



BetterBuilt^{NW}



**Residential New
Construction Market
Update**

October XX, 2017



Housekeeping

Welcome

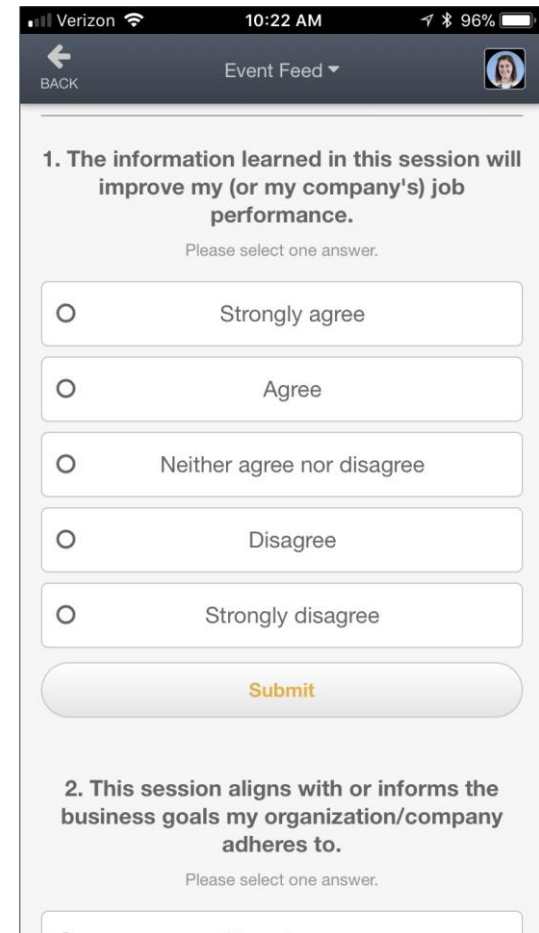
- Safety
- Bathrooms
- Cell phones



Session Survey Instructions

At the end of each session, you will be given 5 minutes to complete the session survey.

1. Open the “HEF2017” app
2. Navigate to “Agenda” and select the session
3. Scroll down to “Session Feedback”
4. For each question, select answer and hit “Submit”
5. Show completed survey to BetterBuiltNW rep to earn points
6. Prizes awarded Friday to the top point earners
 - See “Challenge” section in the app for activities
7. Assistance available at the BetterBuiltNW table



The screenshot shows a mobile app interface for a survey. At the top, the status bar displays "Verizon", "10:22 AM", and "96%". The app header includes a "BACK" button, "Event Feed", and a user profile icon. The main content area displays a survey question: "1. The information learned in this session will improve my (or my company's) job performance." Below the question, it says "Please select one answer." and provides five radio button options: "Strongly agree", "Agree", "Neither agree nor disagree", "Disagree", and "Strongly disagree". A "Submit" button is located below the options. The second question is partially visible at the bottom: "2. This session aligns with or informs the business goals my organization/company adheres to." with the instruction "Please select one answer."

Agenda

- Policy check
- Market trends
- RESNET updates
- EPA and DOE updates
- BBNW updates
- Your program's updates



Let's check the room

What are you hoping we can cover today?

What are you hoping we DON'T cover today?

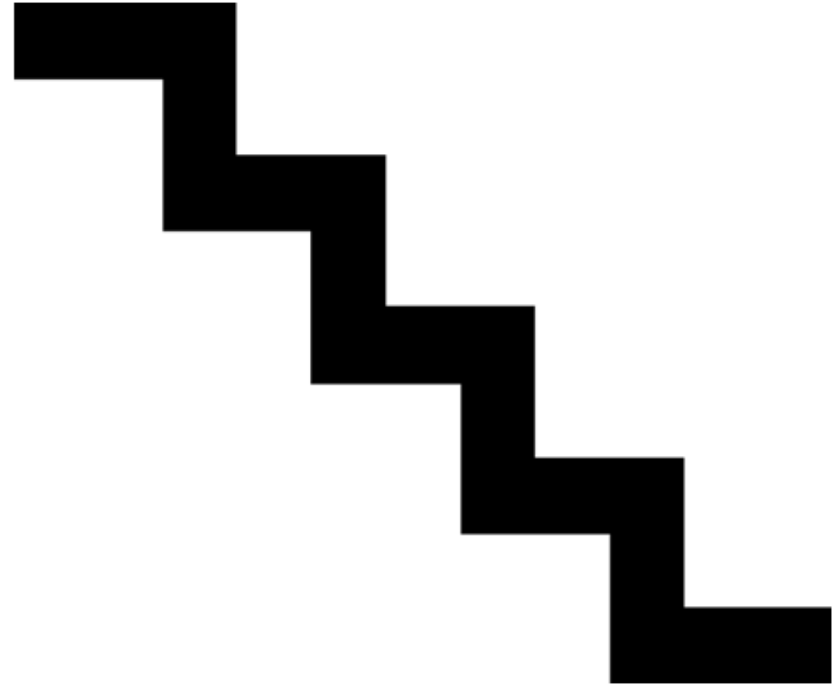
ASK FOR IT.



Policy Check

Tax Credits

- They are currently dead in OR and Federal
 - Still good in Montana!
- Oregon RETC not likely in 2018
- Federal landscape is looking unlikely
- What has been proposed?



EPA



BRIEF

House Appropriations Committee votes to cut Energy Star funding 40%

DOE EERE

Residential Building
Efficiency

Appliance and
Equipment Standards

Emerging Technologies

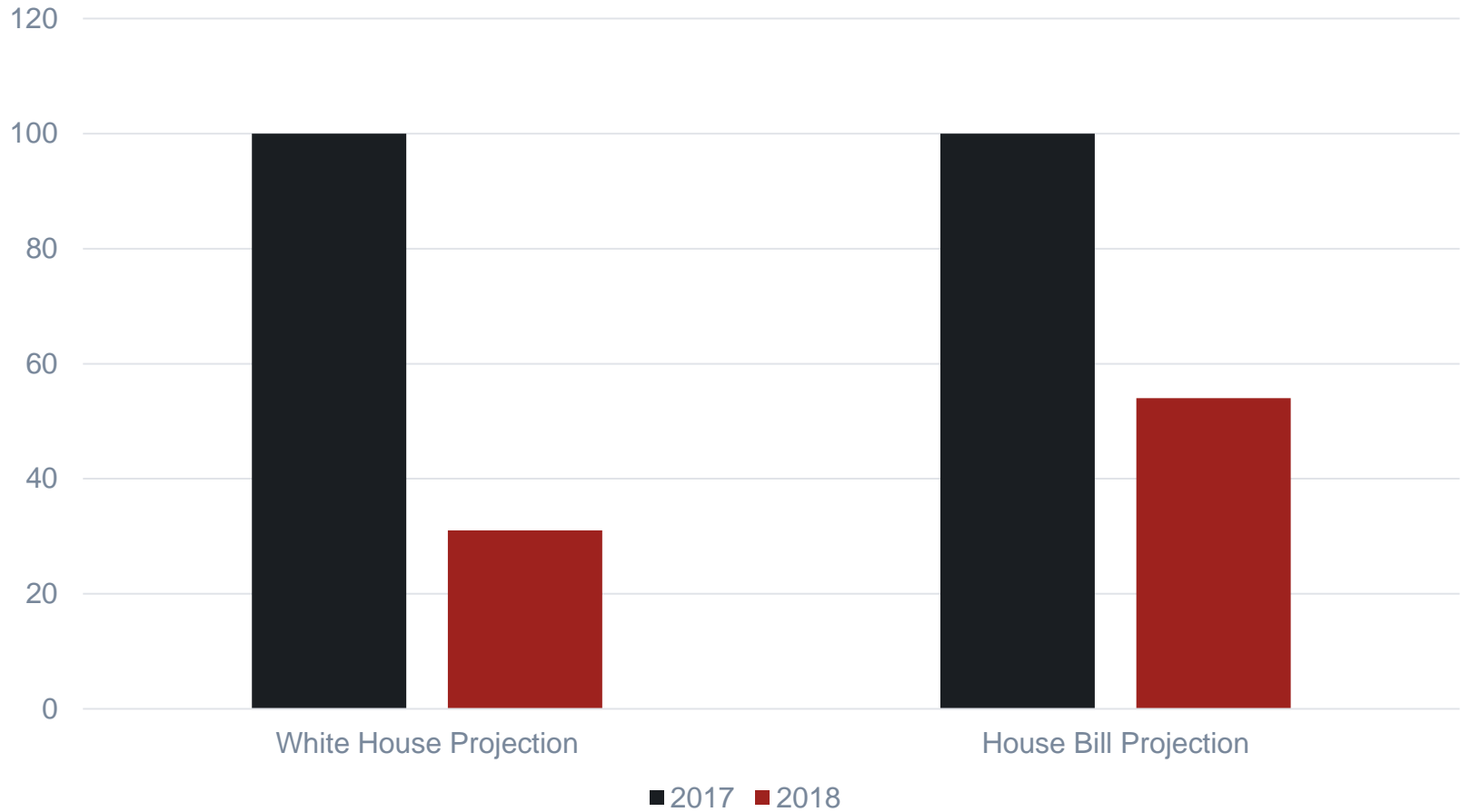
Building Energy Codes

LEDs and Solid-State
Lighting

Guidelines for Home
Energy Professionals

DOE EERE

Who has the bigger scissors?



The Paris Agreement



TRUMP WITHDRAWING FROM PARIS AGREEMENT



Rebecca Harrington   
Jun. 1, 2017, 2:38 PM  49,450



President Donald Trump announced Thursday that he would pull the US out of the landmark Paris Agreement on climate change, following through with a key campaign promise.

While the decision should galvanize his base, it goes against what some of the largest American companies — and many in the rest of the world — were hoping for.



U.S. President Donald Trump talks to President Emanuel Macron of France in Paris in July.

Trump and the Paris Agreement: What Just Happened?

The United States affirmed it's definitely leaving the treaty—but not yet.

All is not lost!

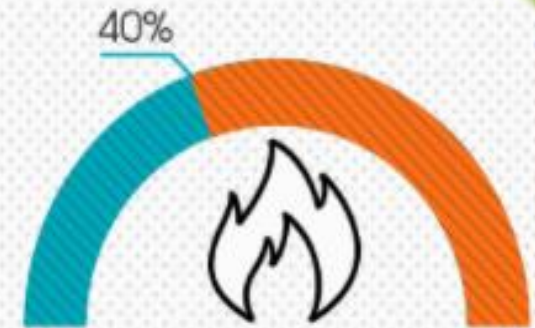
ENERGY EFFICIENCY TARGETS



At least 27% of total energy consumption from renewable energy.



At least 27% increase in energy efficiency.



At least 40% cut in greenhouse gas emissions compared with 1990.

<https://commons.wikimedia.org/wiki/File:US-climate-alliance.svg>



Market Trends

Leading Builders of America

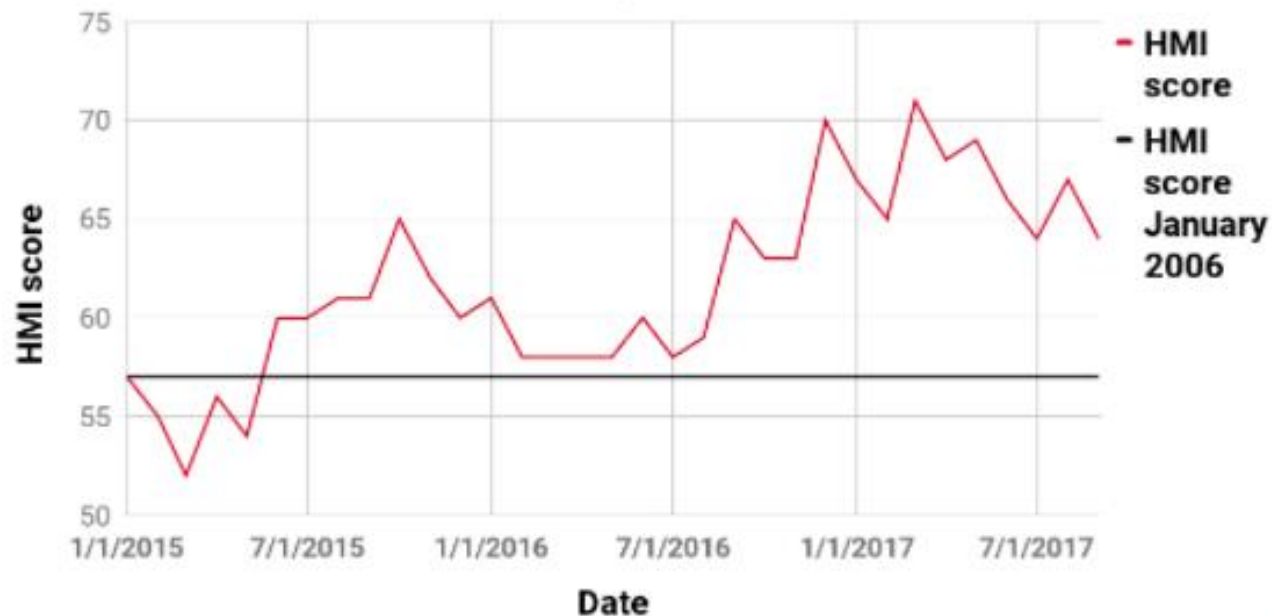
Key Issues

- Energy Efficiency
- Protecting Mortgage Interest Deduction



Construction Dive

Builder confidence stumbles in September



📷 The decline is largely a response to uncertainty from the recent hurricanes sweeping the Southeast and Gulf Coast, which have raised questions regarding labor and material availability. Credit: Mary Tyler March/Construction Dive, data from [National Association of Home Builders](#)

Construction Dive part 2

"BIM is facilitating this collaborative environment where architects, contractors and engineers can work together and model a project before it is even bid on and won" – Sarah Hodges, Autodesk

"[Technology] makes our processes more efficient, and it allows us to give our client a better product."- Sam Arabia, Director of engineering and BIM services, Torcon

"The proliferation of these kinds of tools has allowed us to partner with and work with designers in more meaningful ways" - Geoff Camp, regional VDC manager, Suffolk Construction



RESNET

Top 4 Most Exciting RESNET Initiatives

#4 Appraisal Institute



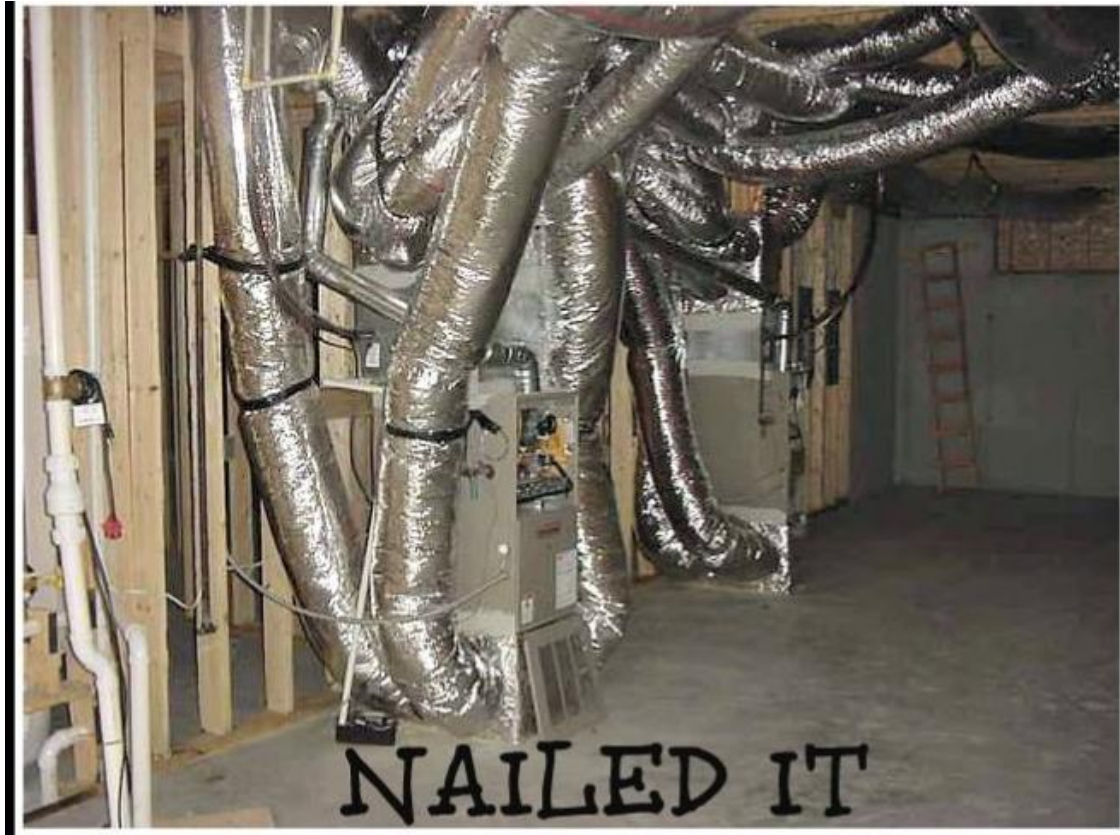
Top 4 Most Exciting RESNET Initiatives

#3 WER Index



Top 4 Most Exciting RESNET Initiatives

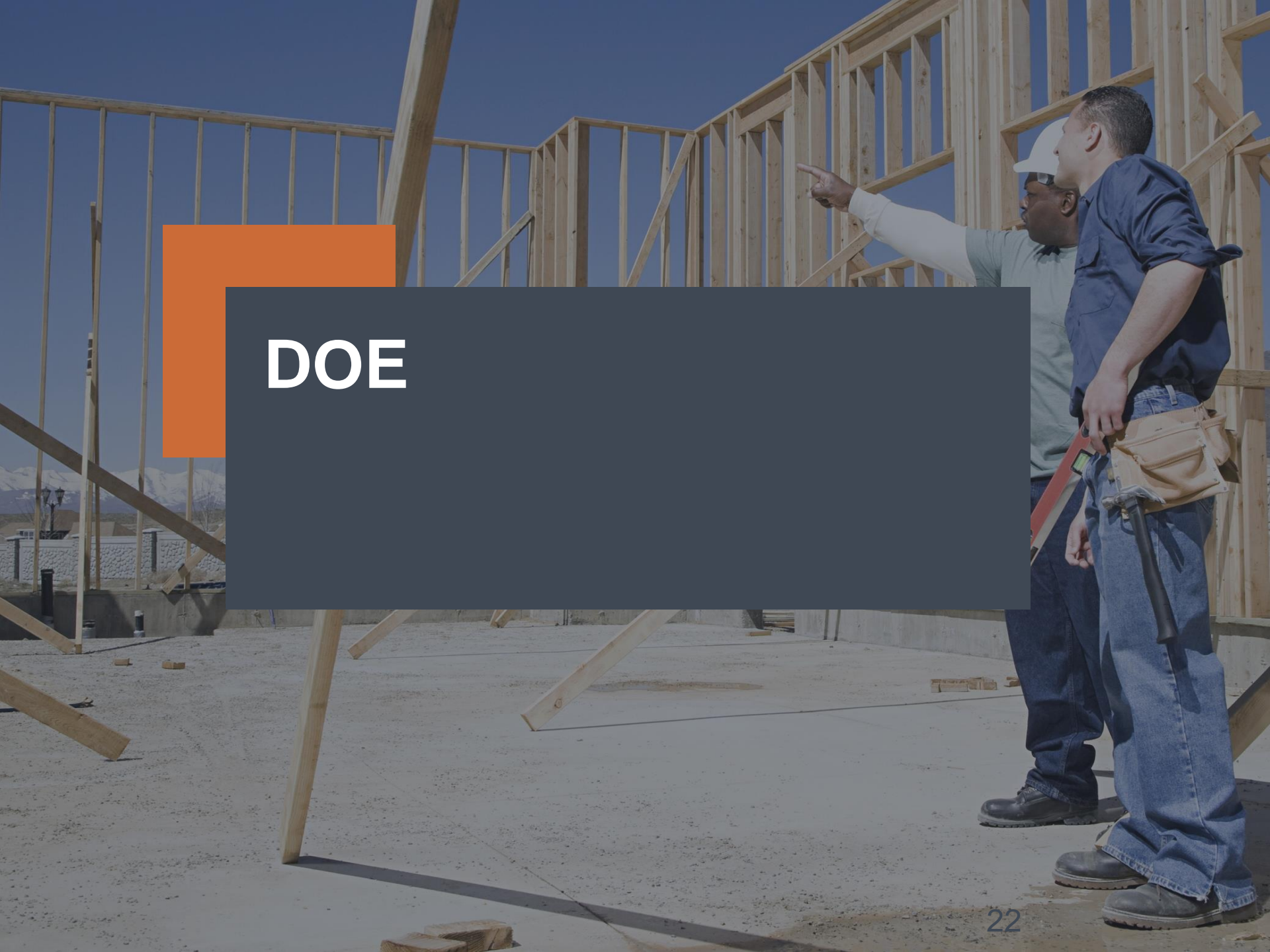
#2 HVAC Quality Install



Top 4 Most Exciting RESNET Initiatives

#1 Standard 305





DOE

Building America

Building America Research-to-Market Plan

A. High-Performance, Moisture-Managed Envelope Solutions

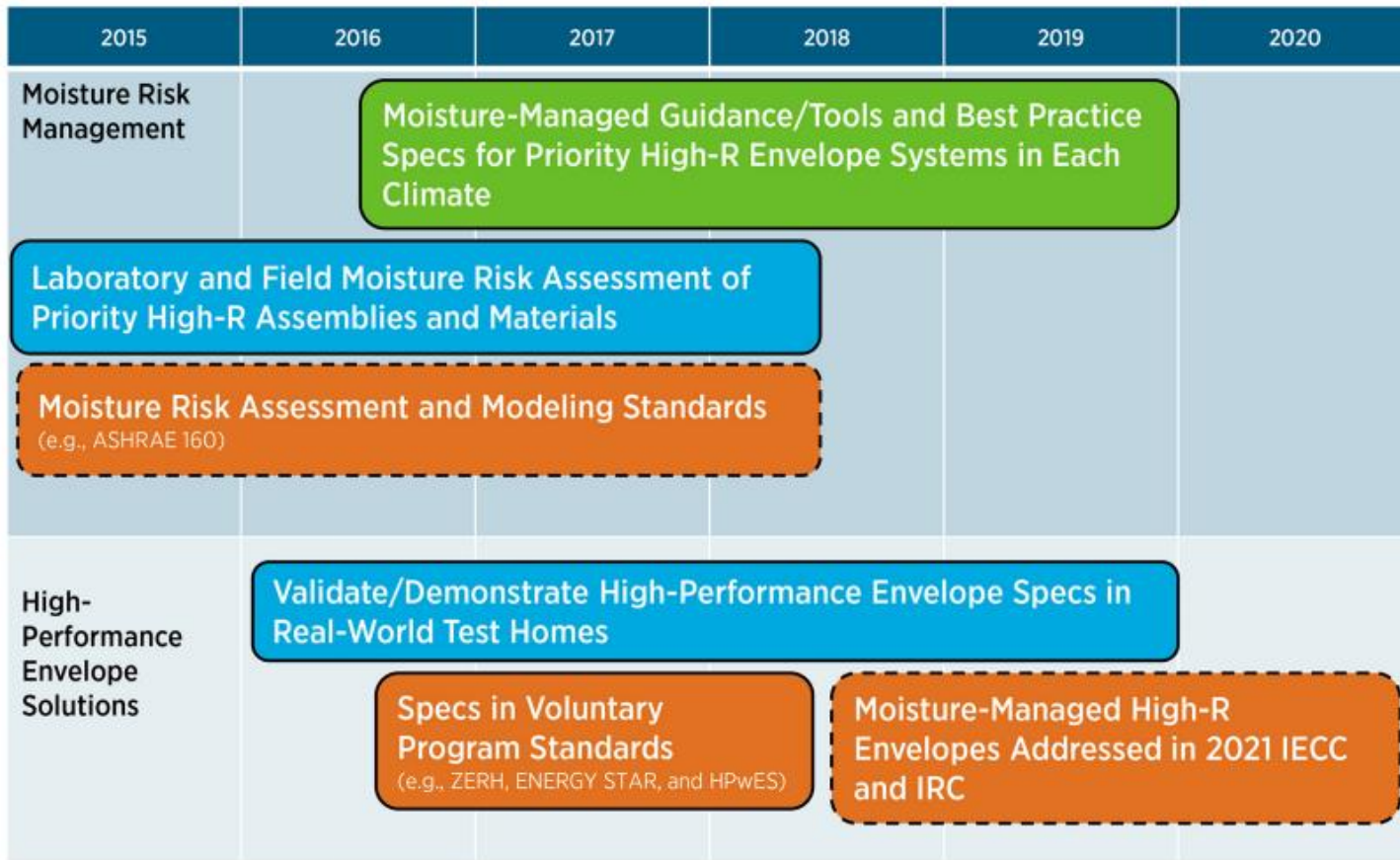


Figure 5. Roadmap A: High-Performance, Moisture-Managed Envelope Solutions

DOE Zero Energy Ready Homes

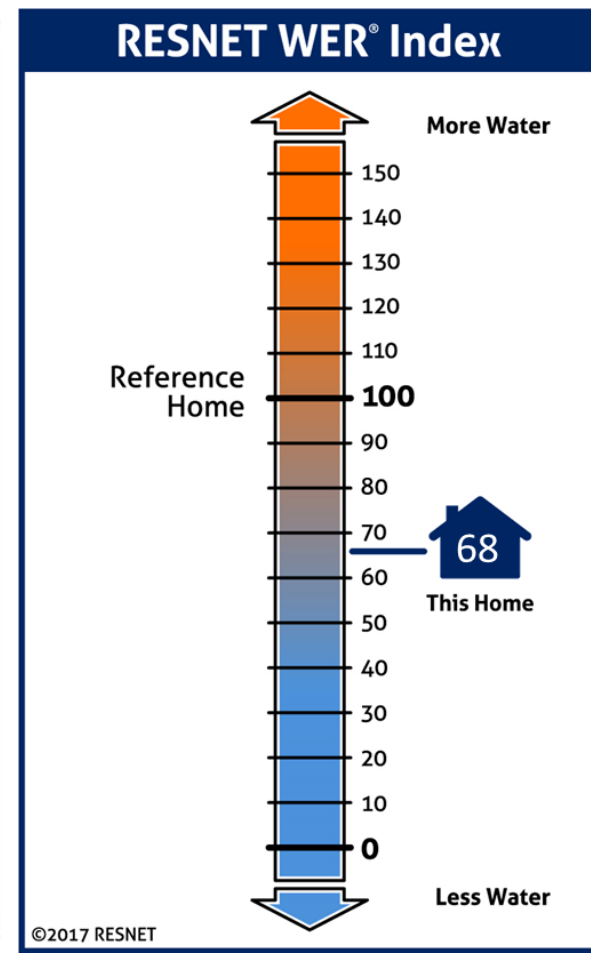
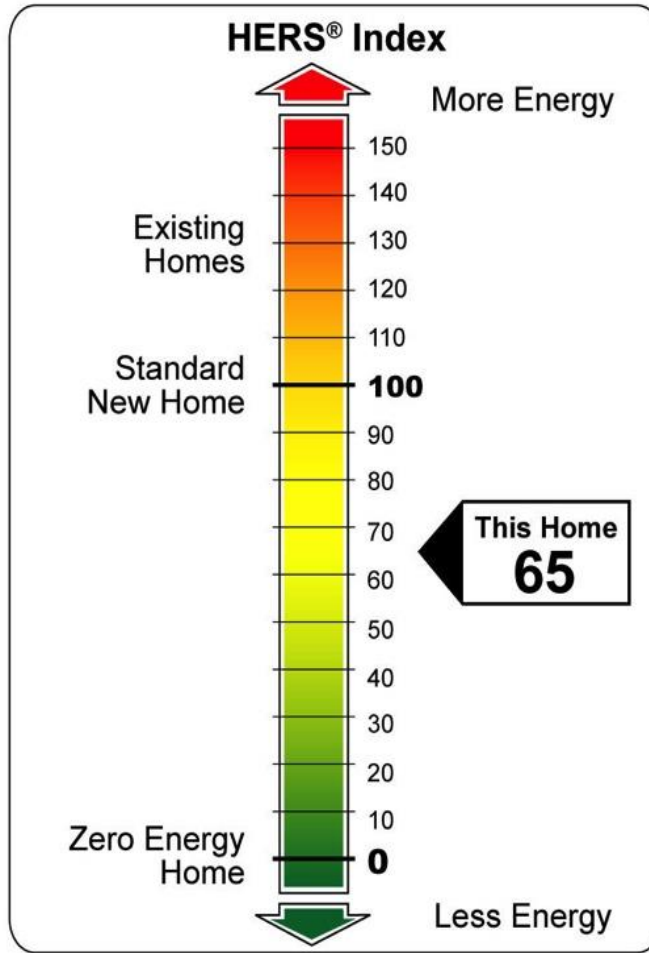
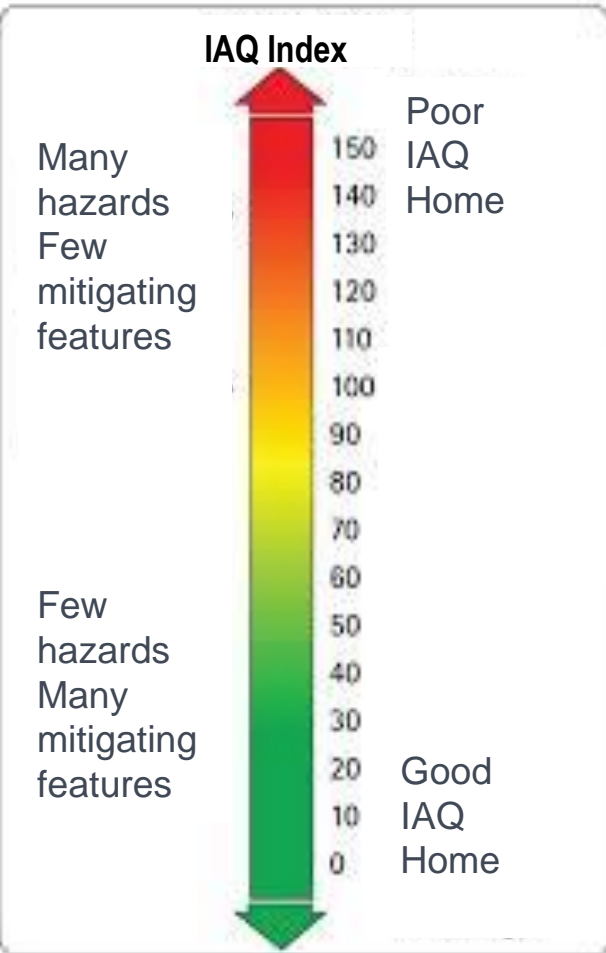
- Solidifying relationships with Passive House
- Partnering closely with Solar Decathlon
- Promoting the Value Proposition
- Housing Innovation Awards



Passive House Institute US

							Source Zero Renewable Energy System
						Balanced Ventilation HRV/ERV	Balanced Ventilation HRV/ERV
				SOLAR READY Depends on climate	SOLAR READY ALWAYS	SOLAR READY ALWAYS	SOLAR READY ALWAYS
				Eff. Comps. & H2O Distrib	Eff. Comps. & H2O Distrib	Eff. Comps. & H2O Distrib	Eff. Comps. & H2O Distrib
				EPA Indoor airPLUS	EPA Indoor airPLUS	EPA Indoor airPLUS	EPA Indoor airPLUS
				Ducts in Condit. Space	Ducts in Condit. Space	Ducts in Condit. Space	Ducts in Condit. Space
			HVAC QI w/WHV	HVAC QI w/WHV	HVAC QI w/WHV	Micro-load HVAC QI	Micro-load HVAC QI
			Water Management	Water Management	Water Management	Water Management	Water Management
			Independent Verification	Independent Verification	Independent Verification	Independent Verification	Independent Verification
IECC 2009 Enclosure	IECC 2012 Enclosure	IECC 2009 Enclosure	IECC 2012 Enclosure	IECC 2012/15 Encl./ES Win.	Ultra-Efficient Enclosure	Ultra-Efficient Enclosure	Ultra-Efficient Enclosure
HERS 85-90	HERS 70-80	HERS 65-75	HERS 55-65	HERS 48-55	HERS 35-45	HERS < 0	HERS < 0
IECC 2009	IECC 2012	ENERGY STAR v3	ENERGY STAR v3.1	ZERH	PHIUS PHIUS+	PHIUS+ SourceZero	PHIUS+ SourceZero

IAQ Index - Scale





EPA

Partner Meetings

Stakeholder also get access to Products Meeting

Topics such as:

- Price premium study
- Smart T-stats
- Mini-splits
- RaterPRO beta testing
- WaterSense
- Multifamily



Speaking of RaterPRO

ENERGY STAR Certified Homes
ABC Company Admin Site

Home Jobs House Plans

Jobs

Active	123
Pre-Drywall	86
Final	37
Completed	59
Internal Review	37
Submitted to Provider	53
Approved	29
Registered	81
Deleted	21

25 Active jobs, ENERGY STAR rating, Builder Name A, House Plan Name...

Sample Set House ID: 10041216
100 Cherry Ln, Fairfax, VA 22031
Last Updated: 11/22/2016, 5/10/2016, by Jim (Jim suspended)

Sample Set House ID: 10071221
1802 New Hampshire Ave NW, Fairfax, VA 22031
Last Updated: 11/22/2016, 5/10/2016, by Jim (Jim suspended)

Home King House ID: 10041221
Cityscapes Townhomes, Lot 12
Last Updated: 11/22/2016, 5/10/2016, by Jim (Jim suspended)

Exterior Walls Ceilings & Roofs Slabs, Floors & Rim Joists Interior Walls HVAC & Water Plug Loads, Lighting, PV, Meters

49 checklist items for pre-drywall and final, any status

Exterior Walls - Pre-Drywall

Insulation levels match proposed design

Insulation is Grade I

Floor / foundation assemblies match proposed design

Foundation

Foundation Type	Thermal Boundary Loc.	Crawl Space Type
None	N/A	N/A

Slabs

Name	Slab Type Name	Perimeter Ins (R)	Perimeter Ins Depth (ft)	Under-Slab Ins. (R)	Under-Slab
slab	Uninsulated	0.0	0.0	0.0	0.0

2 Addresses For This Sample Set

On the local scene...

- v3.2 getting put into REM/Rate by end of the year
- Approximately 10% better than 2015 WA IECC
- Hoping to connect to levels of BuiltGreen and NGBS

Draft Version 3.2 – Climate Zones 4, 5 & 6

	ES v3.1 (CZ 5)	ES v3.1 (CZ 6)	WA 2015 Code w/ Points Applied	WA v3.2 (CZ 5)	WA v3.2 (CZ 6)
Thermal Envelope					
Wall Insulation	R-20 or R-13+5	R-20+5 or R-13+10	R-21	R-21	R-21
Ceiling Insulation	R-49	R-49	R-49	R-49	R-49
Floor Insulation	R-30	R-30	R-38*	R-38	R-38
Basement Wall Insula	R-10ci or R-13	R-15ci or R-19	R-15ci or R-21	R-15ci or R-21	R-15ci or R-21
Slab edge insulation	R-10 2 ft	R-10 4 ft	R-10 2 ft	R-10 2 ft	R-10 4 ft
Insulation Grade	All Grade I	All Grade I	Walls Grade III; All others Grade II	All Grade I	All Grade I
Infiltration (ACH50)	3	3	5	3	3
Window U-factor	0.27	0.27	0.28*	0.27	0.27
Window SHGC	Any	Any	Any	Any	Any
HVAC					
AFUE / SEER	95 / 13	95 / 13	94 / 13*	95 / 13	95 / 13
HSPF / SEER	9.25 / 15	9.5 / 15	9 / 13*	9.5 / 15	9.5 / 15
GSHP	ES	ES	-	ES	ES
DHW EF (gas) 40 gal	0.61	0.61	0.91*	0.91	0.91
DHW EF (elec) 40 gal	0.93	0.93	2.0*	2.75	2.0
DHW delivery	-	-	Circulation system	Circulation system	Circulation system
DHW flow rating	Standard	Standard	Low-flow*	Low-flow	Low-flow
Duct Location	Conditioned Space	Conditioned Space	Any	Any	Any
Duct leakage	OCFA	OCFA	4CFA	4CFA	4CFA
Other					
Appliances	ES	ES	-	ES	ES
High-efficacy Lighting	90%	90%	75%	90%	90%

The background of the slide is a photograph of stacks of lumber in a workshop. The wood is light-colored with visible grain patterns. An orange L-shaped graphic element is positioned in the upper left corner, partially overlapping the text box.

Programs and Tools – Final Thoughts

NGBS and AXIS

Pivotal - AXIS

Auto populating
Green Appraisal
Addendum

NGBS

Updating and
launching 2016
Specifications

Together

Auto filling participating
MLS for all NGBS
Homes!

Built Green

A new Net Zero label is coming soon from Built Green.

Expect news and visuals later this year!



Q and A

What other questions do you have about the state of the industry?

Who at this conference are you hoping to talk to?

What are you tracking that we did not mention today?





Dan Wildenhaus

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