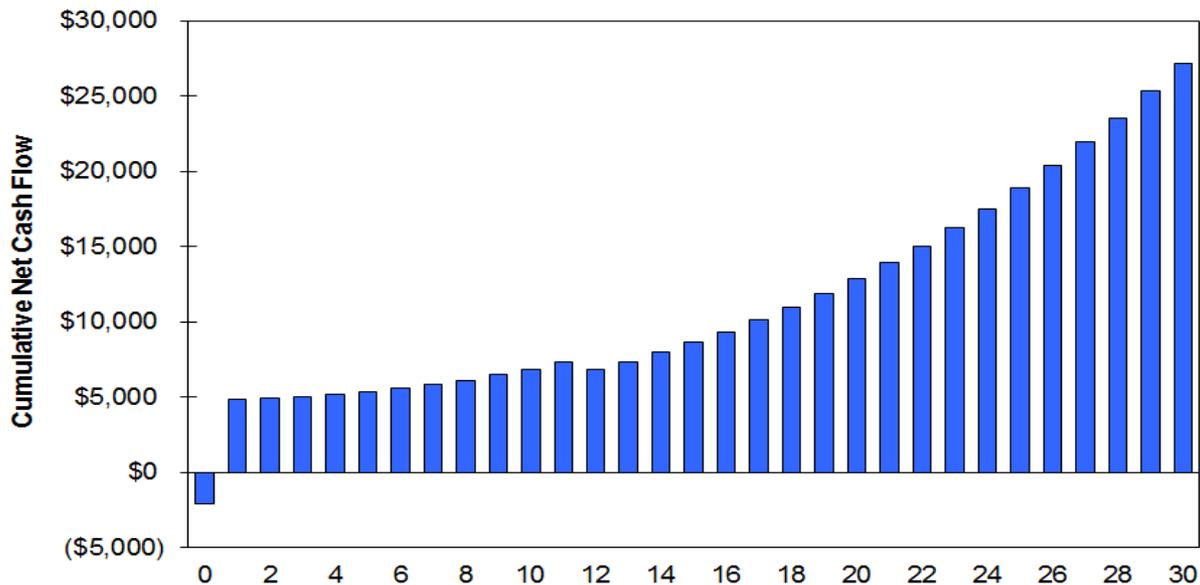
Assumptions

10% down, 30-yr FMR at 4.6%

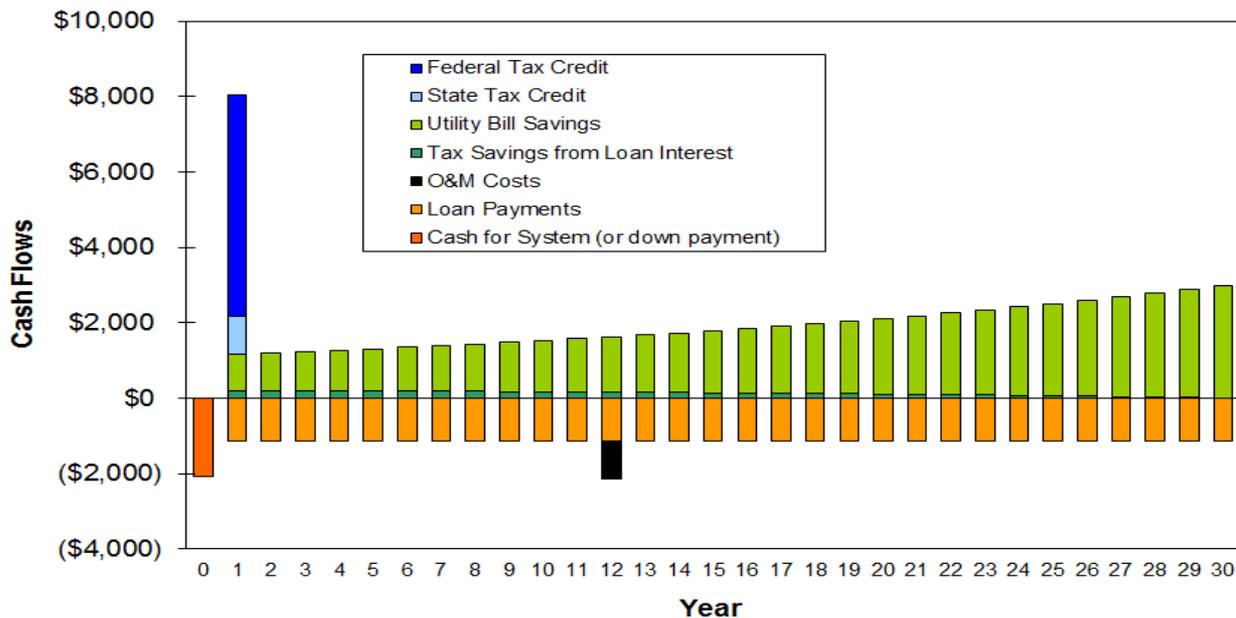
Current Electricity Avg. rate of \$0.12 per kWh

Electricity rate of inflation = 4%

Net Cash Flow, Cumulative



Year-by-Year Cashflows

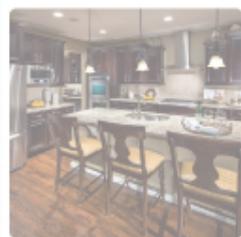


Challenges

- **Cost / Benefit**
- **Consumer Awareness**
- **Green Washing**
- **Transactional**
- **Change**

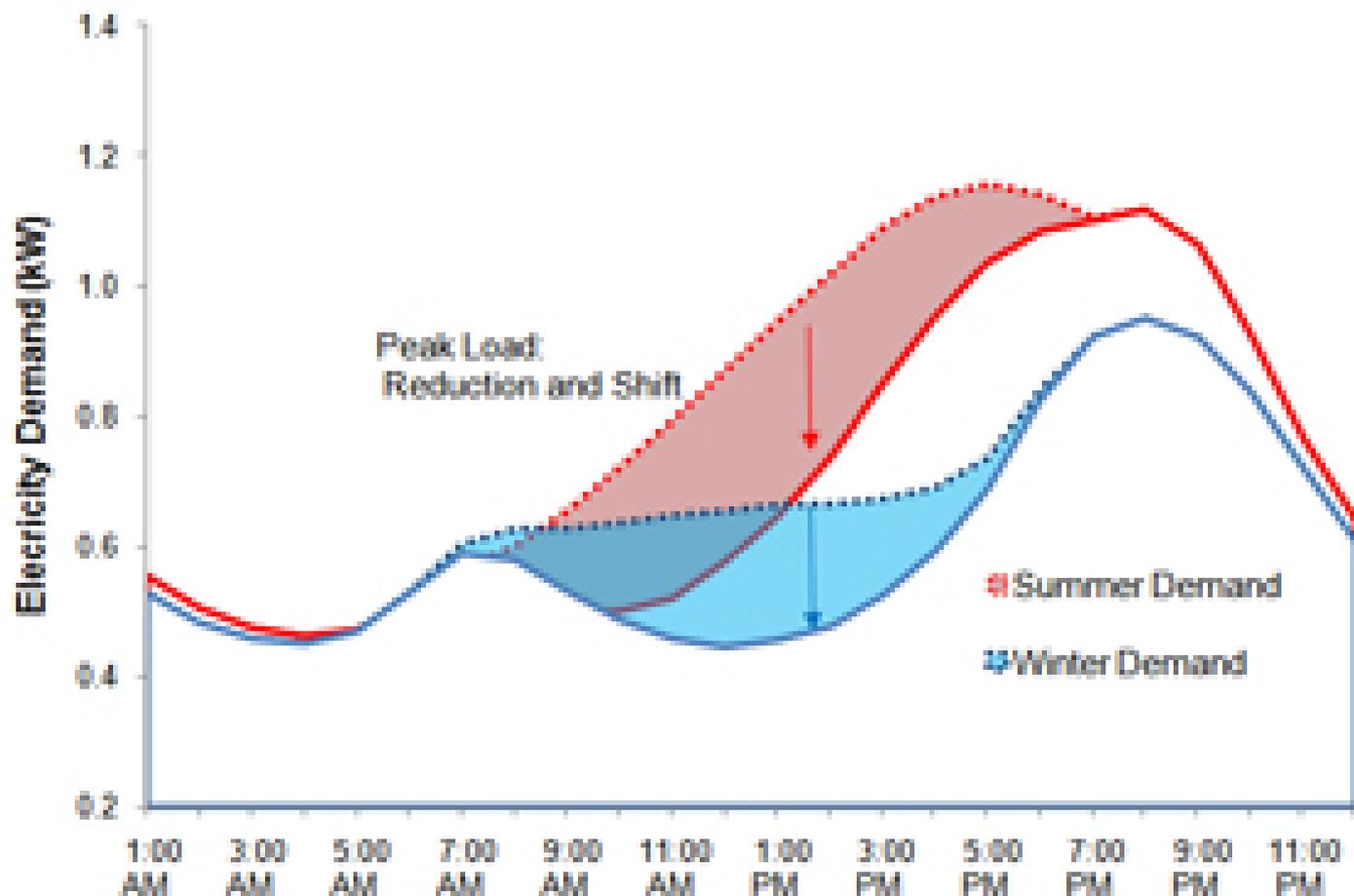


Renewable Energy: peak reduction / Duck Curve



DA

SCE Residential Peak Load Shift Impact of 10% PV Generation



Source Data: SCE, NREL

Win/Win: Load Leveling

- Solar design to demand peak (western orientation)
- Smart 62.2 Ventilation
- Smart Appliances
- Smart Tstat Control
- Embedded Thermal Mass



Thermal Mass / R factor

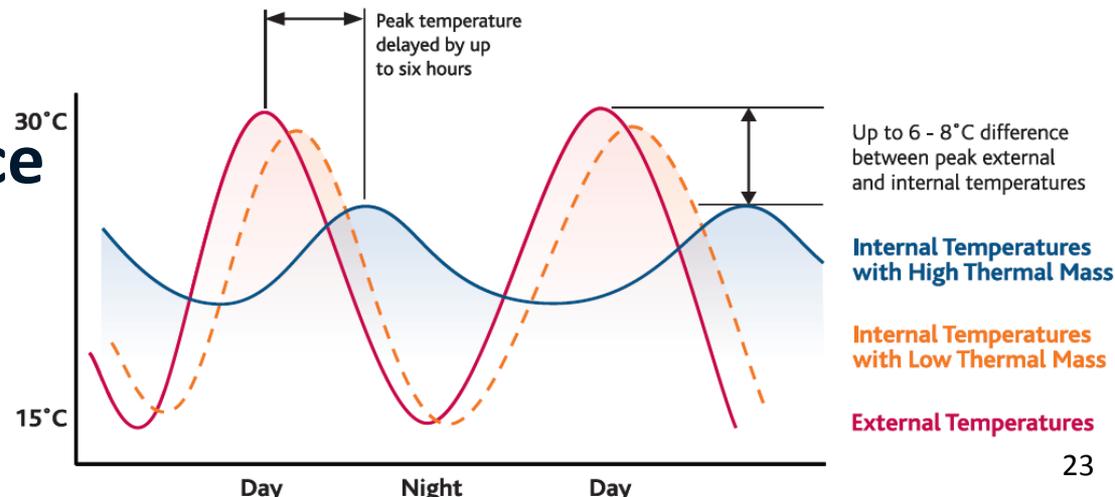
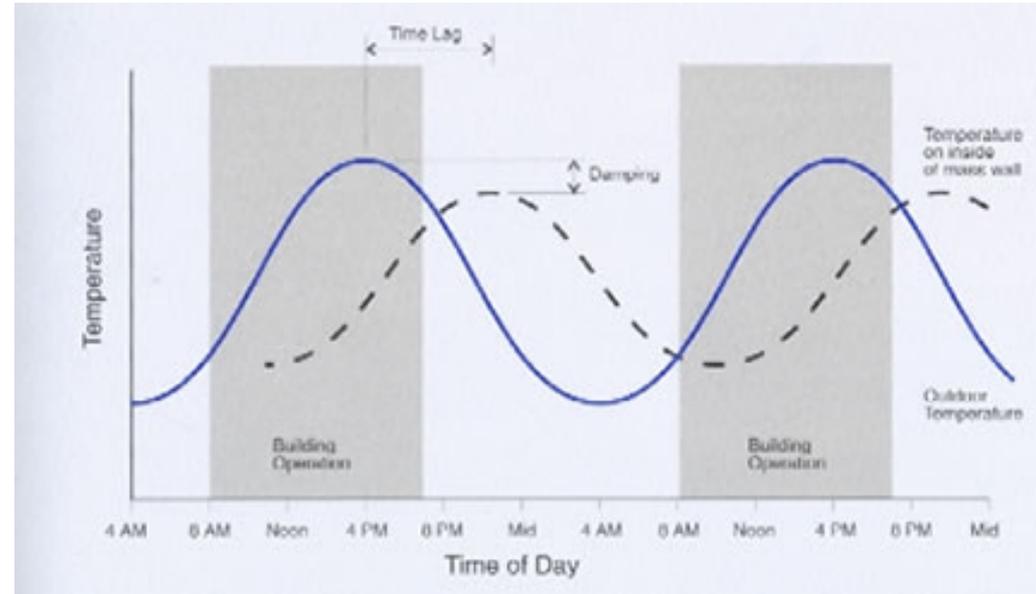
Conduction

- Concrete 0.08
- Wood 1.0
- Fiberglass 3.5
- Urethane foam
 - 3.5-6.0

Storage / Delay

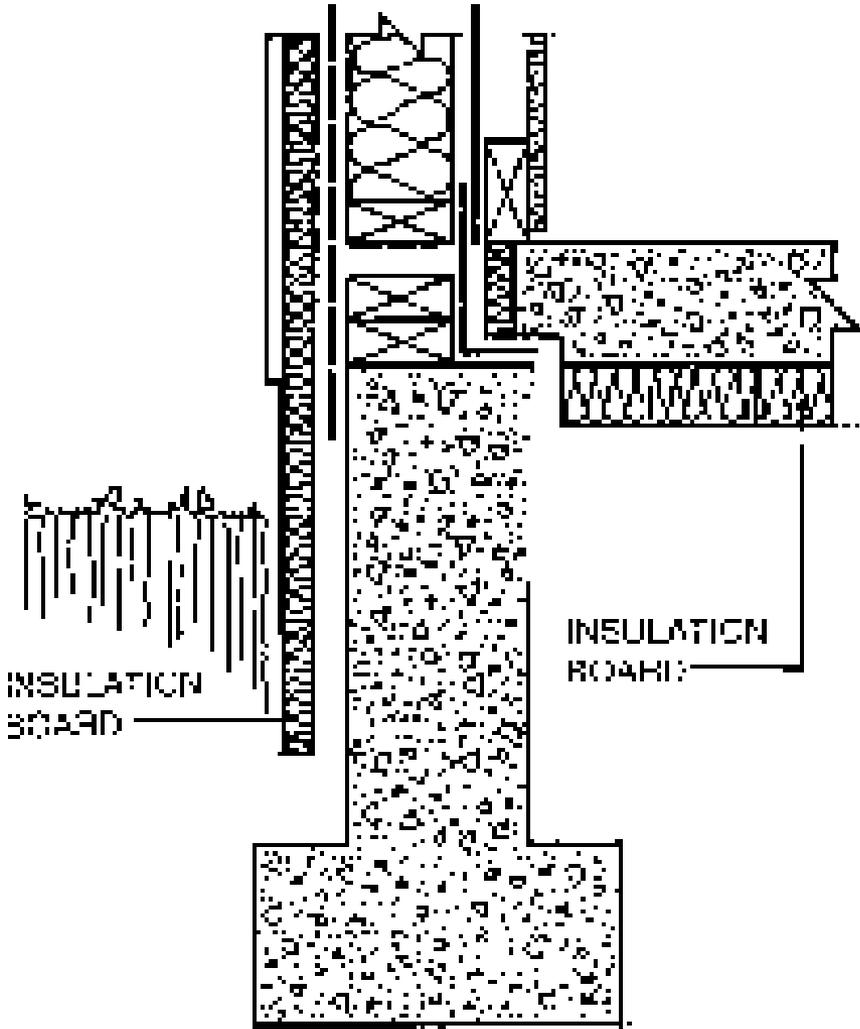
Thermal Emittance

- 70 to 90



Thermal Mass from Isolated Slabs

- PT to Footer w/ thermal break and subsurface insulation



Insulated Concrete Panels

- **Faster construction**
- **Stronger**
- **More durable**
- **Precision engineered**
- **Energy efficient**
- **Rot/Mold/Termite-proof**
- **Cleaner, Healthier, Safer**
- **Quieter**

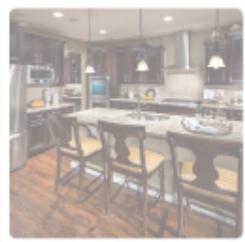


- **Top of Wall Continuous Concrete Bond Beam**
- **Metal Top Caps**
- **Horizontal Rebar(2)**
- **ShearStrip® Technology Eliminates Vertical Rebar**
- **EPS Foam Shell High Efficiency Insulation to R-32**
- **Concrete Stud**
- **6", 8" or 9" Wall Profile**
- **ShearStrip® Steel Stud Mounting Surface**
- **Continuous Concrete Base**

HERCUWALL[®]
ShearStrip™ Technology

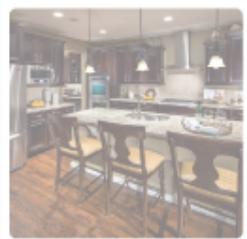
MeritageHomes[®]
CORPORATION

HercuWall® Job Site



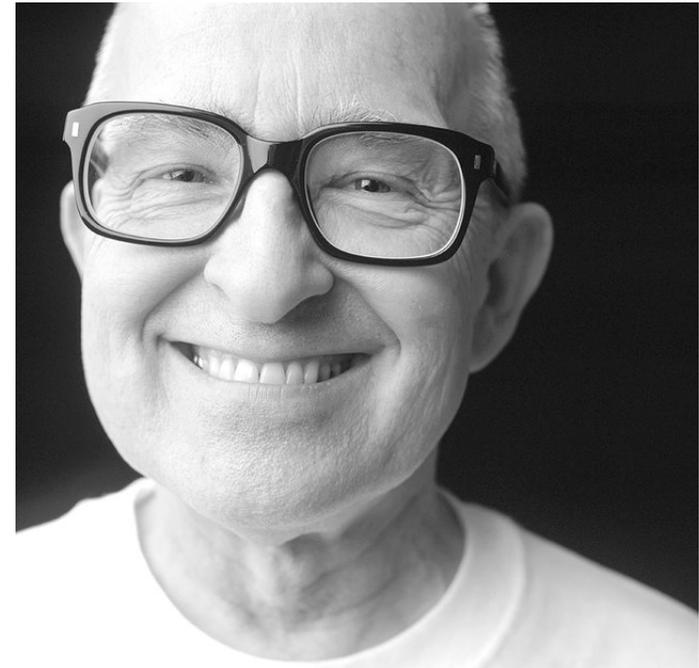
Lessons Learned

- **Buyer Sophistication**
 - “Nothing is wrong”
 - Temporal Discount
 - Total Monthly Cost of Ownership
- **Industry Sophistication**
 - Appraisal
 - Underwriting
- **Sustainable Sustainability**
 - Cost / Benefit
 - Assured directs / Unsure returns
 - Business Strategies / Rebates
 - Warranty



Solar Benefits for the homebuyer

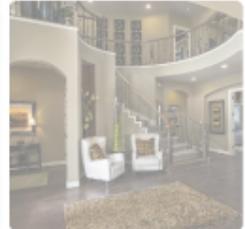
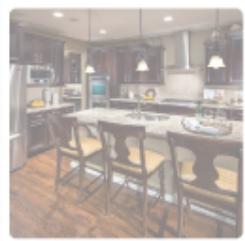
- **Further reduce energy costs**
 - Meritage Homes focus on energy efficiency
 - SunPower help bring energy costs down close to Net Zero
- **Monthly cash flow positive**
 - The decrease in energy costs can be more than the increase in the mortgage payment - and utility rates keep increasing!
 - Better pricing through Meritage
 - Low-Interest Mortgage
- **Federal Income Tax Credit**
 - 30% of the system value off next year's taxes
- **Greater home value**
 - \$5,000 per Kilowatt of system size premium (CA)
- **Warranty**
 - Roof warranty is not affected
 - 25 year warranty on SunPower products
- **Easy**
 - Direct Solar Consultation



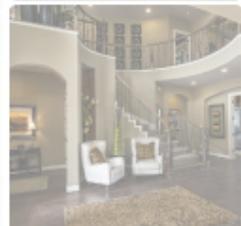
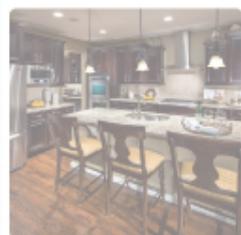
GET MORE

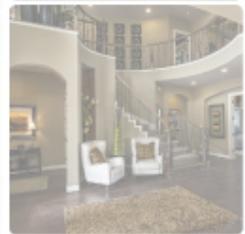
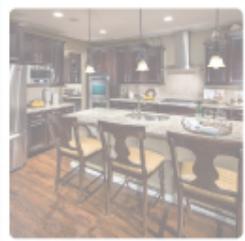


BE HEALTHY

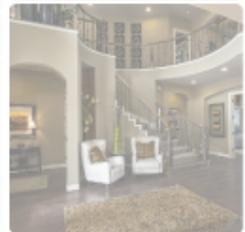
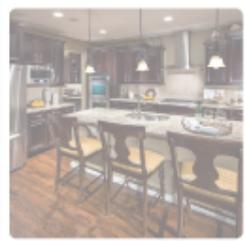


LIVE BETTER





Questions?



Thank you!

CR Herro, VP Environmental Affairs

CR.Herro@MeritageHomes.com

Meritage Homes

www.MeritageHomes.com