



**Home Innovation**  
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# TRENDS AND OPPORTUNITIES IN THE U.S. HOME AND REMODELING MATERIALS MARKET

Pro Dealer Industry Summit  
October 18, 2018

Finding Innovation a Home

# Home Innovation Research Labs

- Founded in 1964 as wholly-owned subsidiary of NAHB
- Independent, for-profit researchers assisting development and commercialization of new building technologies
  - Engineering research & development
  - Market & field research
  - Laboratory testing
- Leader in green home building movement (NGBS)
- Key role in building codes and standards development
- Partnership with ICC-ES to fast-track issuance of ESRs



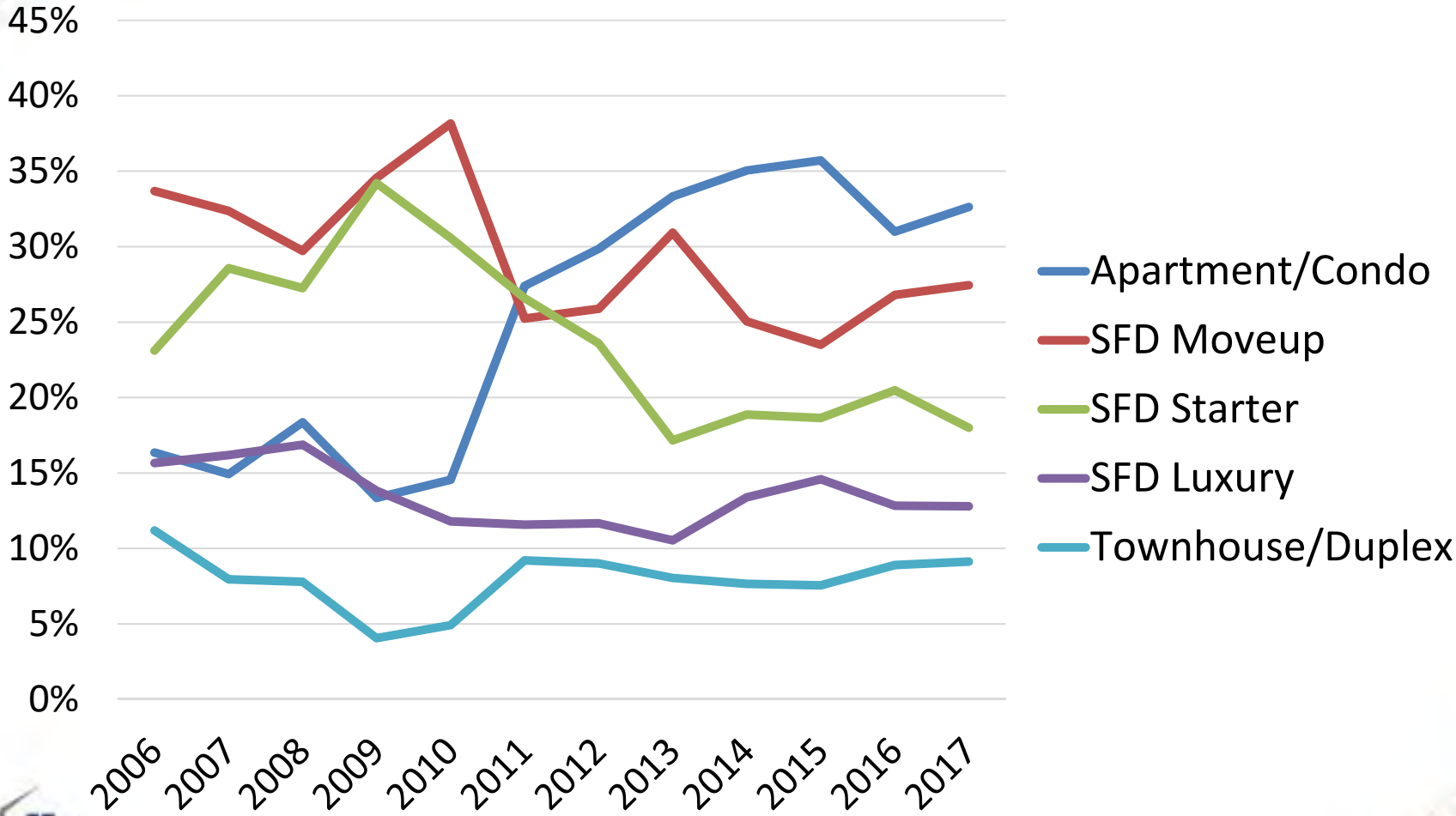
# Annual Building Product Tracking, Custom Market Research Studies

- Home Innovation has been tracking annual materials purchases since 1995
  - Builder Practices Survey of 1,500 U.S. Builders
  - Consumer Practices Survey of 100,000 households
- Decades of custom market research, sponsored by hundreds of building materials manufacturers
- Observational research of materials installation issues



# U.S. New Housing Mix

(based on annual starts)



# Characteristics of New U.S. Homes, 2017 – Size, Price, and Value

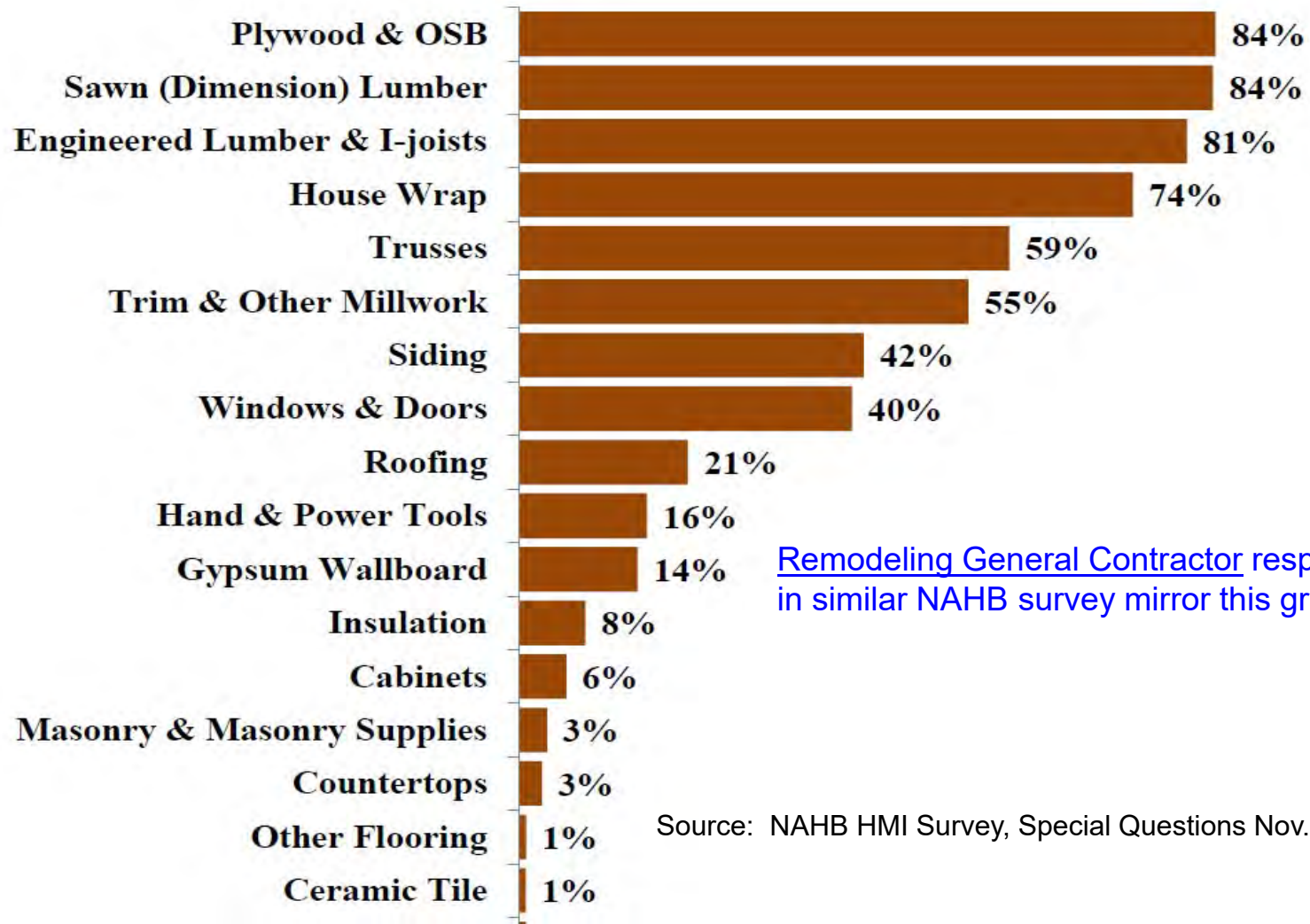
	Average Living Area	Average Price	Total Sq.Ft. Added (millions)	Total Sales (billions)
TOWNHOUSE/DUPLEX	1,702 sf	\$332,742	172	\$32
APARTMENTS/CONDOS	1,136 sf	\$171,149	414	\$62
SFD STARTER	1,674 sf	\$187,728	384	\$42
SFD MOVEUP	2,435 sf	\$356,829	862	\$127
SFD LUXURY	3,647 sf	\$777,181	583	\$126

# Average Annual Growth Forecast of Housing Starts, 2017 - 2022

	SFD Starts	MF Starts
NEW ENGLAND	2%	-1%
MID-ATLANTIC	2%	1%
EAST NORTH CENTRAL	3%	1%
WEST NORTH CENTRAL	2%	-1%
SOUTH ATLANTIC	5%	2%
EAST SOUTH CENTRAL	3%	0%
WEST SOUTH CENTRAL	4%	0%
MOUNTAIN	5%	0%
PACIFIC	5%	0%



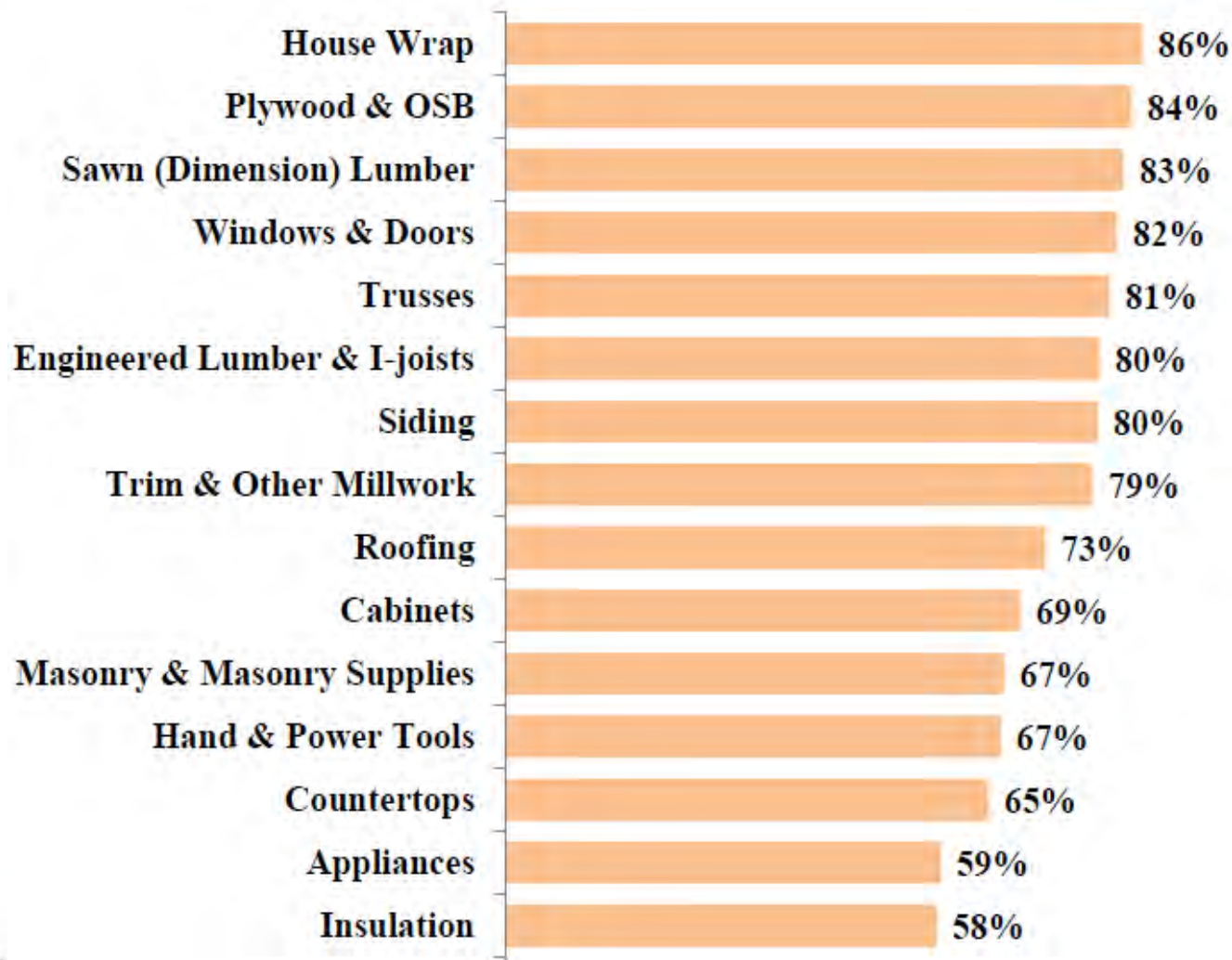
# Shares of New Home Builders Purchasing at Lumber Yards



[Remodeling General Contractor](#) responses in similar NAHB survey mirror this graph.

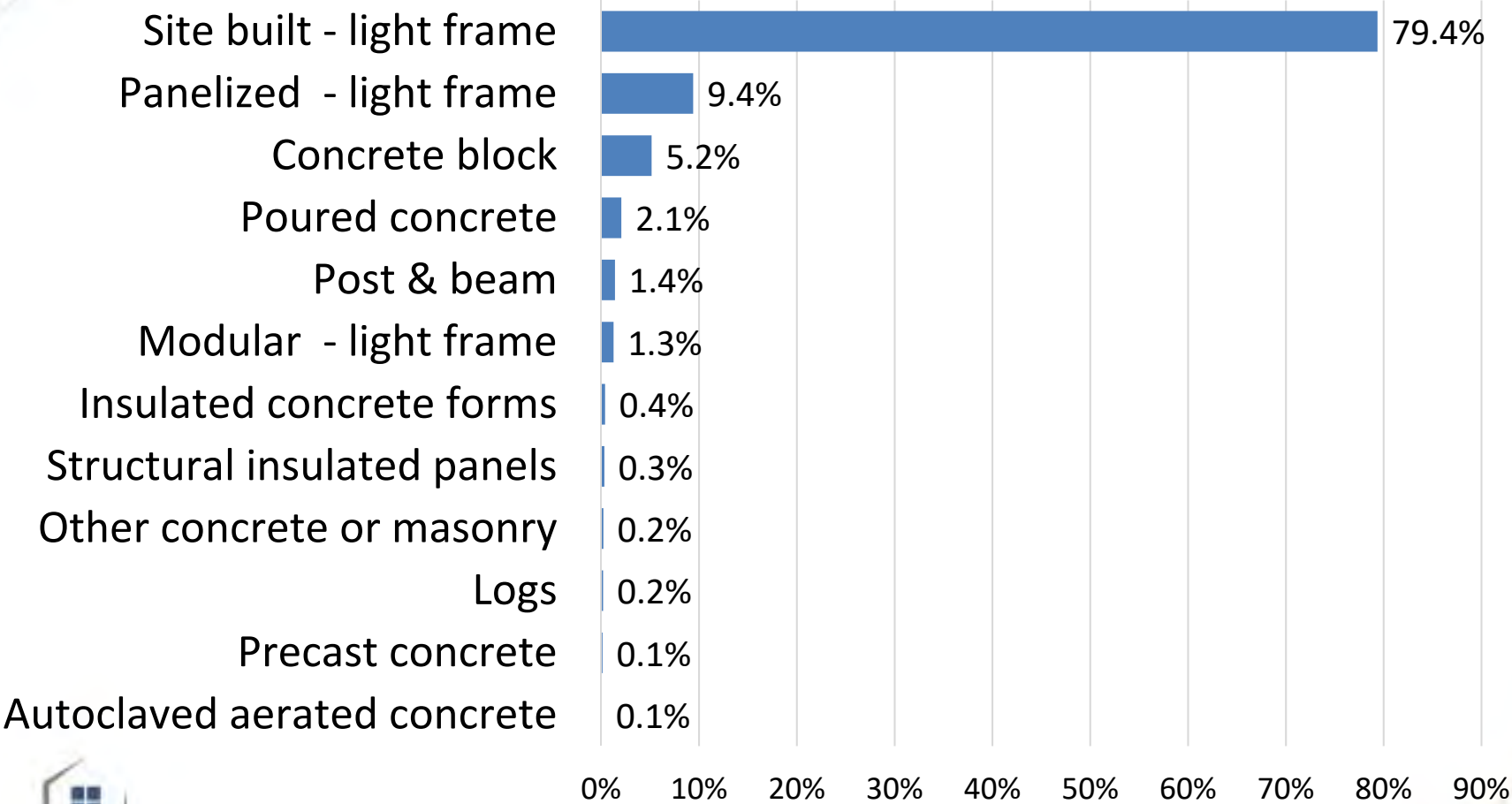
Source: NAHB HMI Survey, Special Questions Nov. 2015

# Shares of Purchase Decisions Made by Home Builder

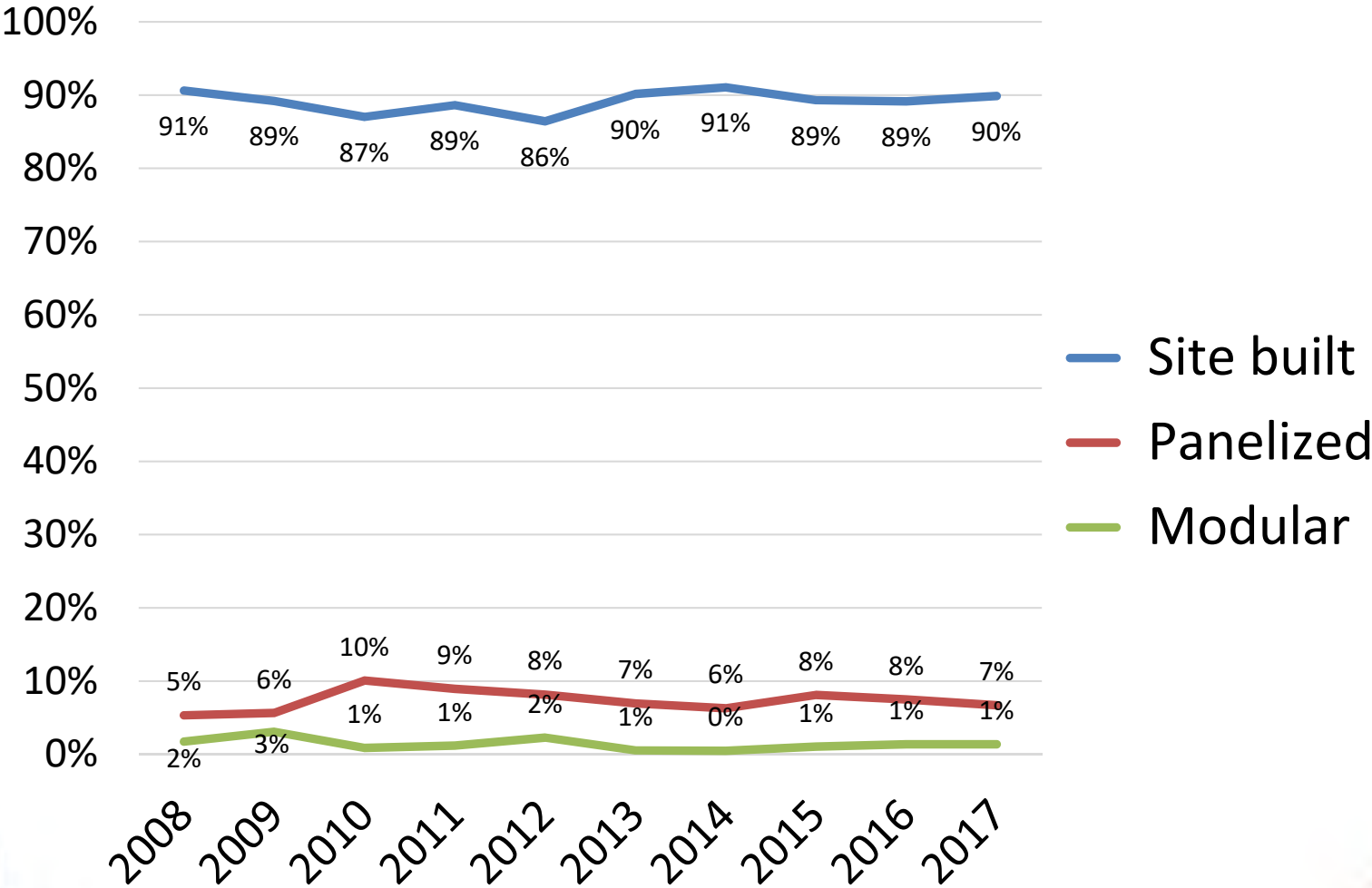




# Single Family Detached (SFD) Above-Grade Wall Construction, 2017



# Trends in SFD Above-Grade Wall Construction



Source: Annual Builder Practices Reports

# 2018 Builder Survey on Anticipated Adoption of Labor-Saving Alternatives

	Haven't used, Don't plan to	Plan to use it less often	Plan to use it about the same	Plan to use it more often
Roof trusses	12%	6%	65%	17%
Pre-cut framing package	66%	6%	20%	8%
Factory-built open wall panels	67%	8%	20%	5%
Factory-built closed wall panels	73%	7%	18%	3%
Panelized, pre-assembled floors	75%	7%	14%	4%
Modular	77%	6%	13%	4%
Turn-key framing	51%	10%	33%	6%
Precast floor, wall, or roof panels	73%	6%	18%	4%

Question: CONSIDERING ONLY THE NEW HOMES YOUR COMPANY BUILDS, WHICH OF THE FOLLOWING DO YOU PLAN TO USE LESS OFTEN, ABOUT THE SAME, OR MORE OFTEN IN THE COMING YEAR COMPARED TO LAST YEAR?



# 2018 Survey of Builders Sheds Light on Labor Saving Alternatives

## Large Builders Only—25 or more Starts/Year

	Haven't used, Don't plan to	Plan to use it less often	Plan to use it about the same	Plan to use it more often
Roof trusses	7%	7%	61%	25%
Pre-cut framing package	53%	7%	26%	14%
Factory-built open wall panels	53%	16%	26%	5%
Factory-built closed wall panels	53%	11%	35%	2%
Panelized, pre-assembled floors	63%	9%	21%	7%
Modular	61%	7%	25%	7%
Turn-key framing	40%	14%	37%	9%
Precast floor, wall, or roof panels	60%	9%	26%	5%

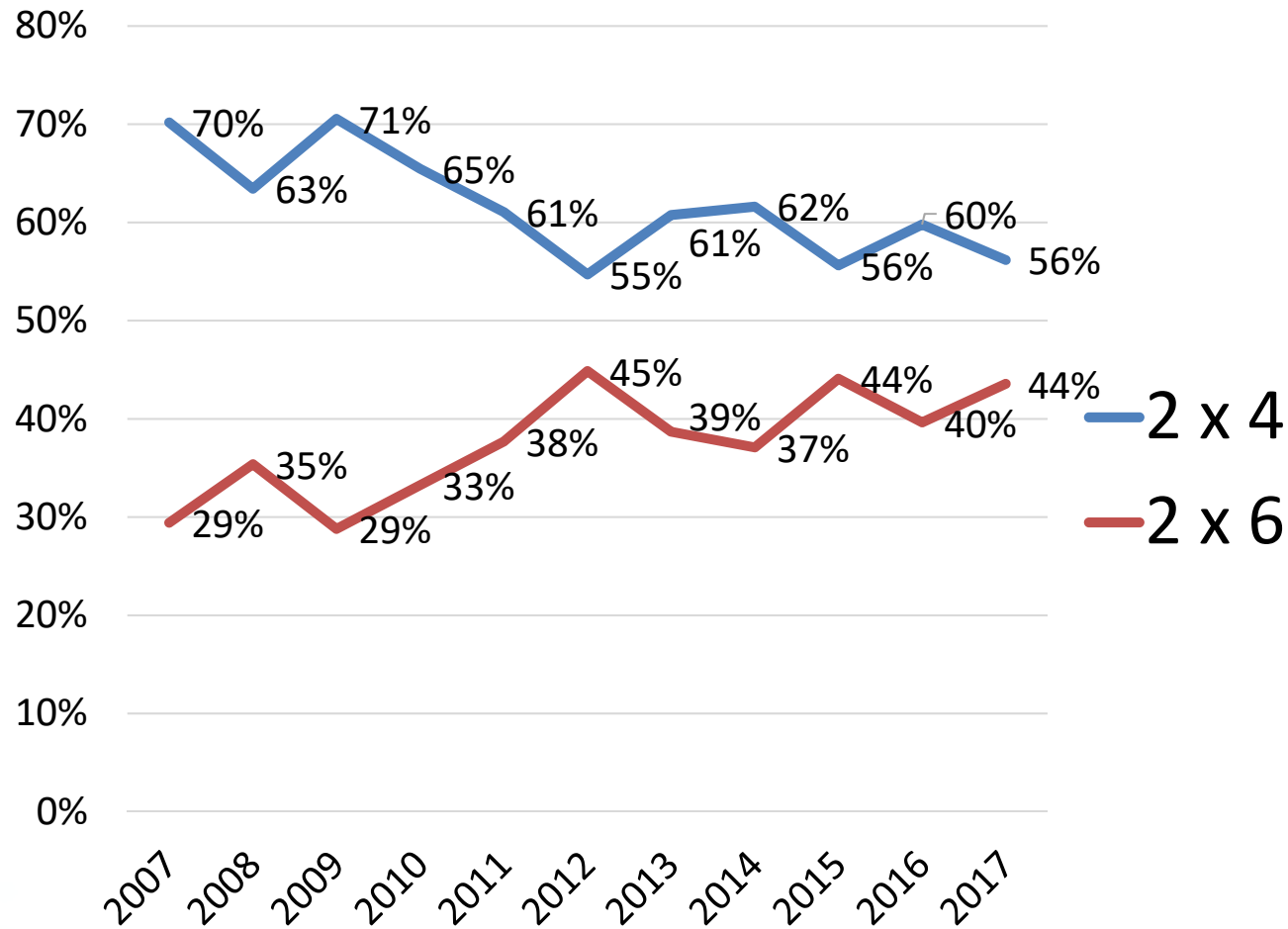
Question: CONSIDERING ONLY THE NEW HOMES YOUR COMPANY BUILDS, WHICH OF THE FOLLOWING DO YOU PLAN TO USE LESS OFTEN, ABOUT THE SAME, OR MORE OFTEN IN THE COMING YEAR COMPARED TO LAST YEAR?



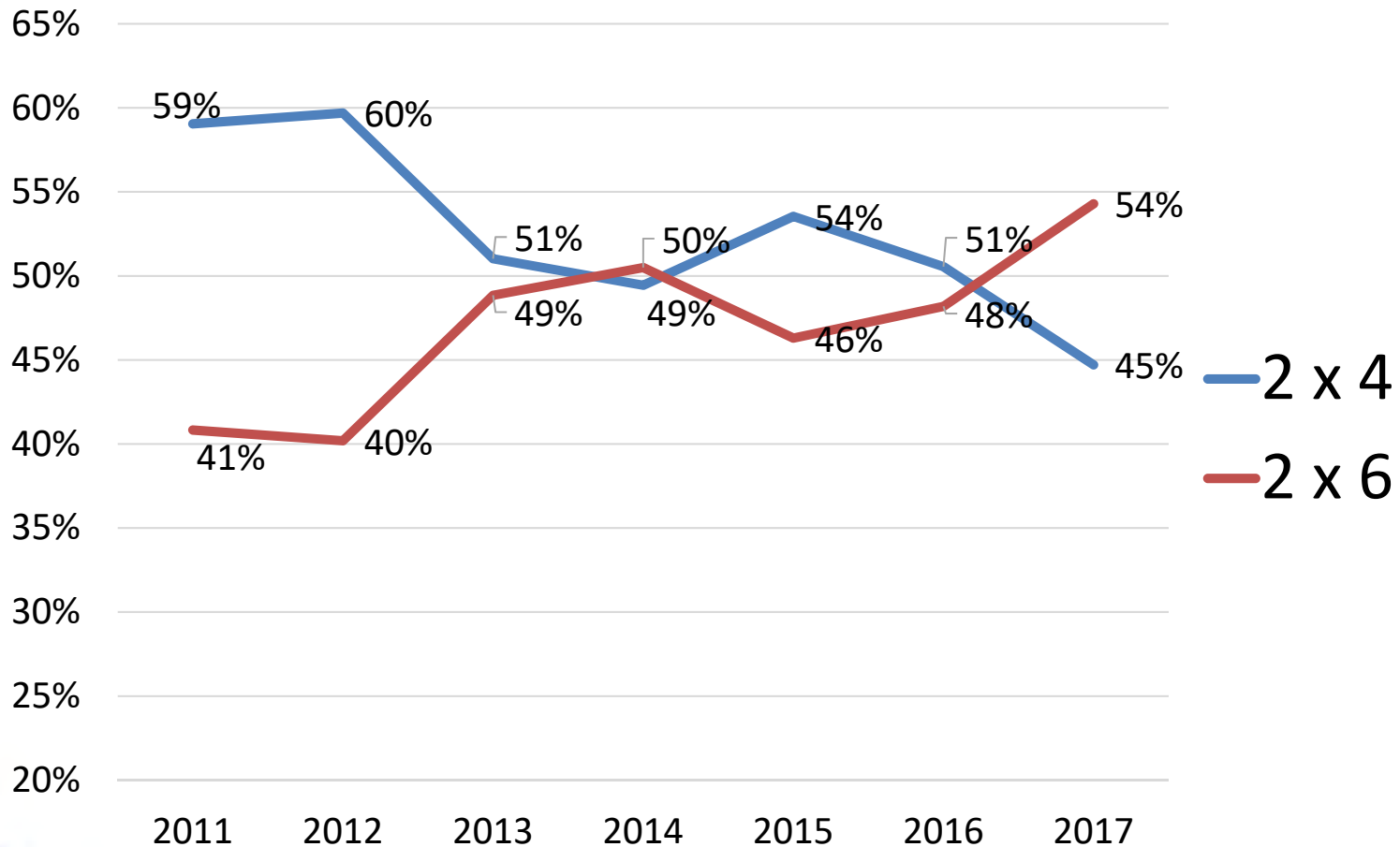
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Source: *Home Innovation Research Labs Survey*

# Exterior Wall Framing in SFD Homes: 2 x 6 vs. 2 x 4 Studs

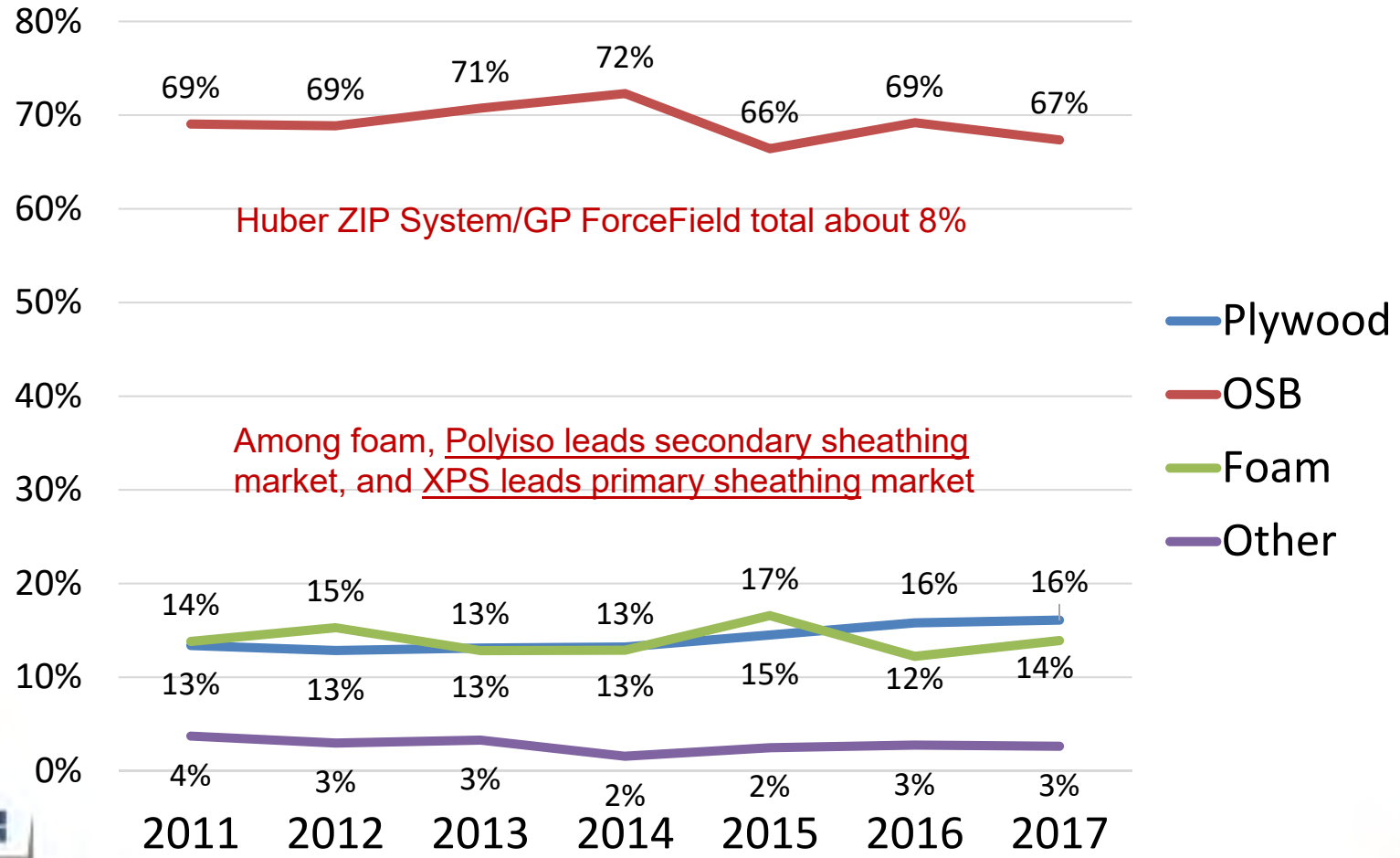


# Exterior Wall Framing In Multifamily Homes: 2 x 6 vs. 2 x 4 Studs

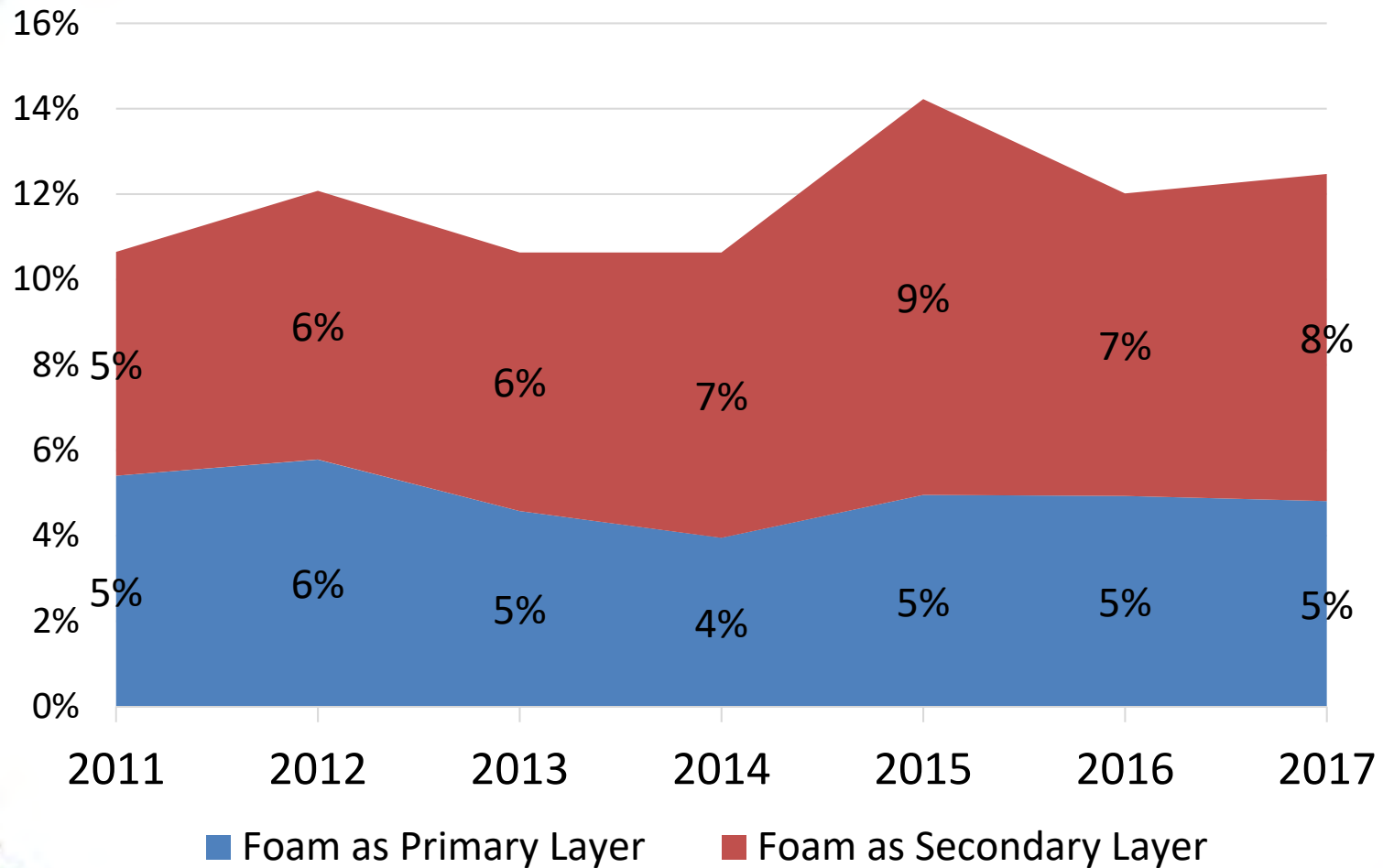


# Exterior Wall Sheathing Materials for New SFD Homes

Includes Primary & Secondary Layers

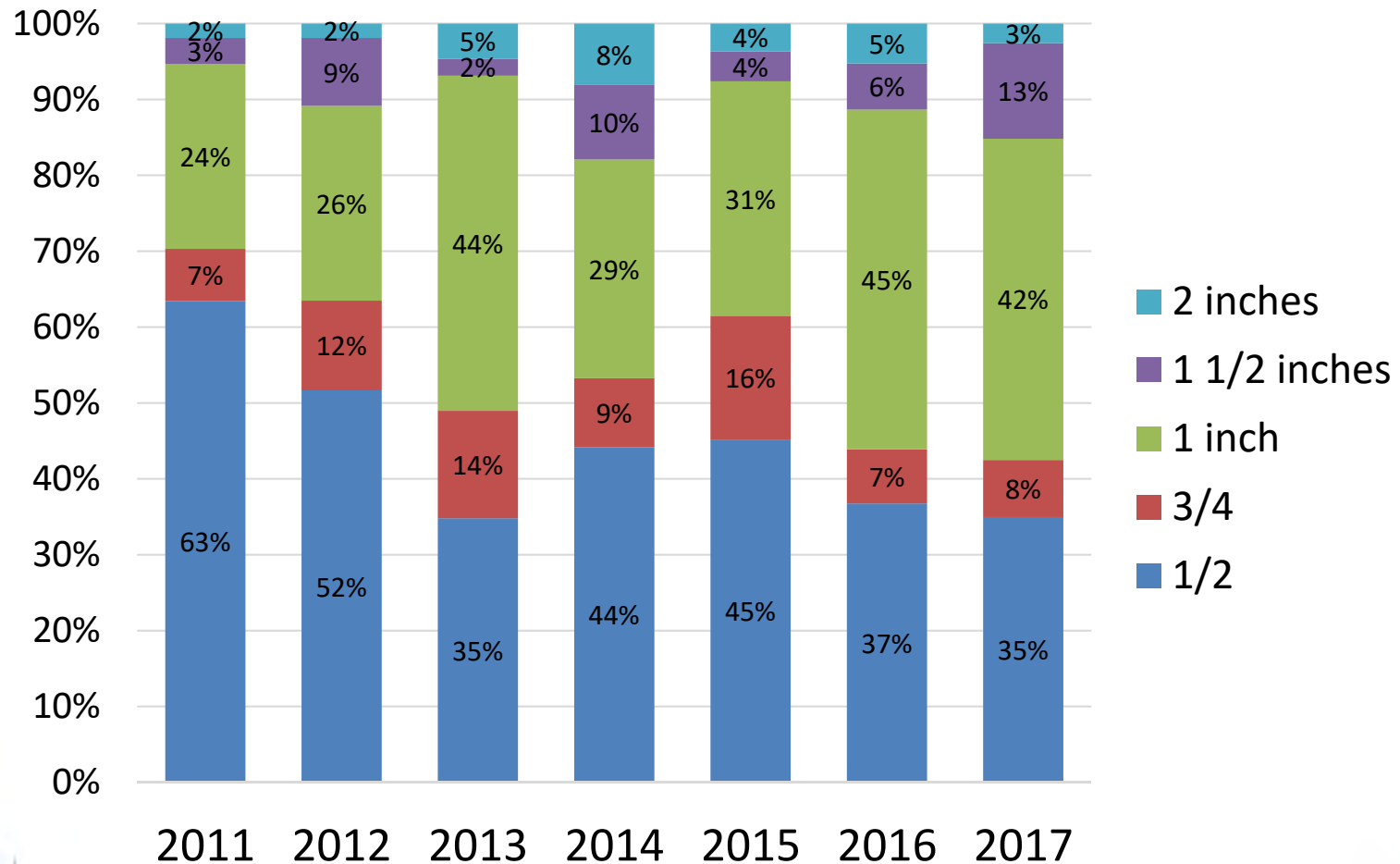


# Shares of Insulating Foam Wall Sheathing in New SFD Homes

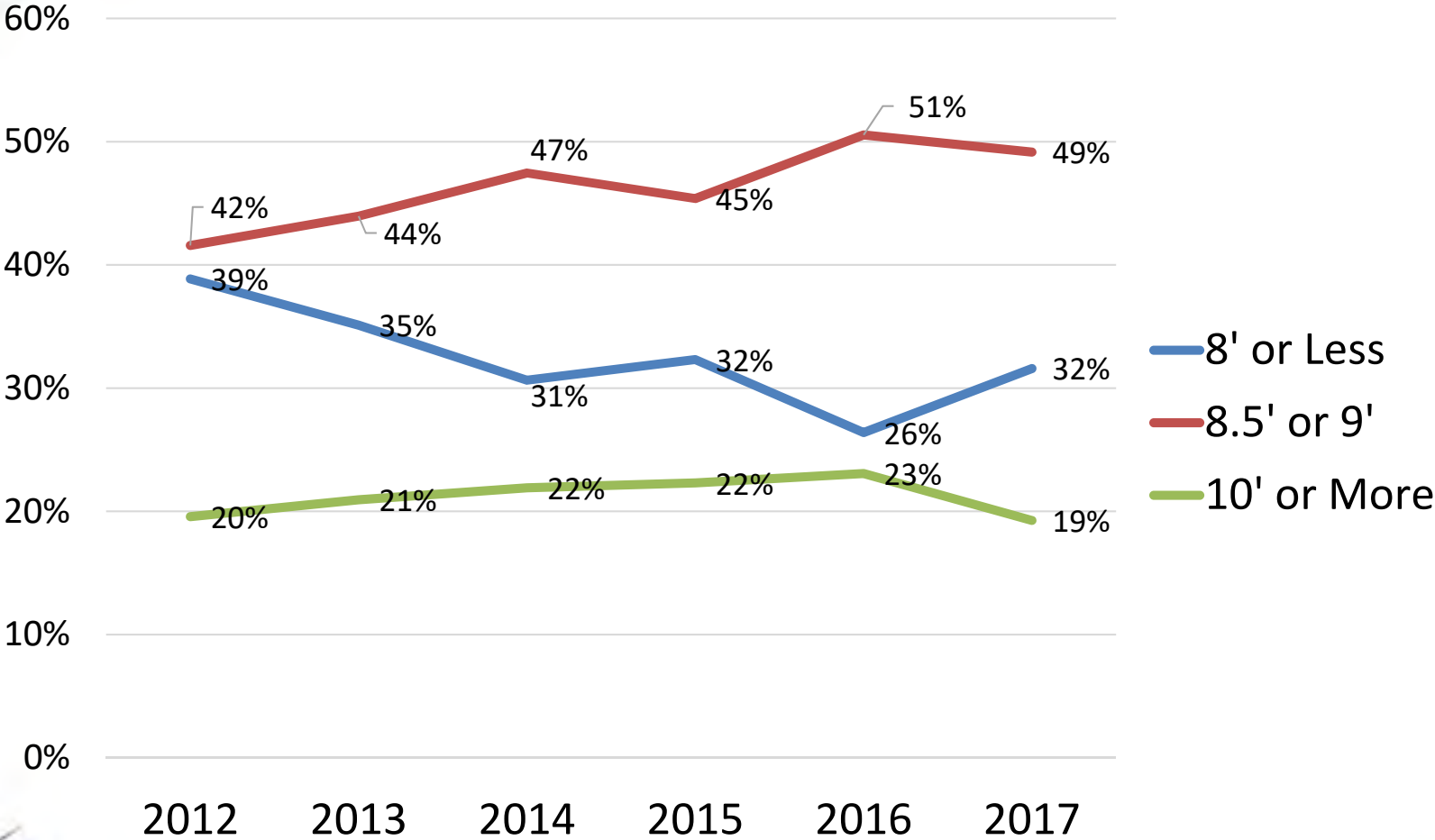




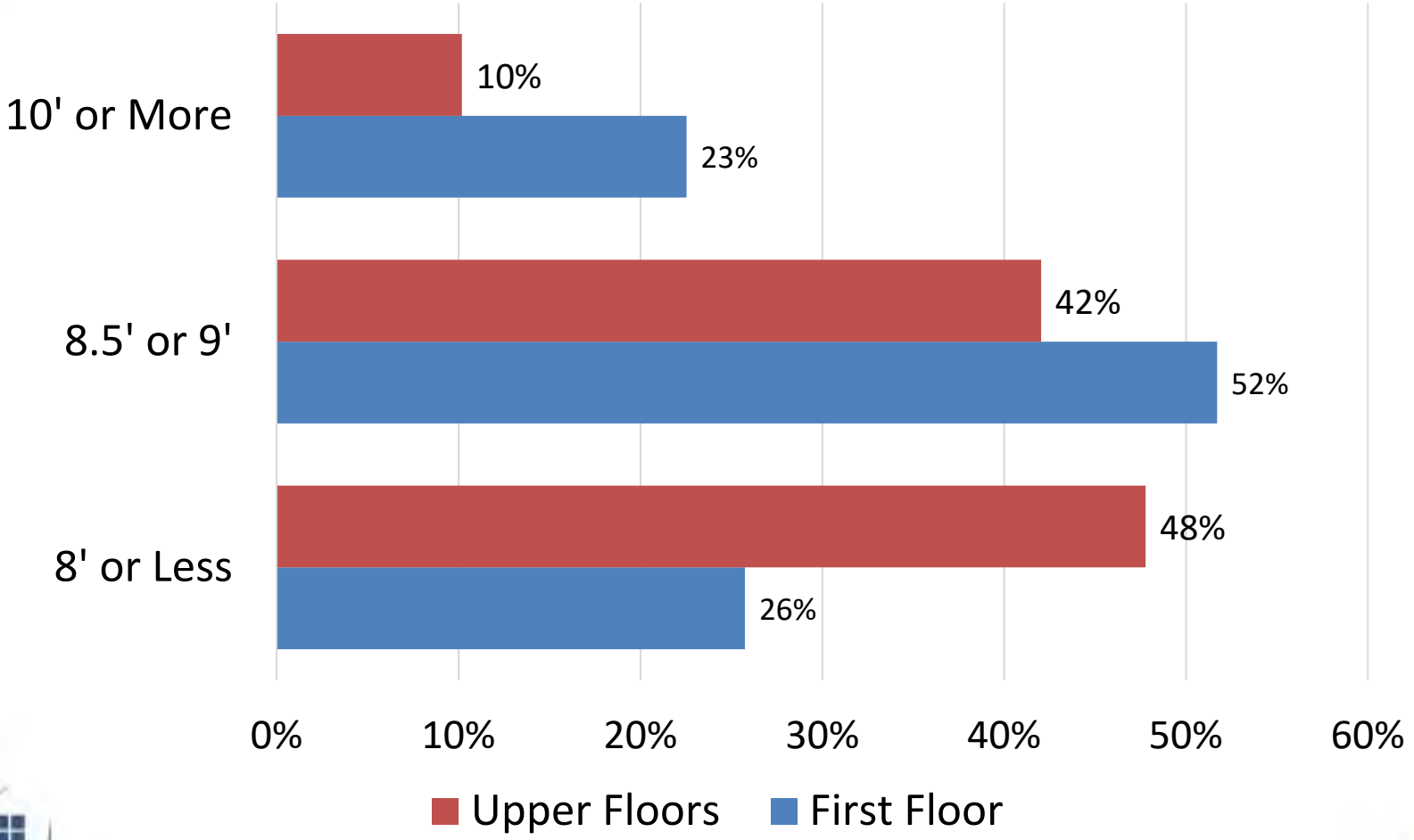
# Exterior Foam Wall Sheathing by Thickness, New SFD Homes



# Trend in Wall Height of New SFD Homes

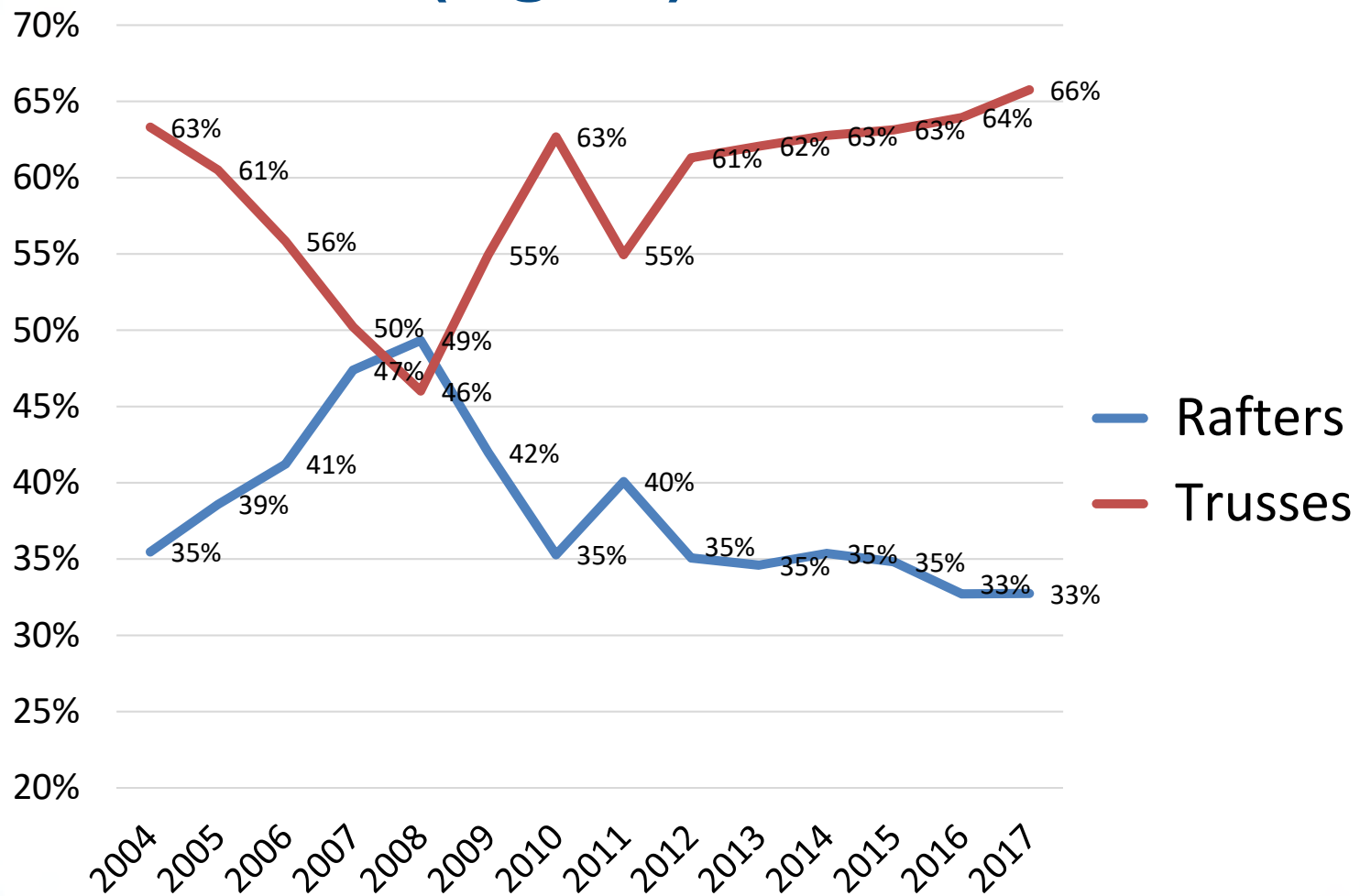


# Ceiling Heights in New SFD Homes, 2017

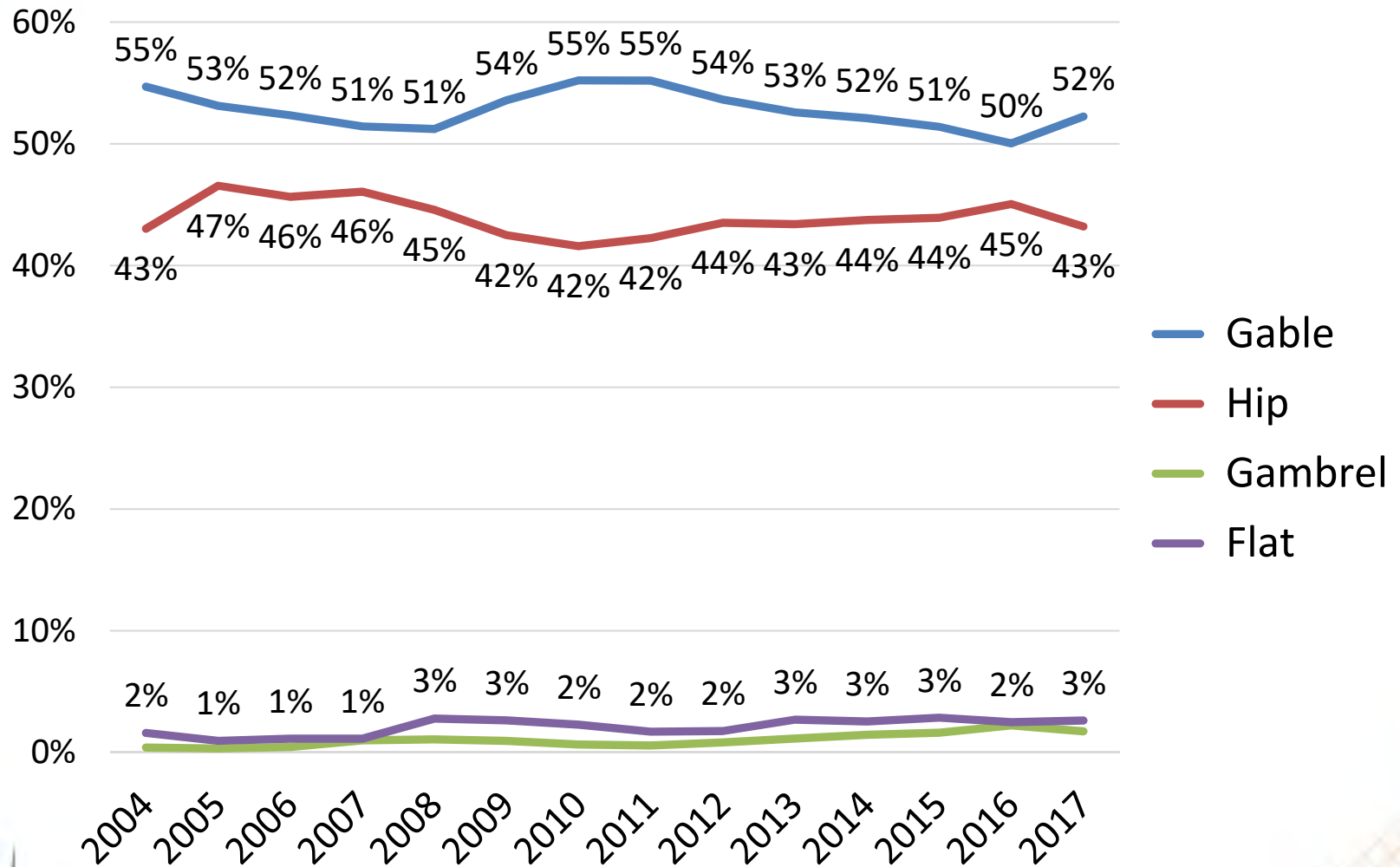


Source: Annual Builder Practices Reports

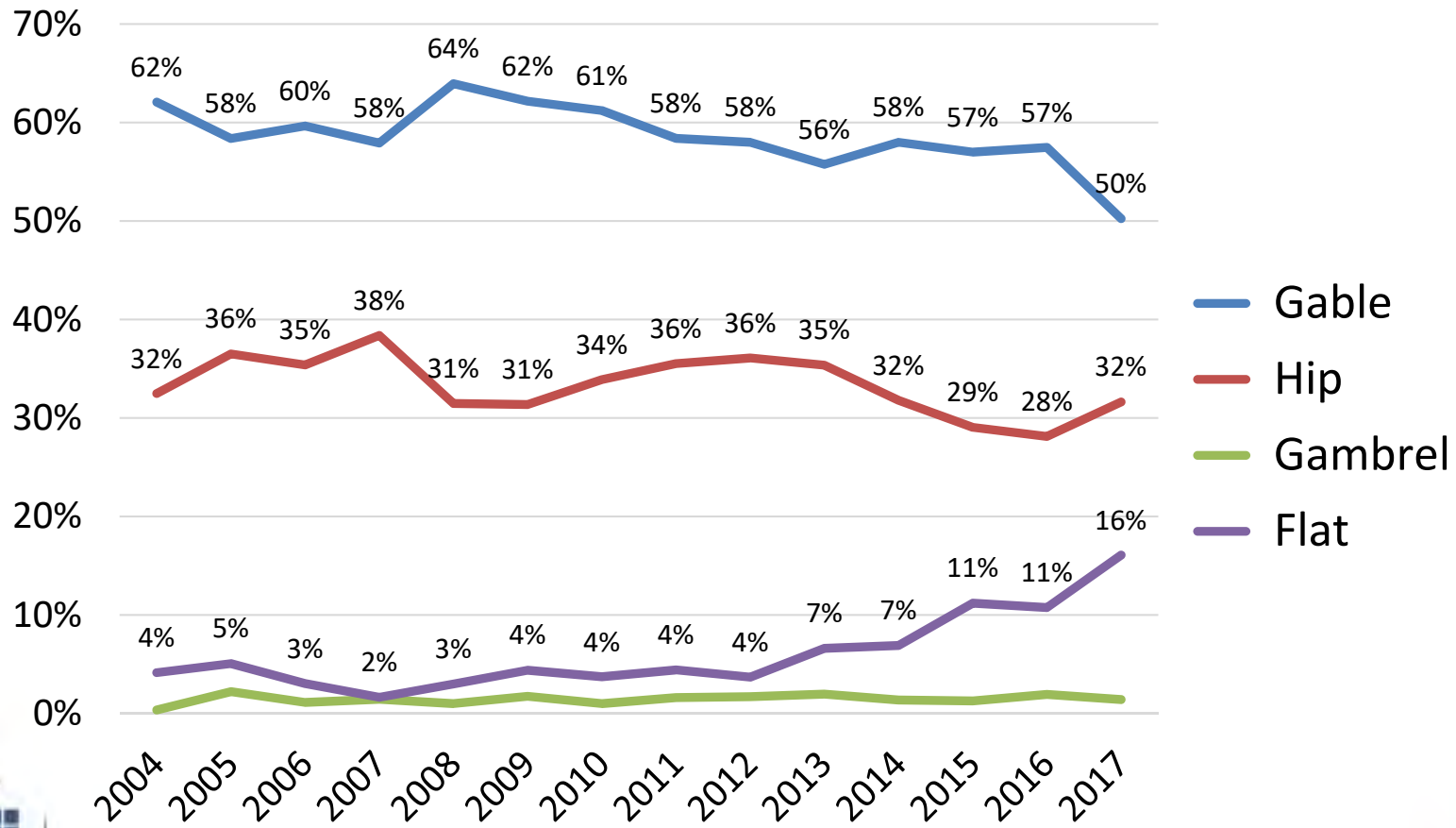
# Wood Trusses Trending Upward (Again) in New SFD Homes



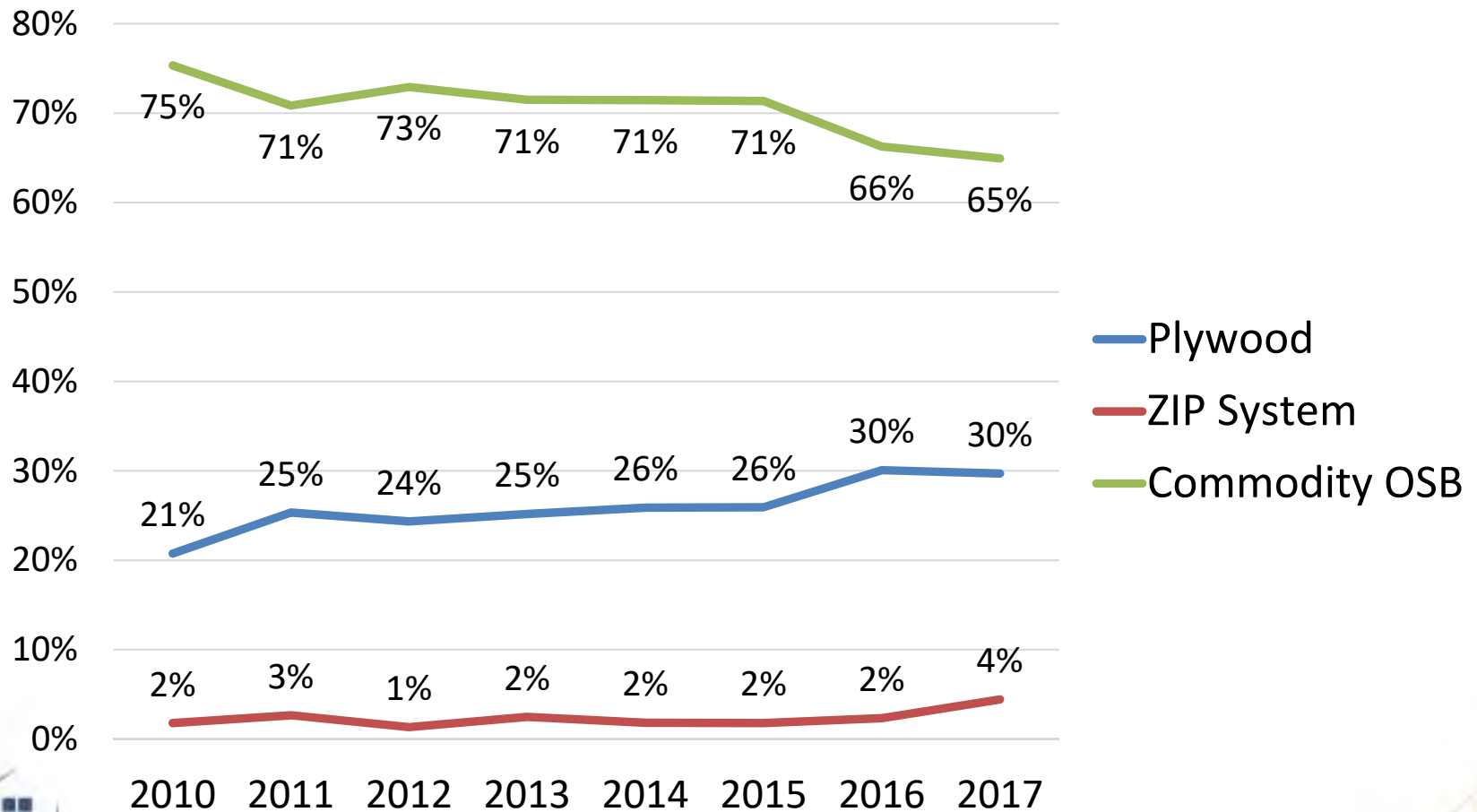
# Trend in Roof Shapes in New SFD Homes (based on sq.ft. roof footprint)



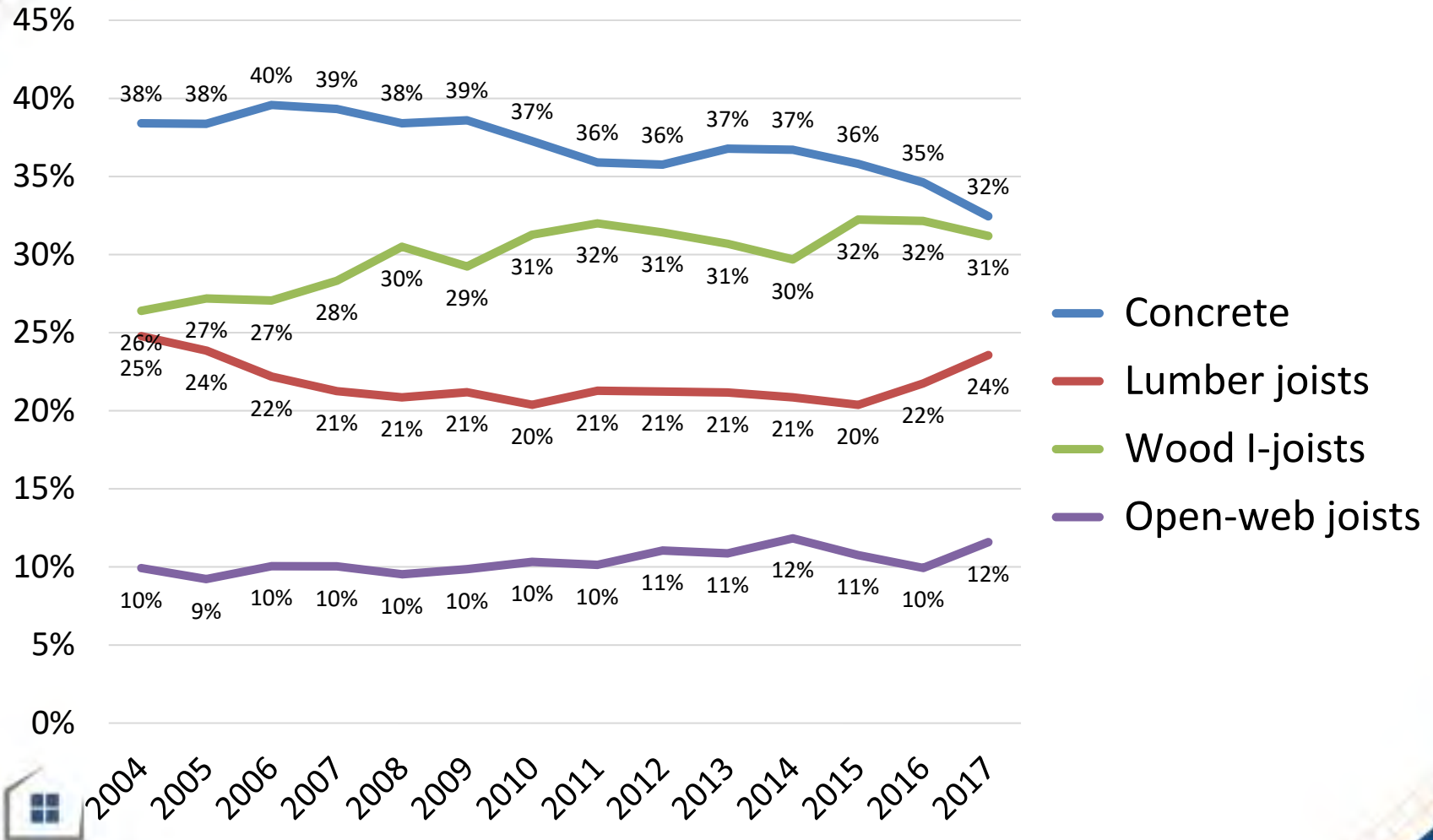
# Trend in Roof Shapes in New Multifamily Homes (based on sq.ft. roof footprint)



# Roof Sheathing on New SFD Homes

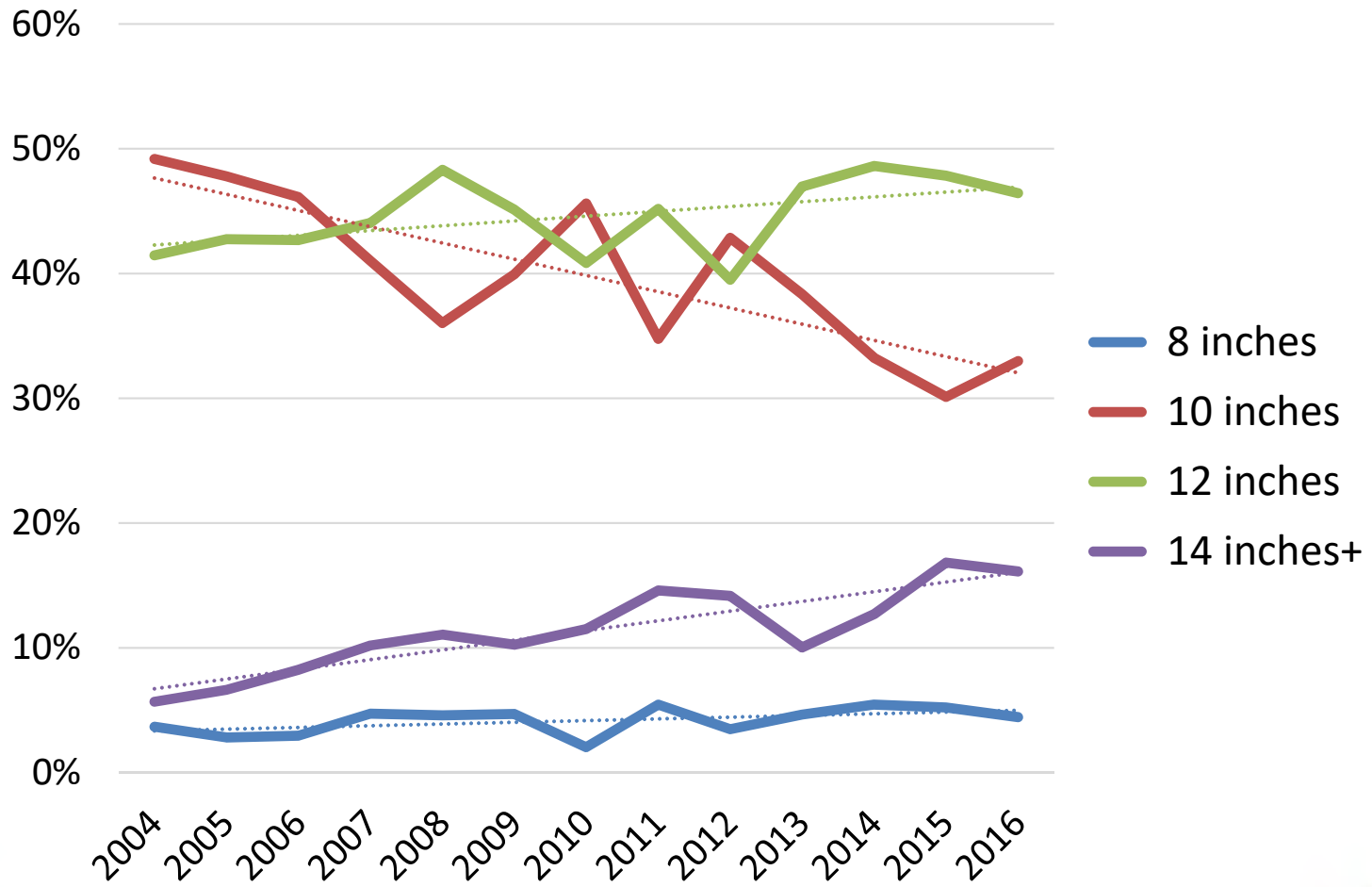


# Shares of Structural Floors in New SFD Homes (based on sq.ft. of floor space)

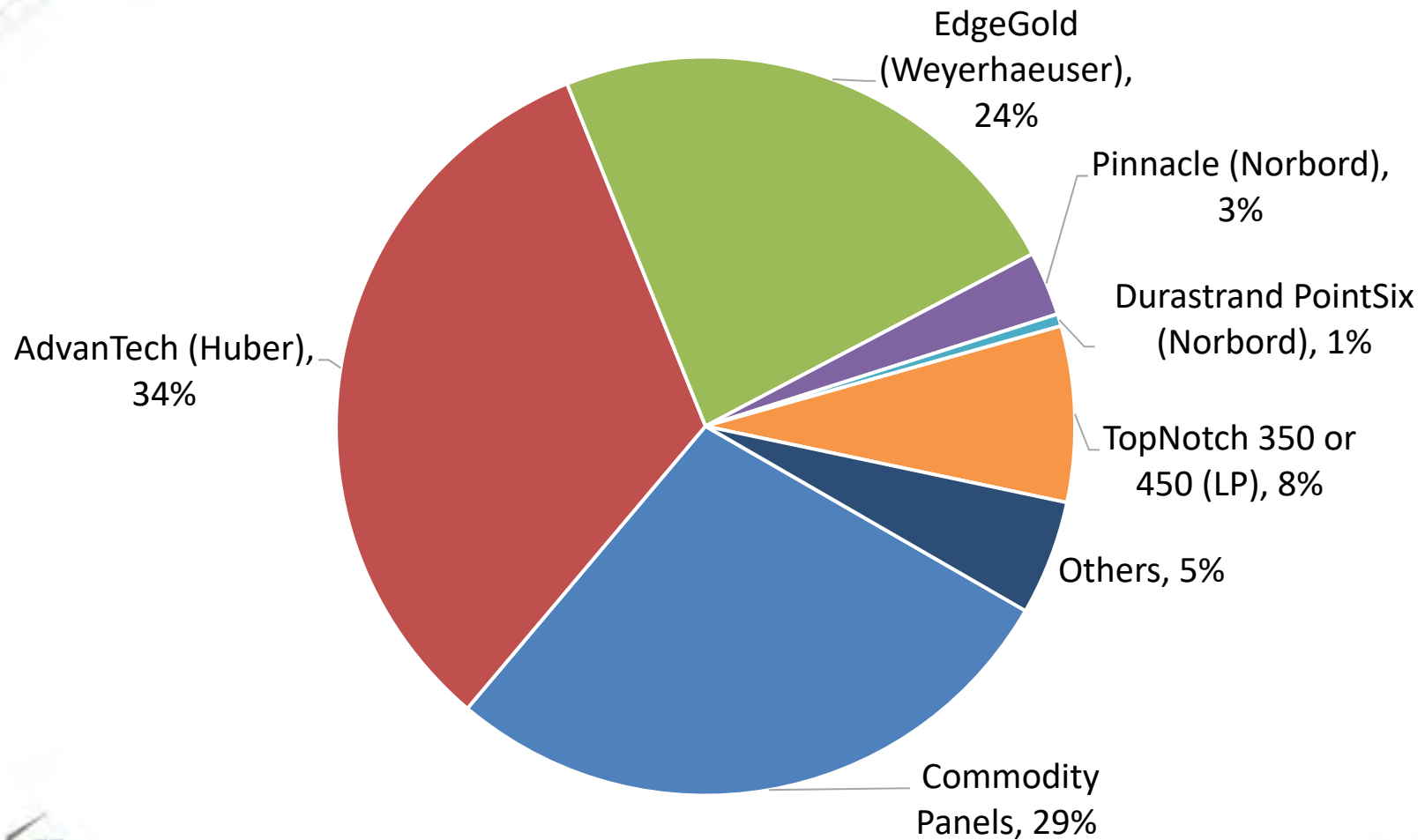




# Floor Joist Depth in New SFD Homes

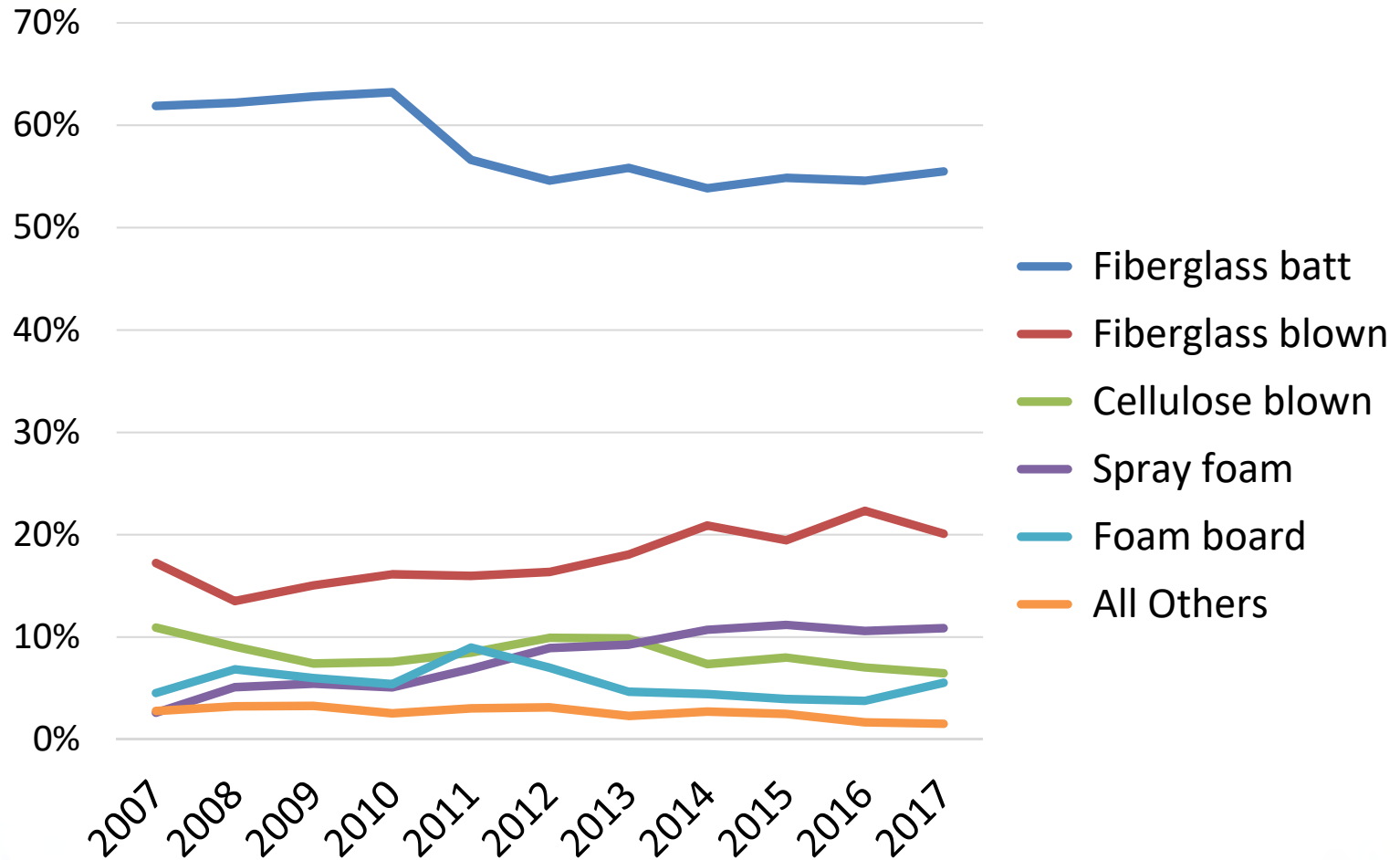


# Premium & Commodity OSB Subflooring in New SFD Homes, 2017

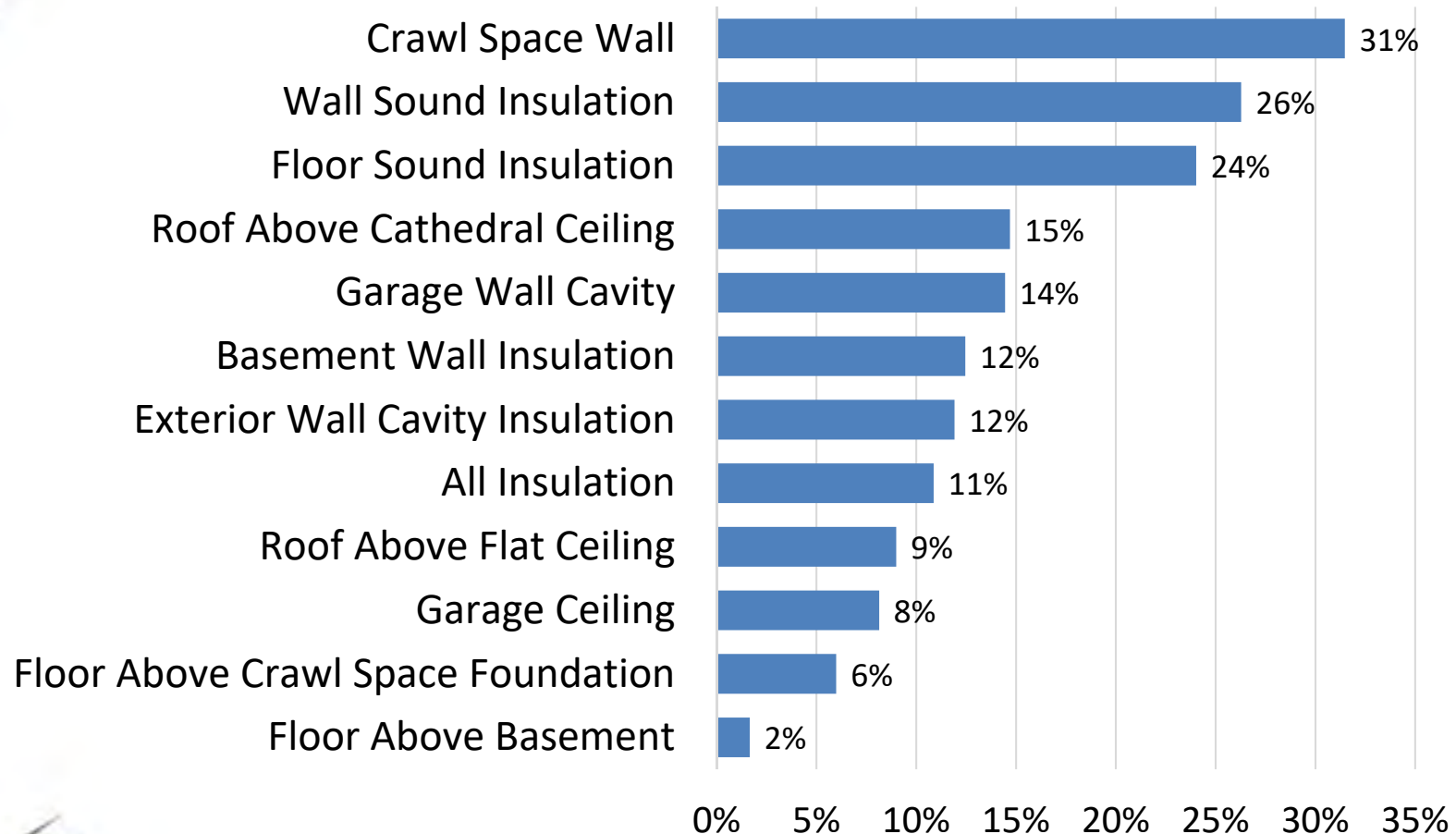


# Insulation Usage in New SFD Homes

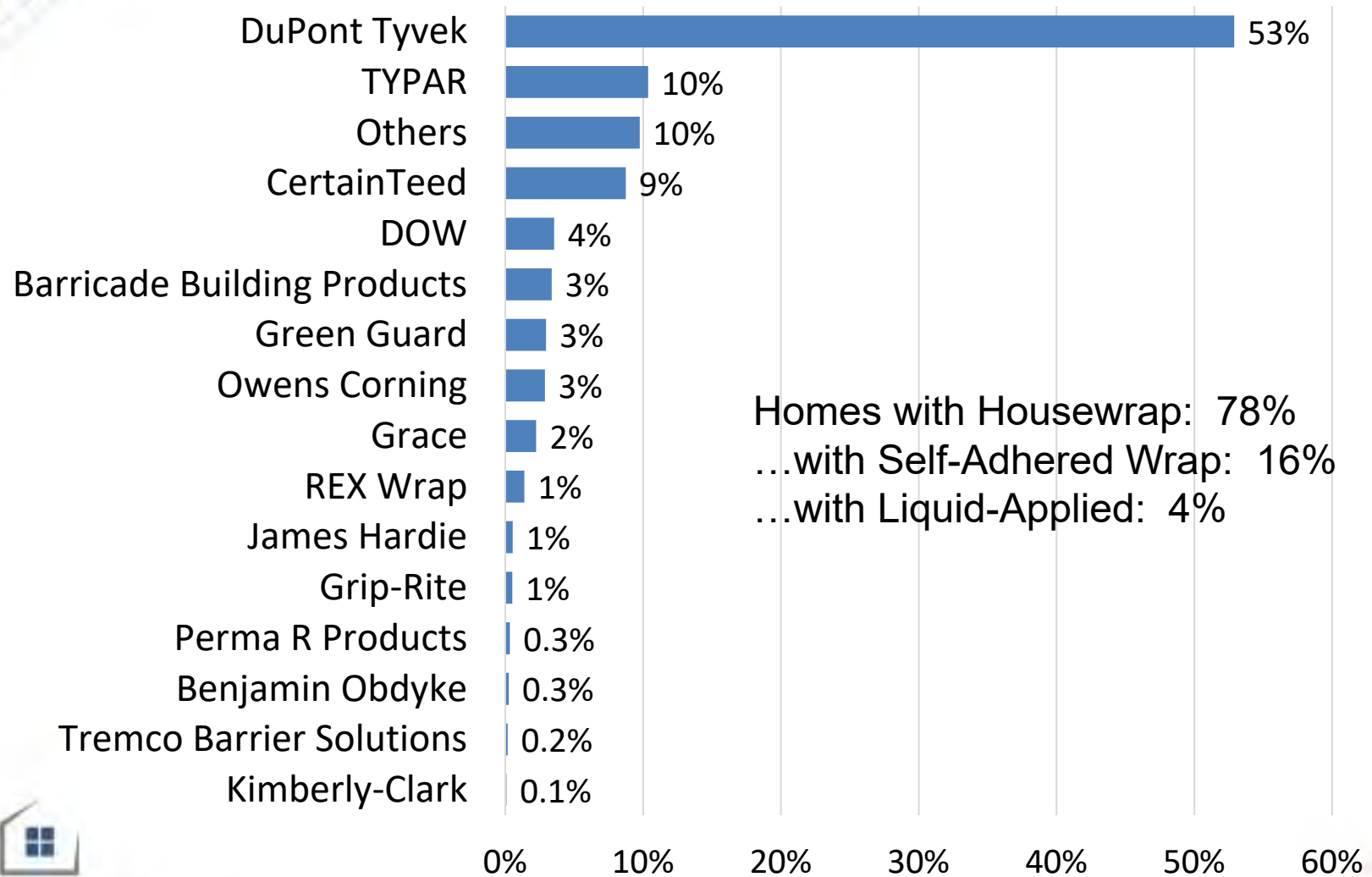
(based on sq.ft. area insulated of walls, floors and roof)



# Spray Foam Insulation Market Share by Assembly in New SFD Homes, 2017

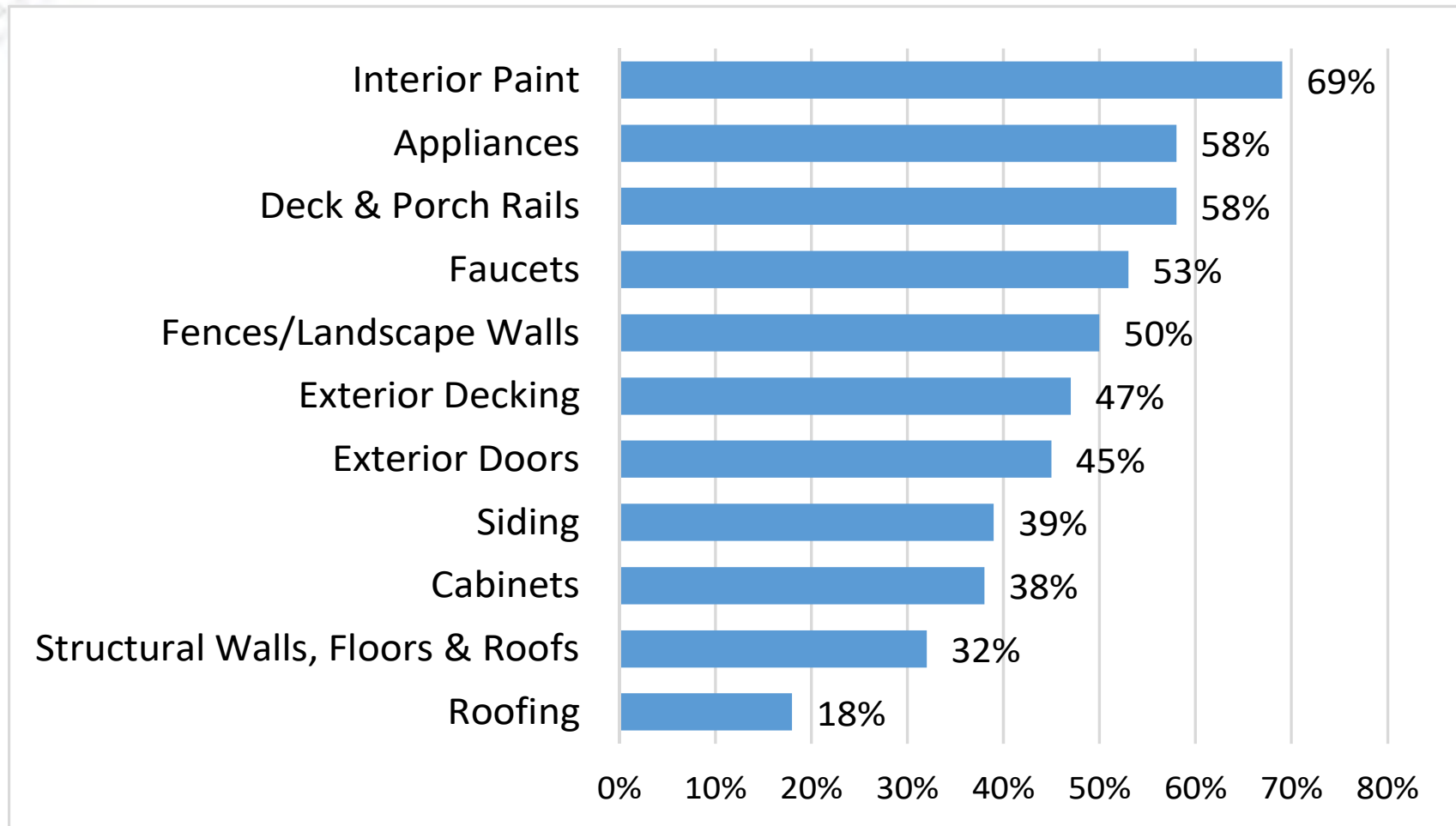


# Shares of Housewrap, in New SFD Homes, 2017



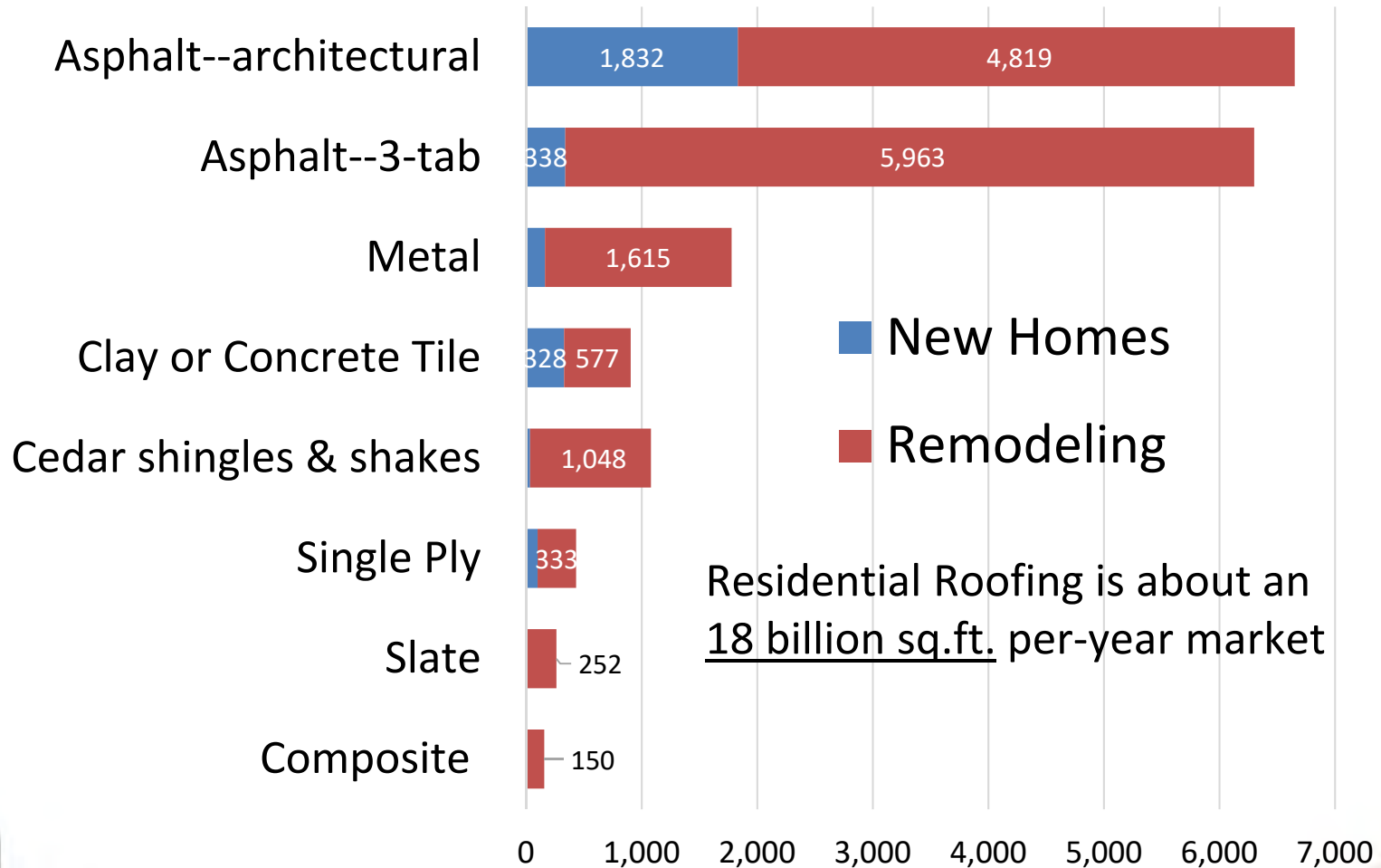
# Is the Remodeling Market Opportunity Primarily for Pros or DIYers?

## DIY Share of Remodeling Materials Purchases

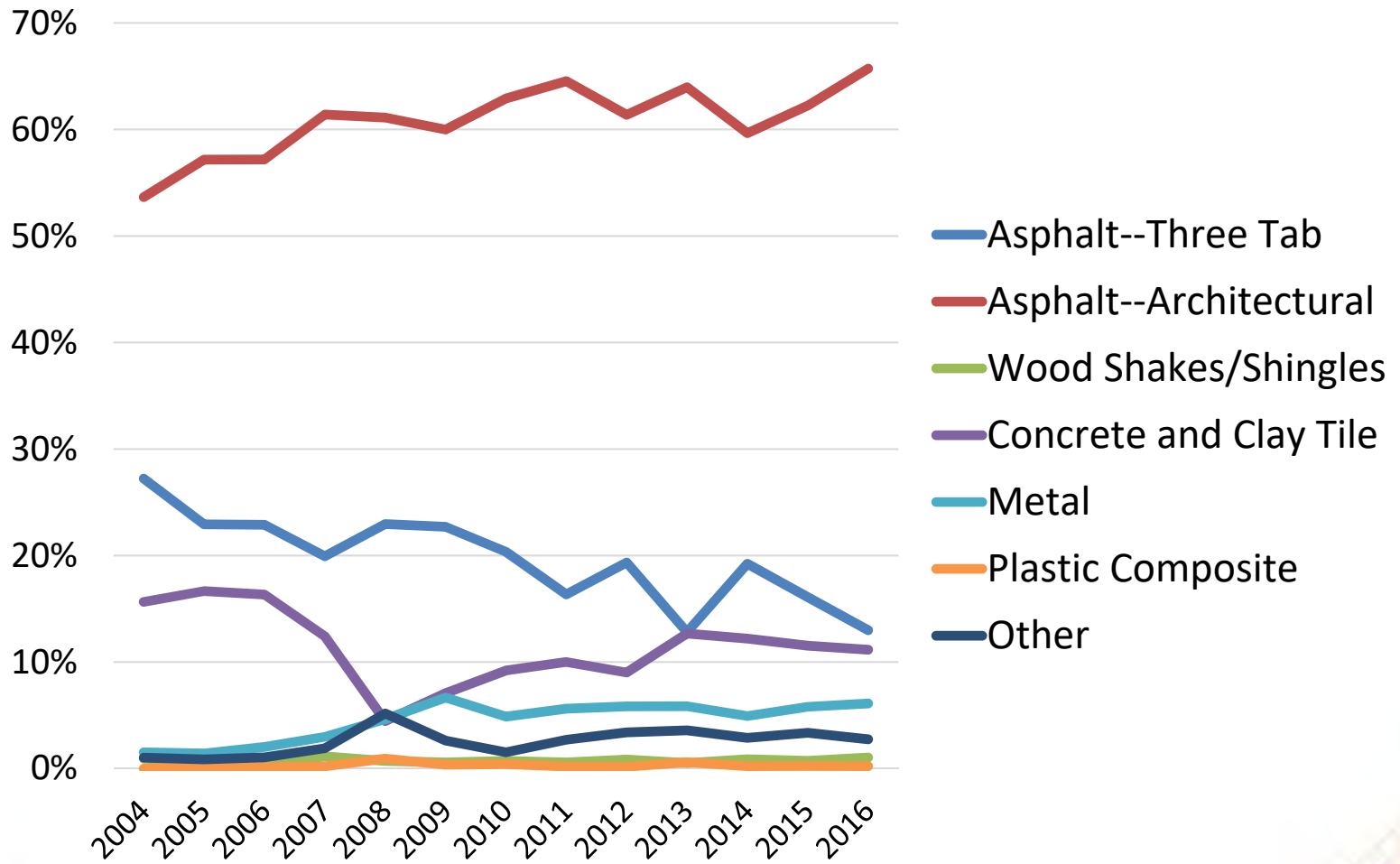


# Residential Roofing: New Homes and Home Replacements/Additions, 2017

(millions of sf)

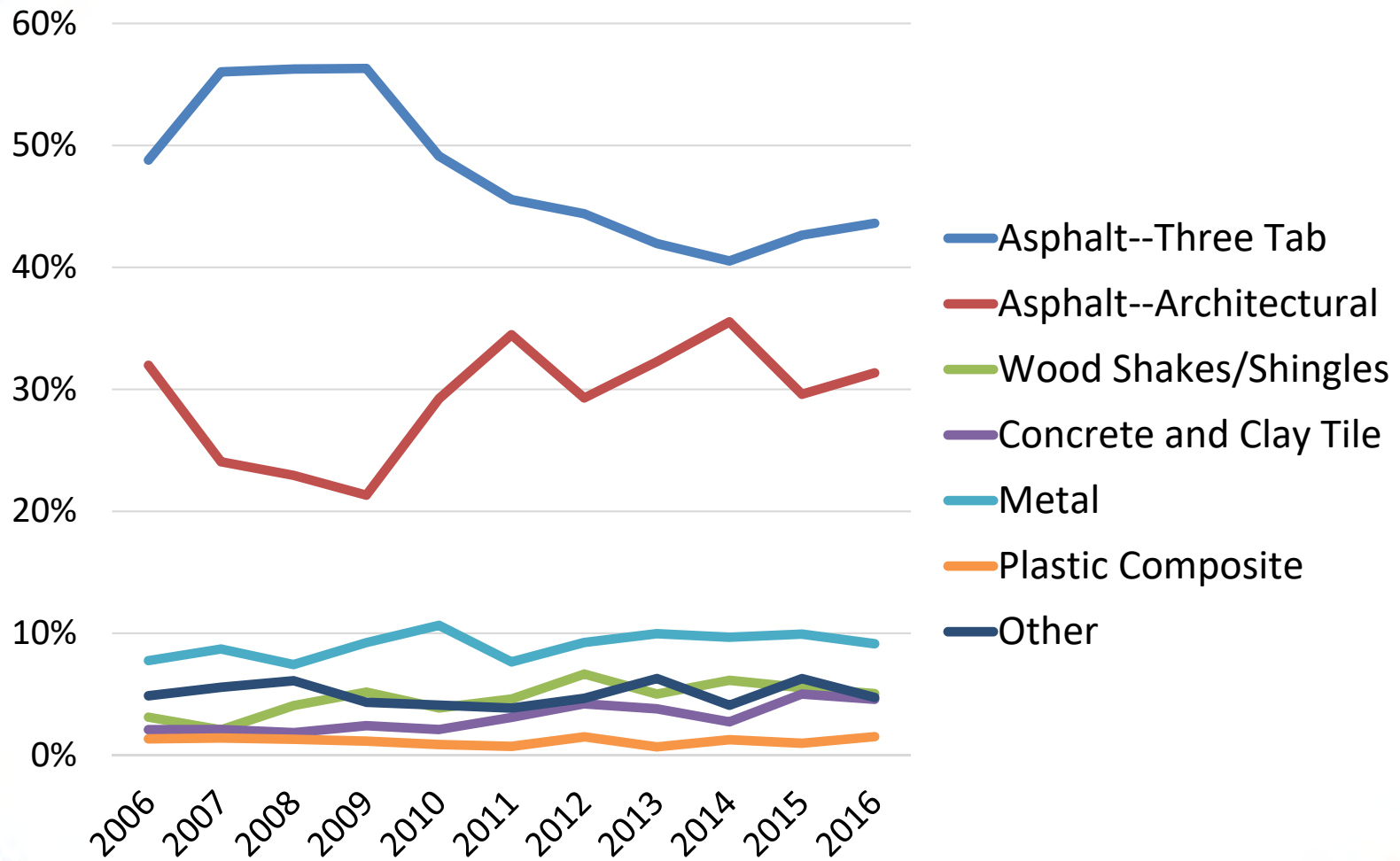


# Roofing Materials Installed in New SFD Homes

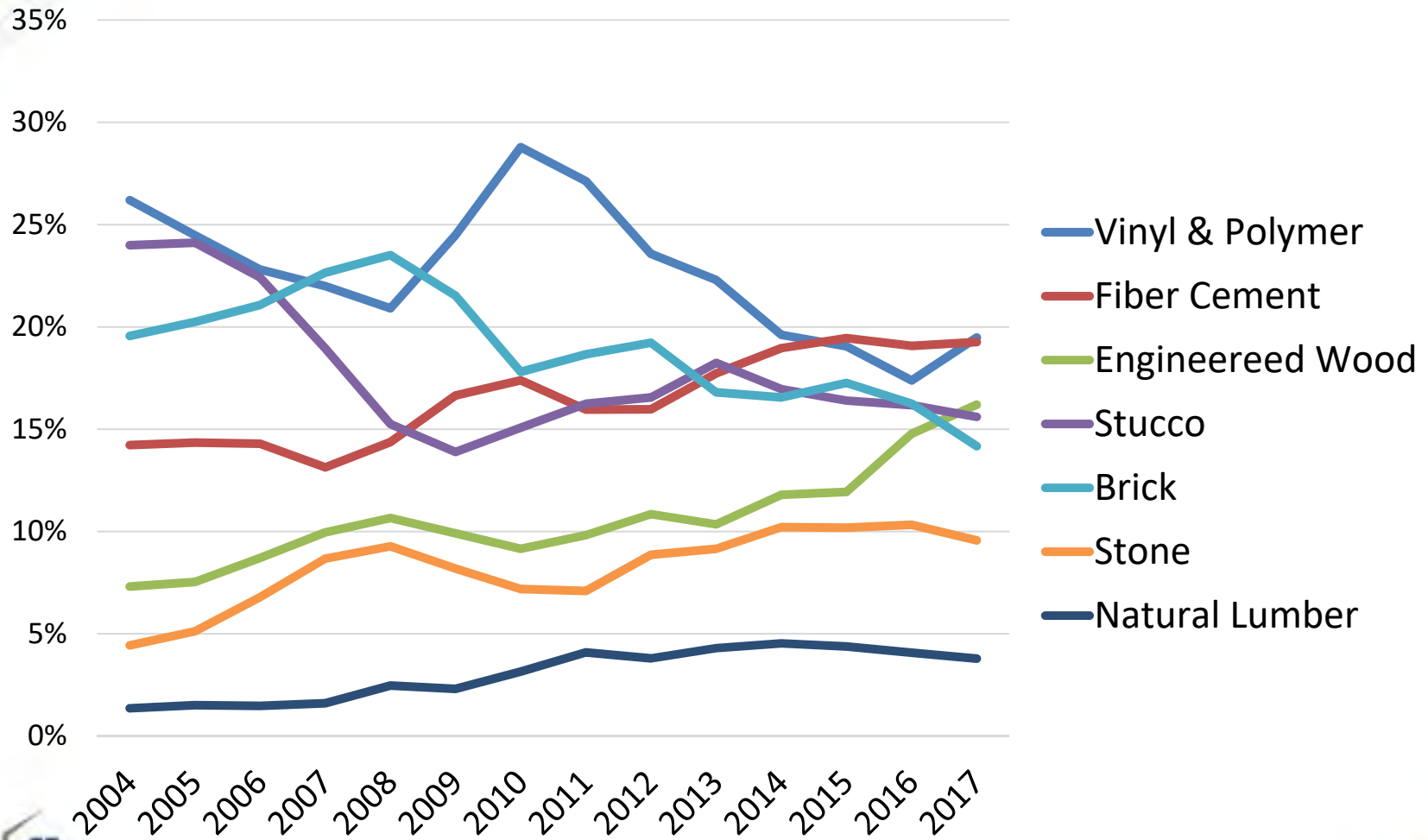




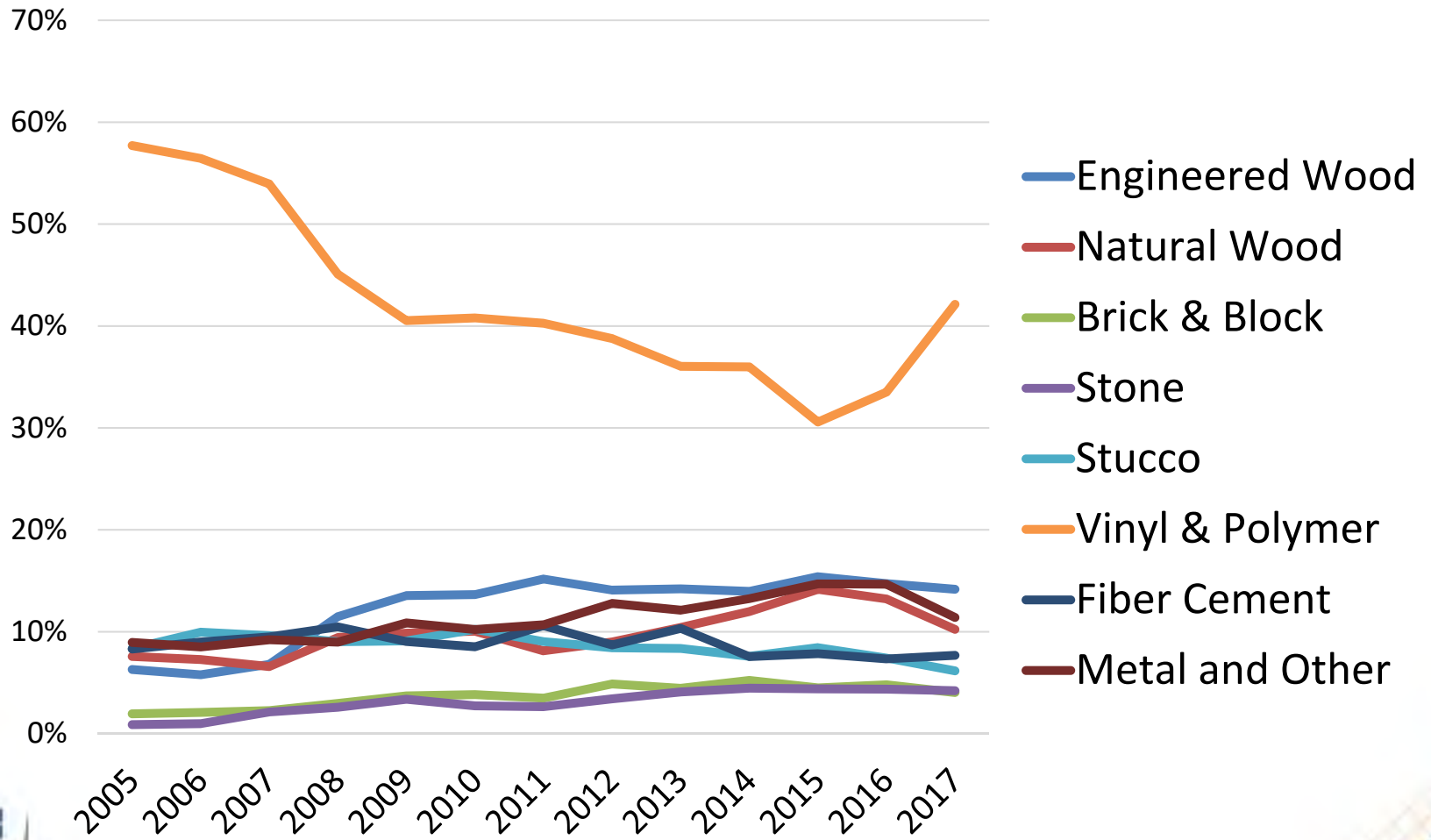
# Roofing Material Installed in Home Replacements



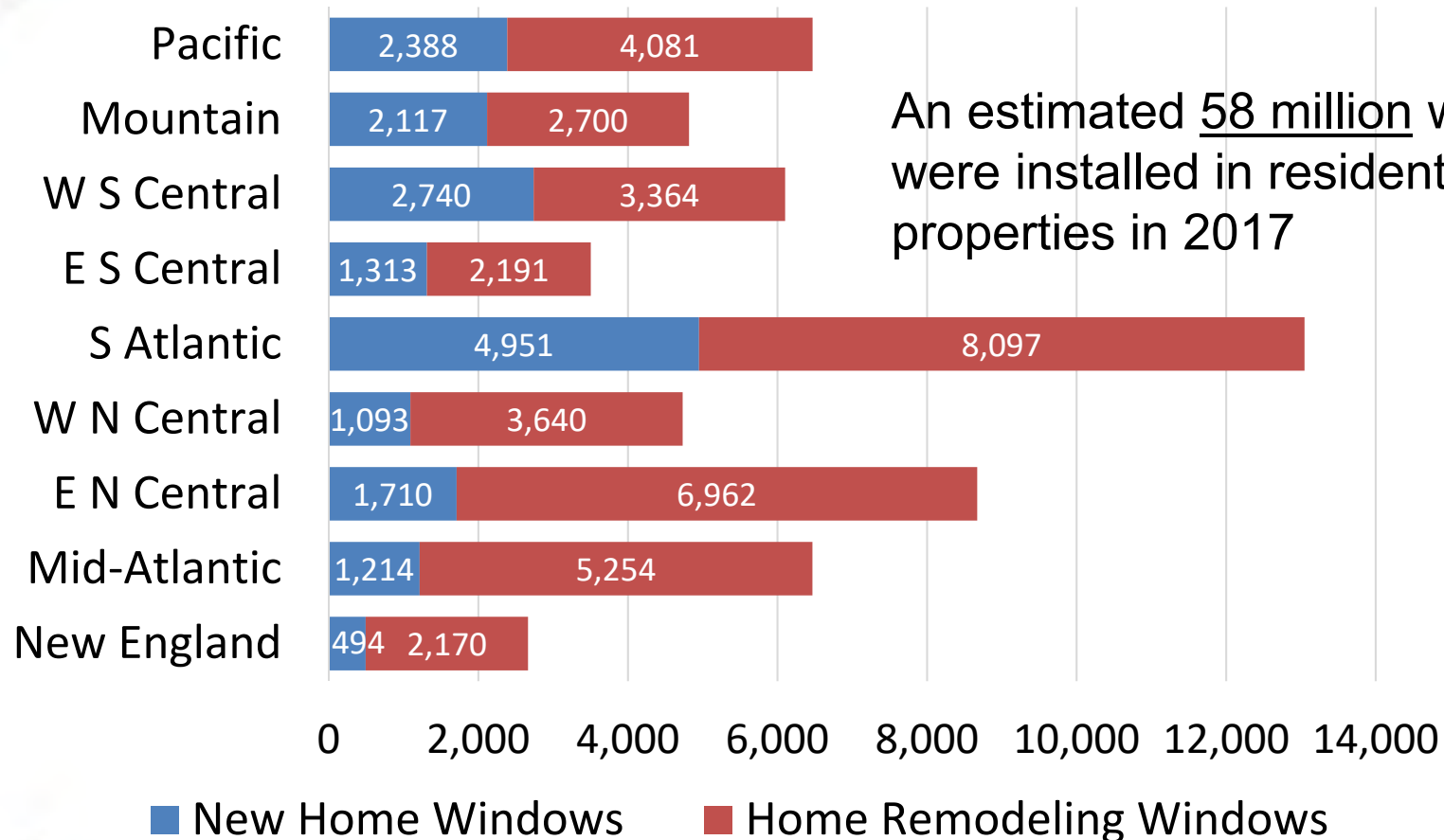
# Siding in New SFD Homes



# Siding in Home Remodeling

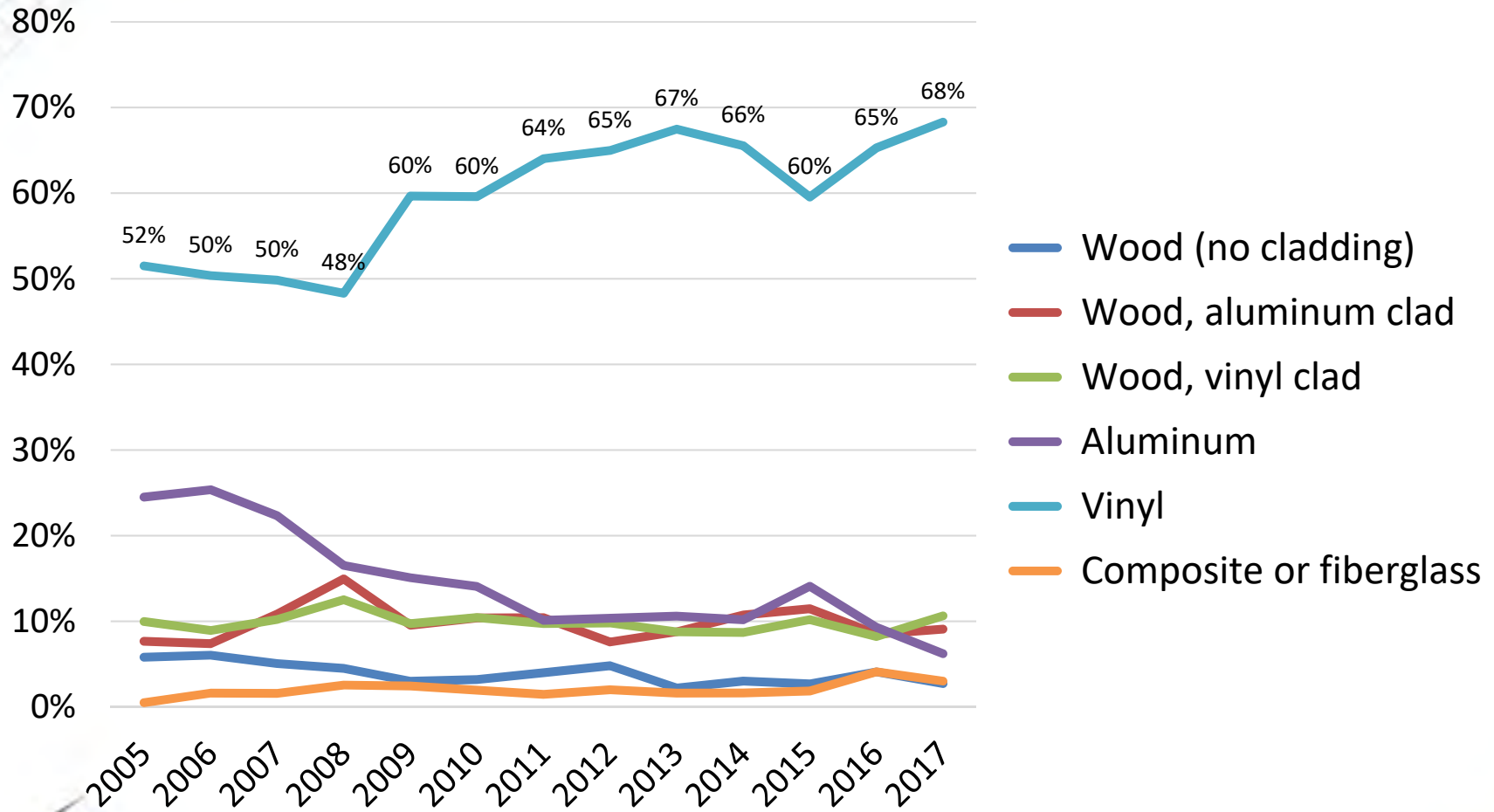


# New Home and Remodeling Window Installations, 2017 (1000's)

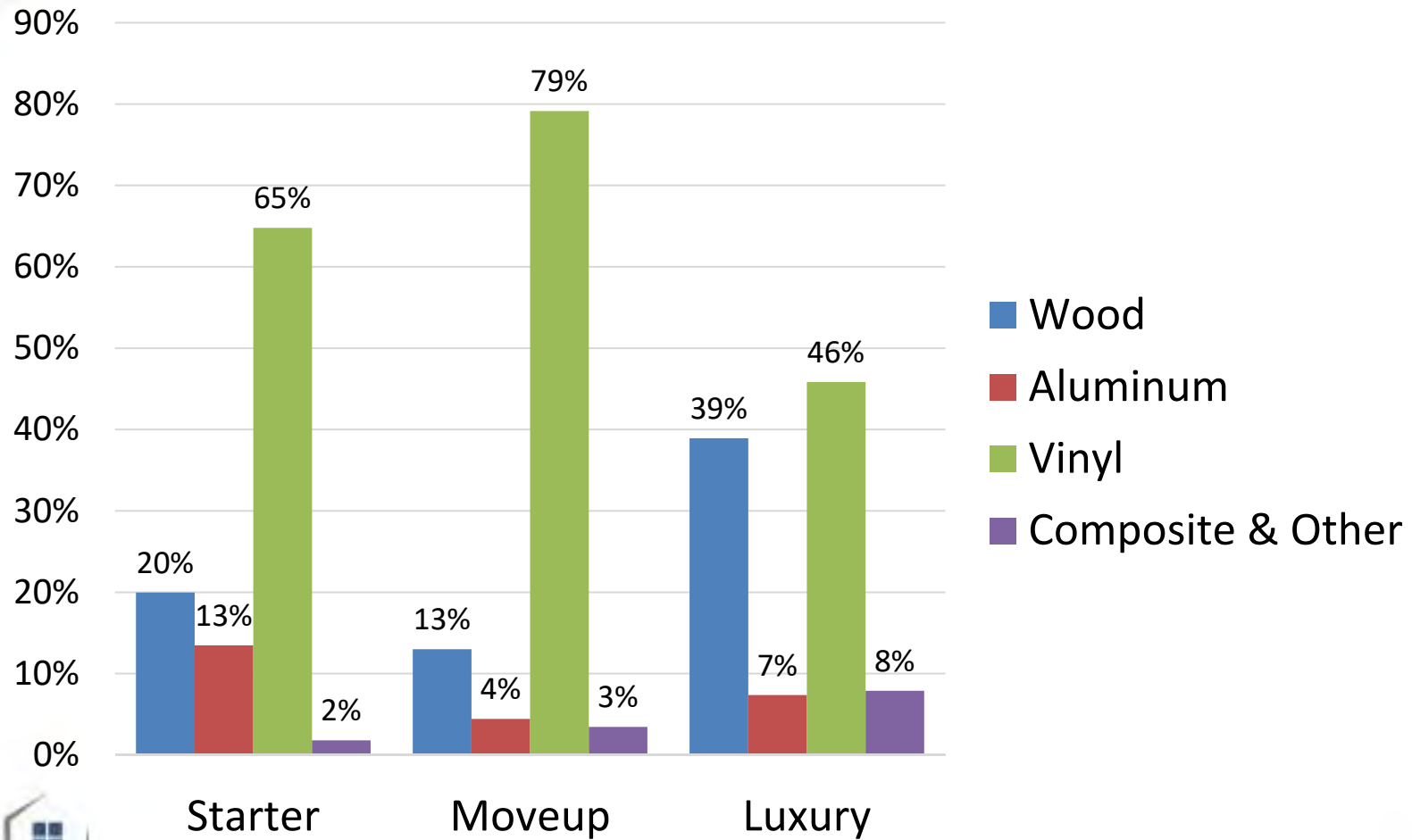


An estimated 58 million windows were installed in residential properties in 2017

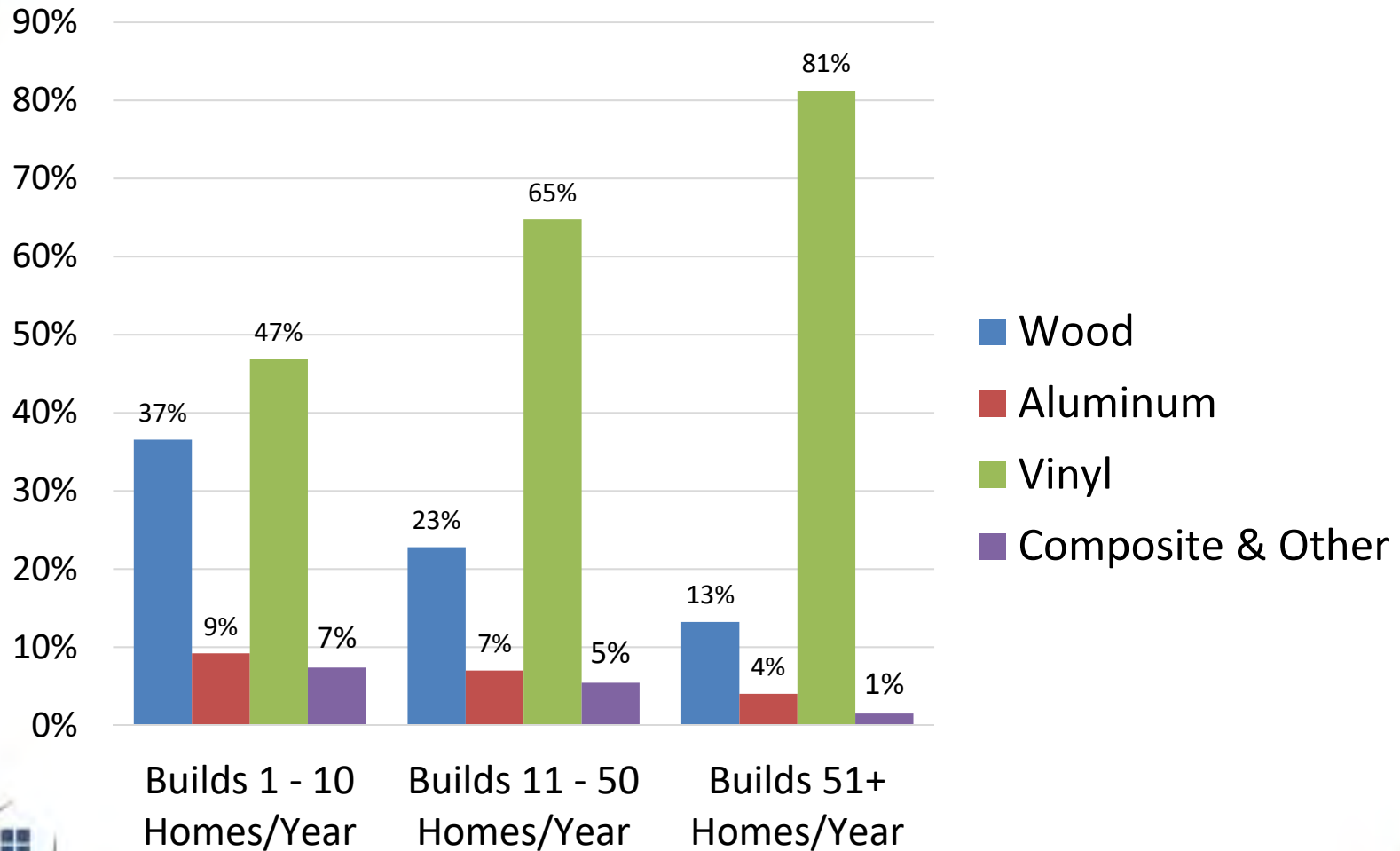
# Trends in New SFD Home Window Frame Materials



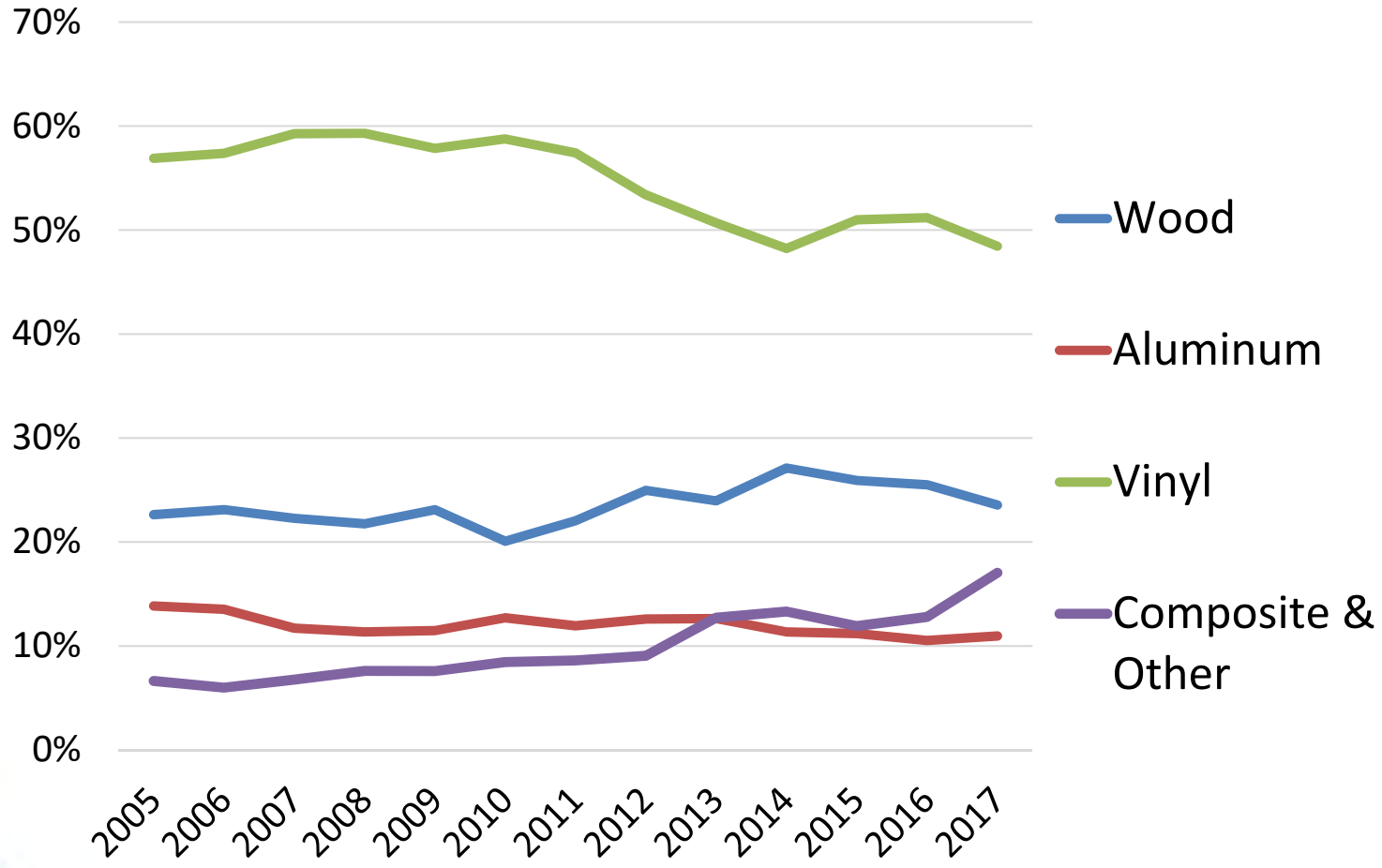
# Window Purchases by New Home Price-Point



# New Home Window Purchases by Size of Home Builder

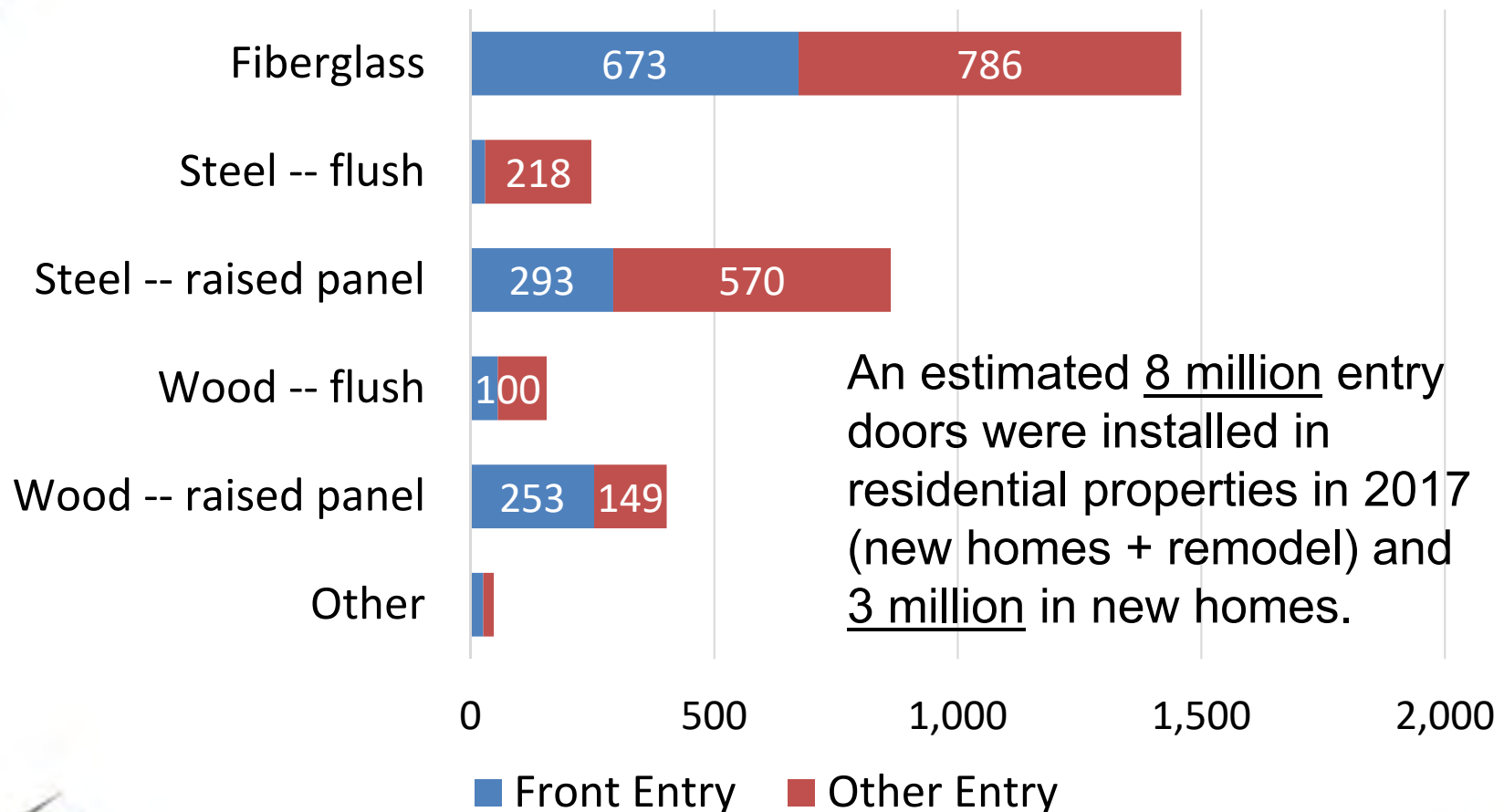


# Trends in Home Remodeling Window Frame Materials

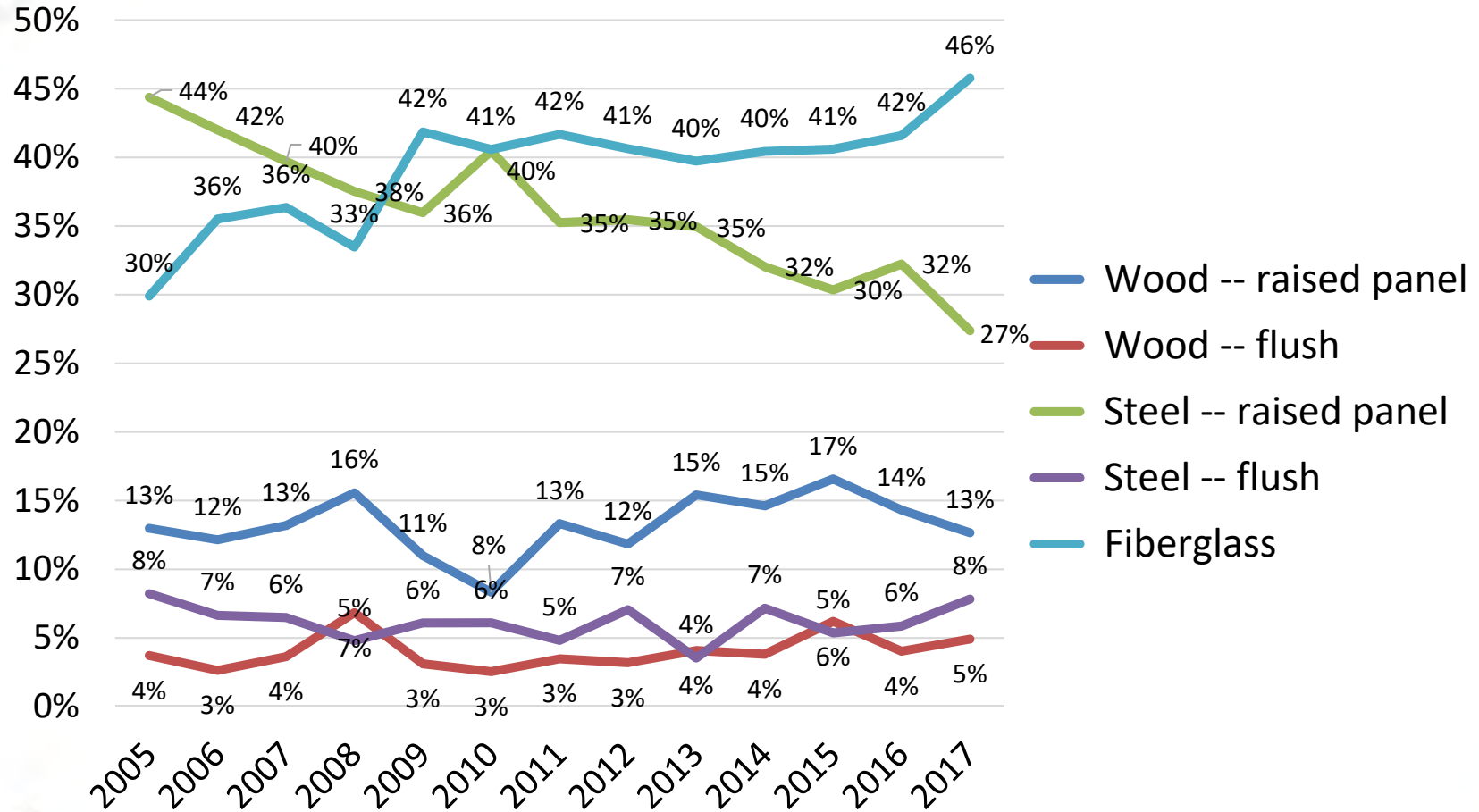




# Exterior Door Purchases in New Homes, 2017 (thousands)



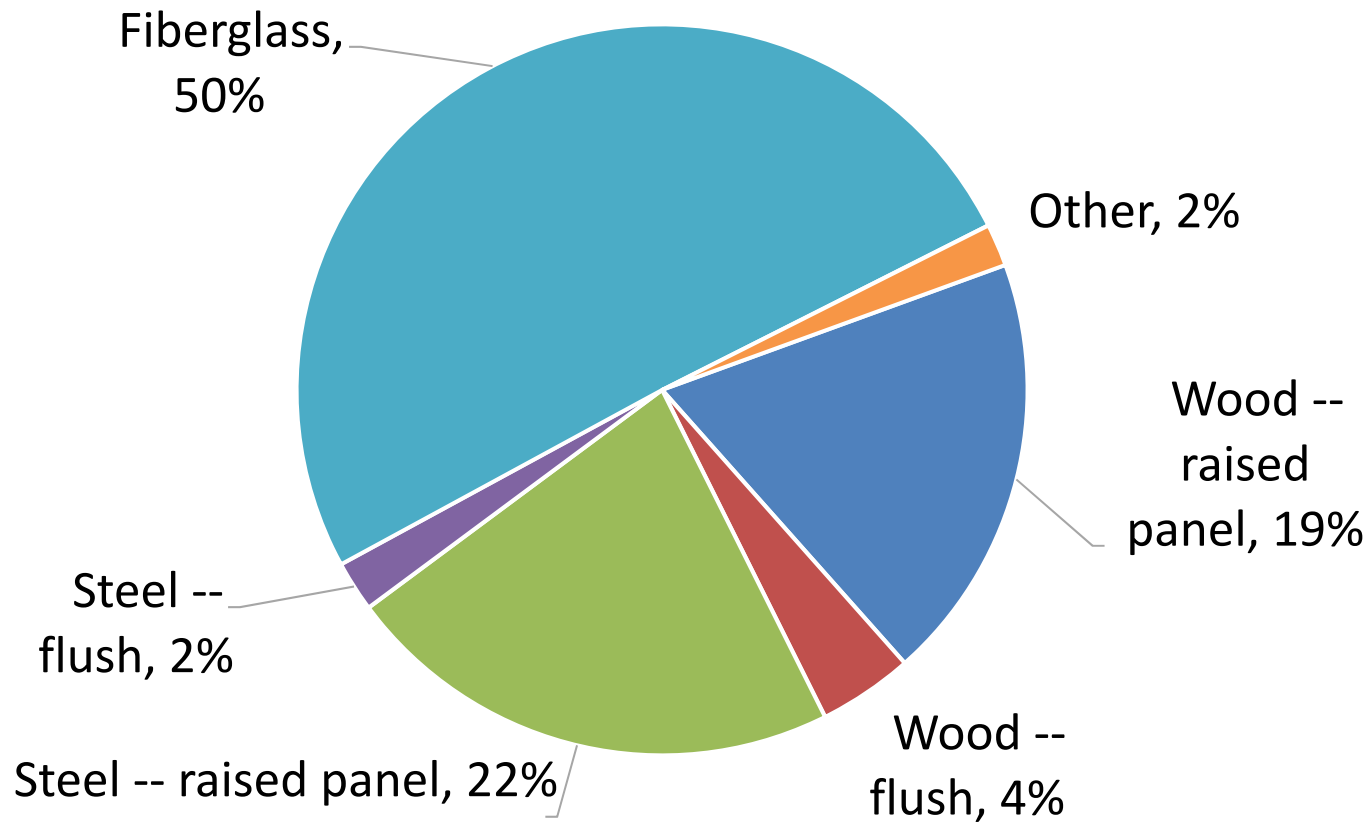
# Exterior Entry Door Purchase Trends, New Homes



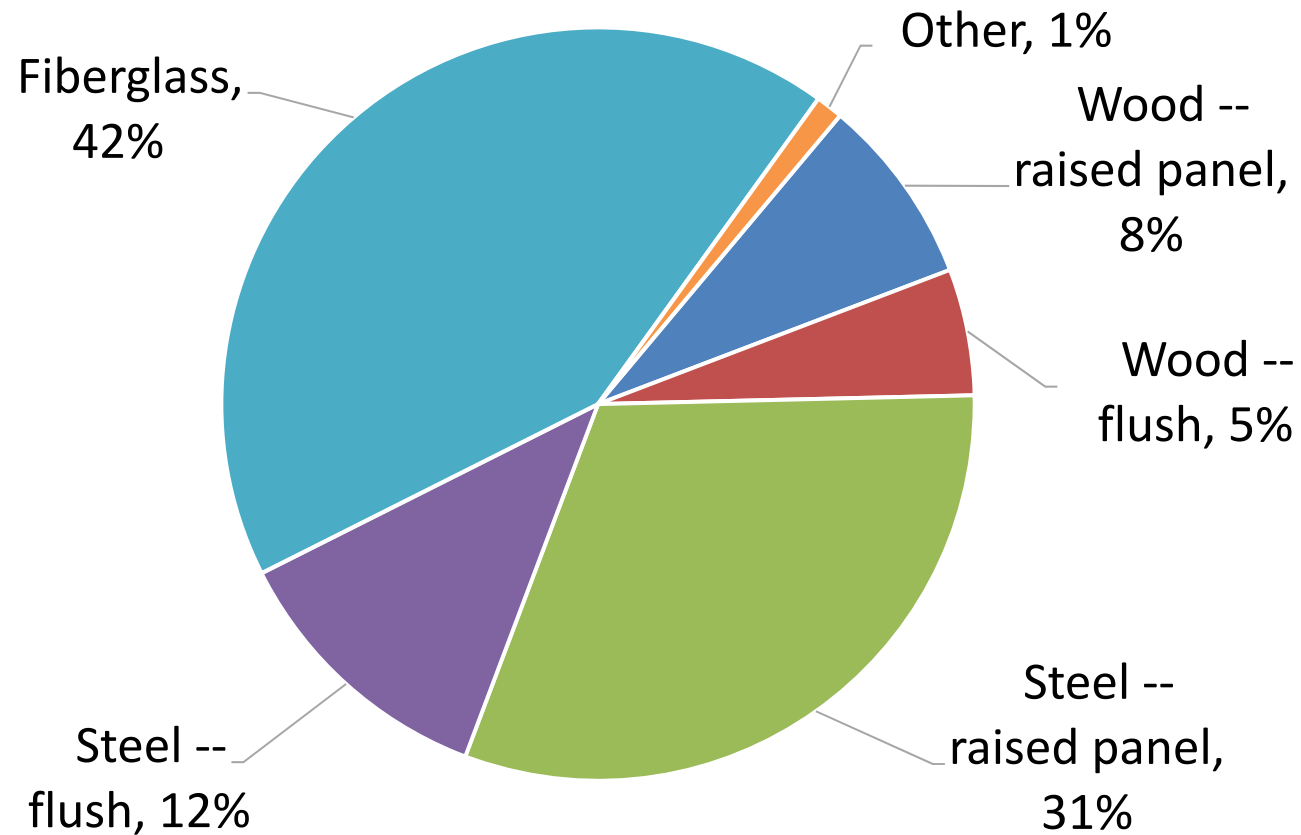
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Source: Annual Builder Practices Reports

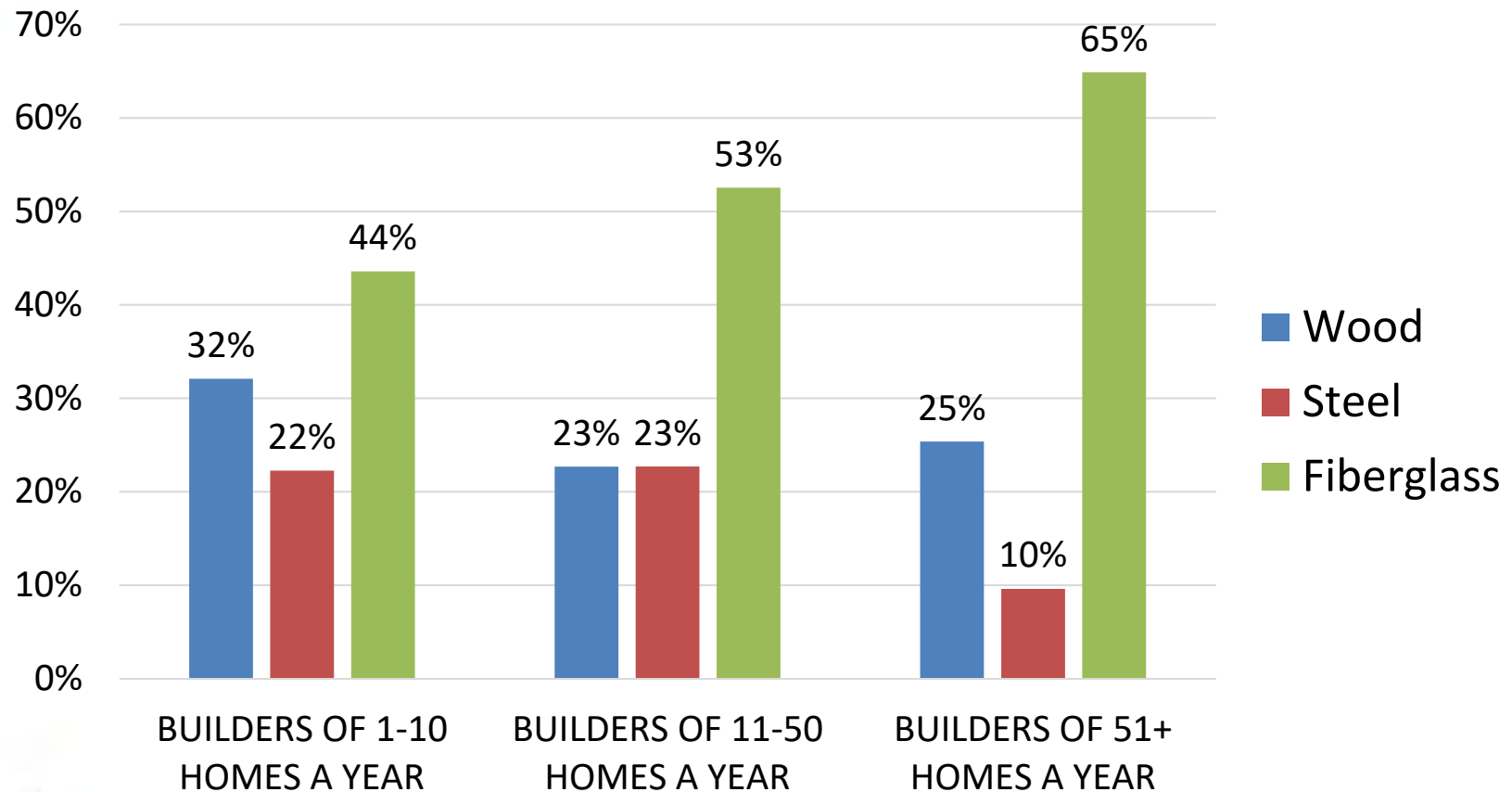
# Front Entry Doors, New U.S. Homes 2017



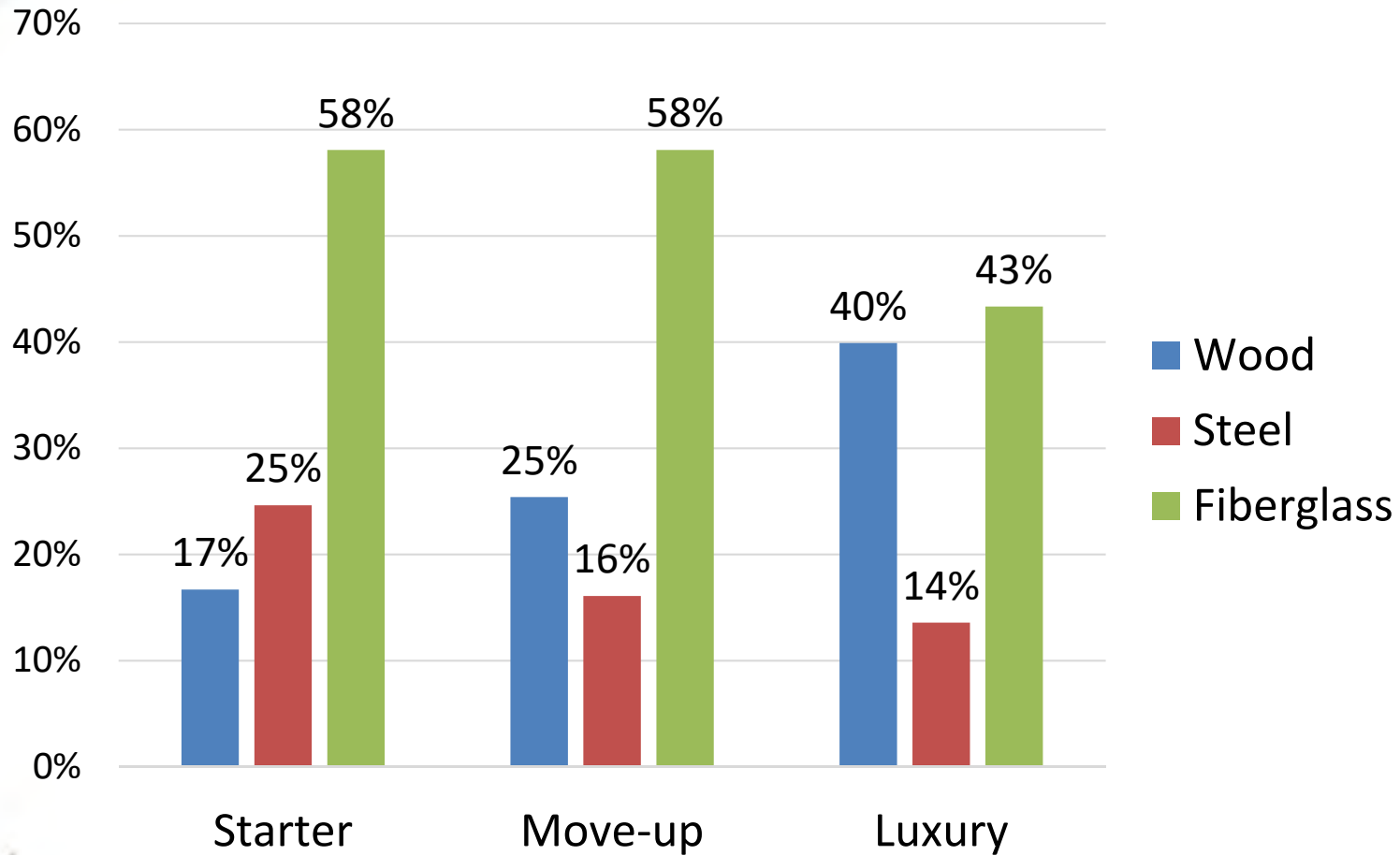
# Other Entry Doors, New U.S. Homes 2017



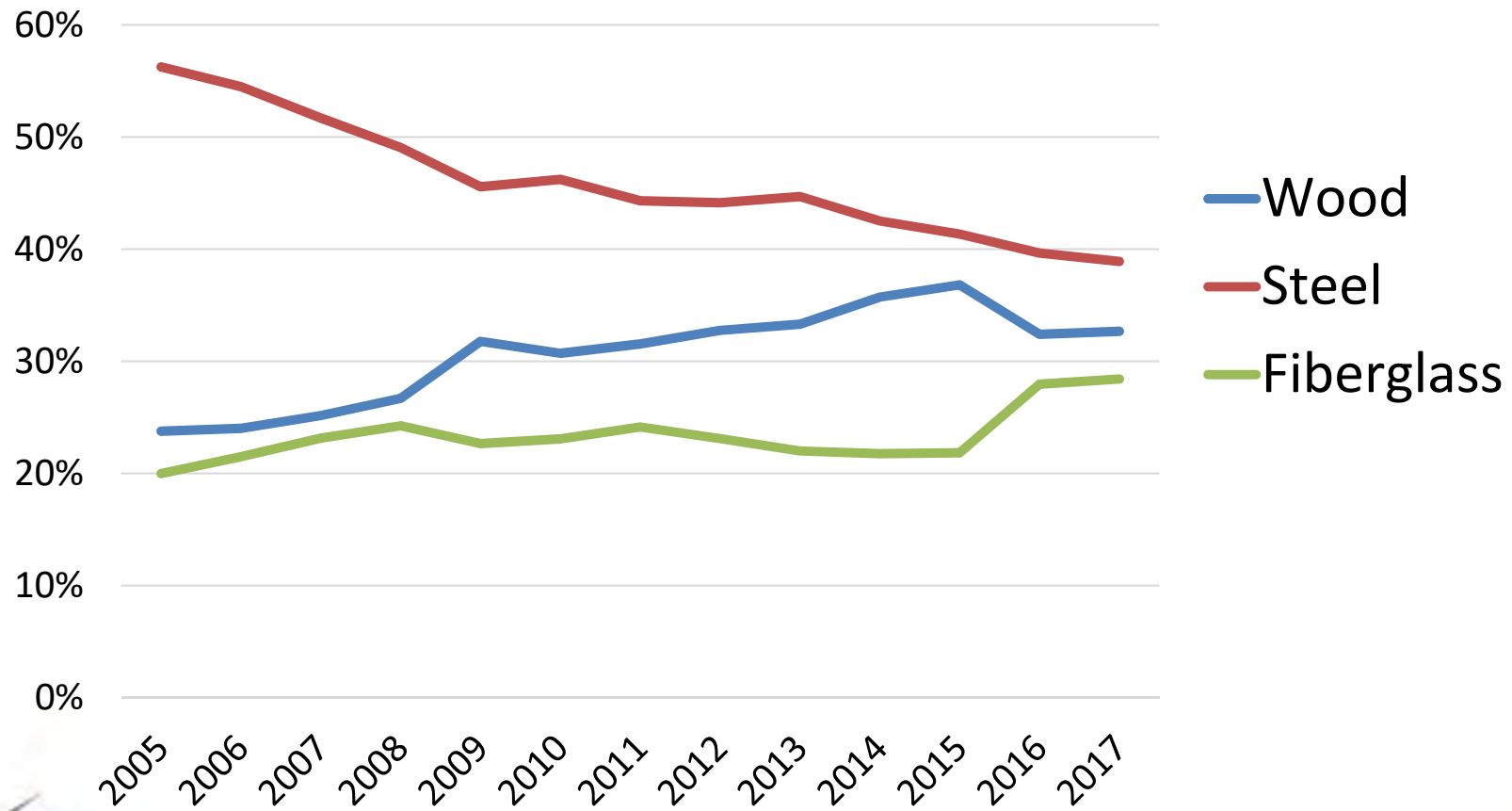
# Front Entry Doors by Builder Size, New SFD Homes, 2017



# Front Entry Doors by Price-Point of New SFD Homes, 2017



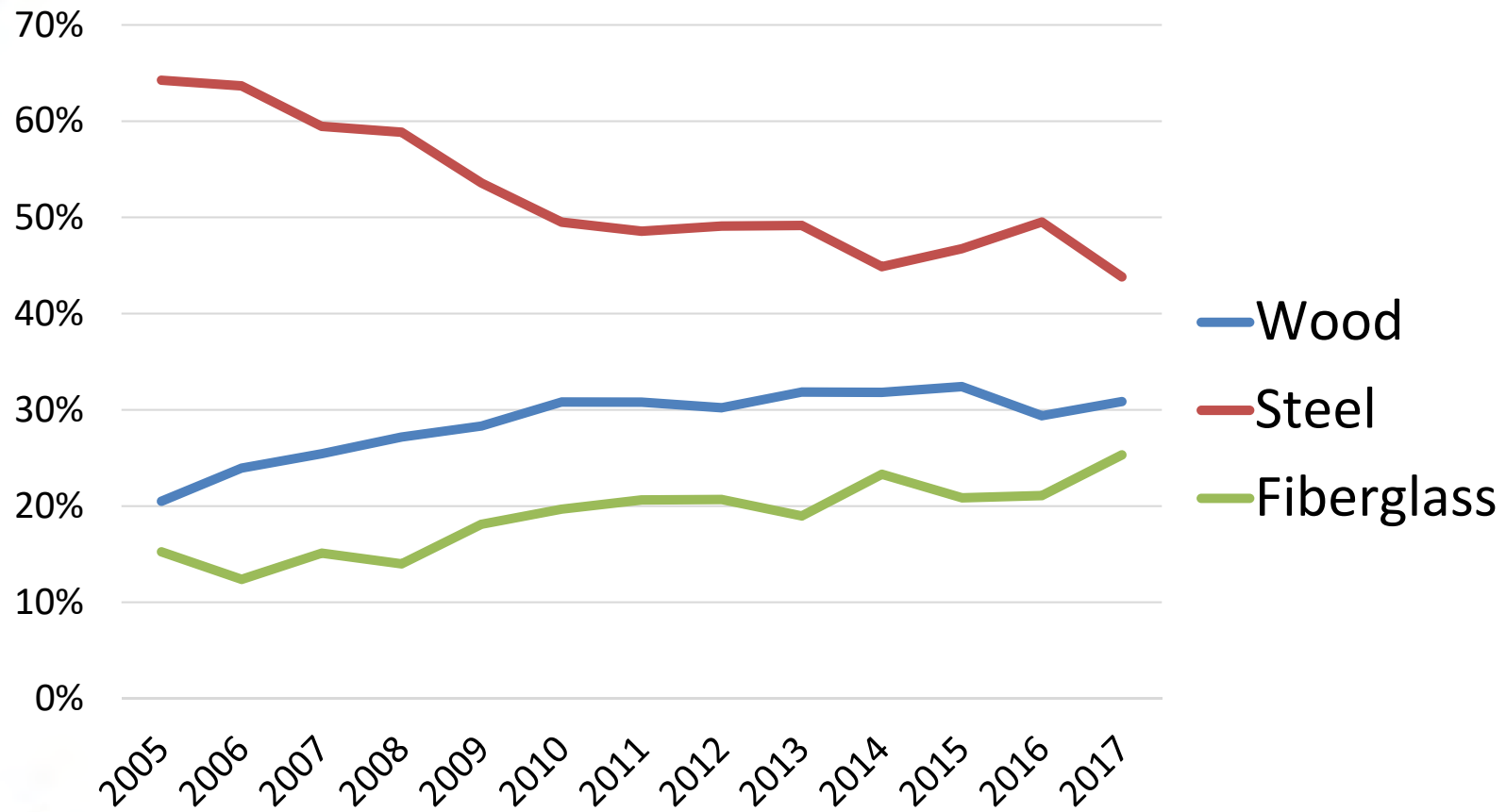
# Front Entry Doors, Home Repair & Remodeling, 2017



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Source: Annual Consumer Practices Reports

# Other Entry Doors, Home Repair & Remodeling, 2017

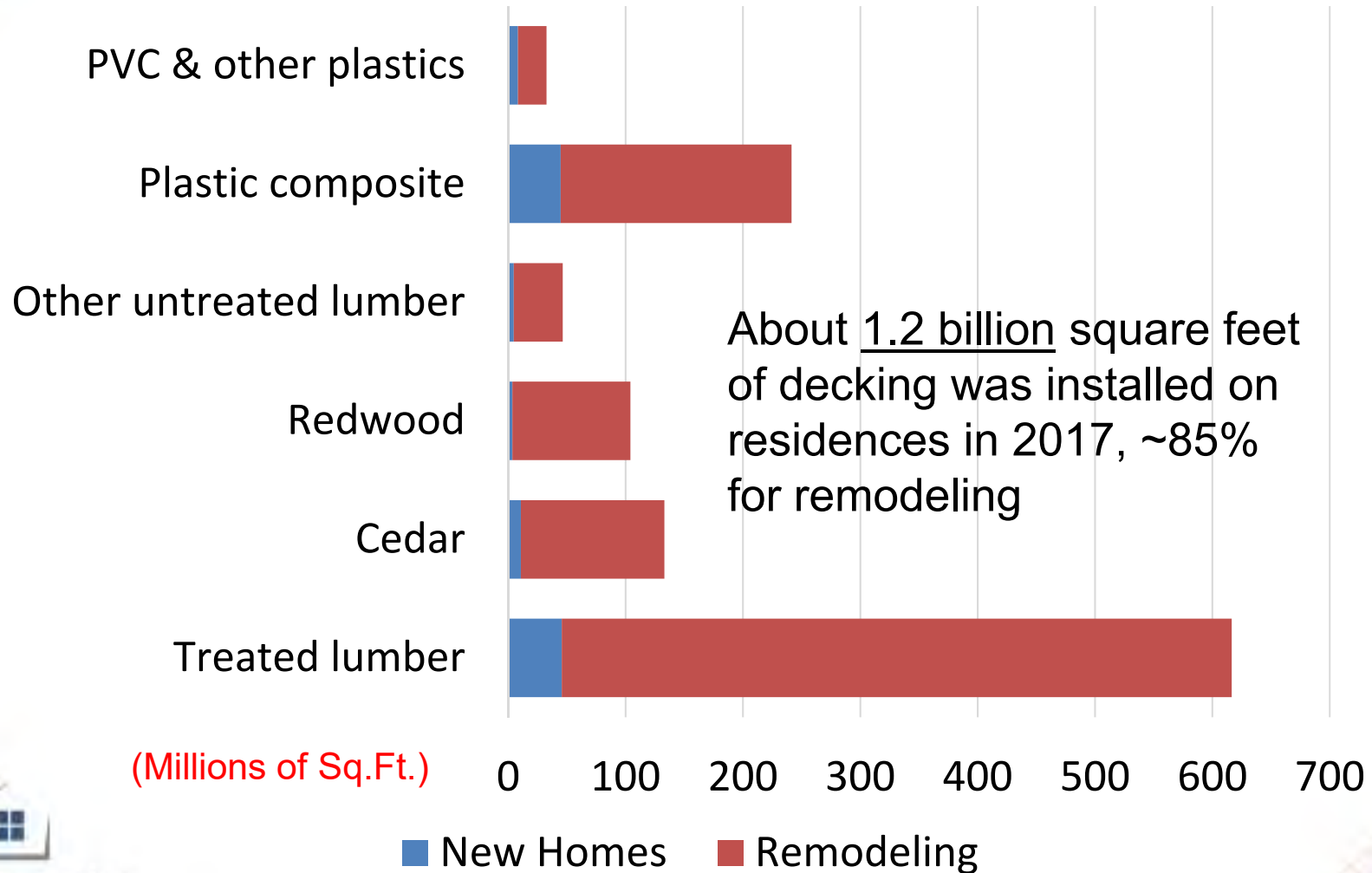


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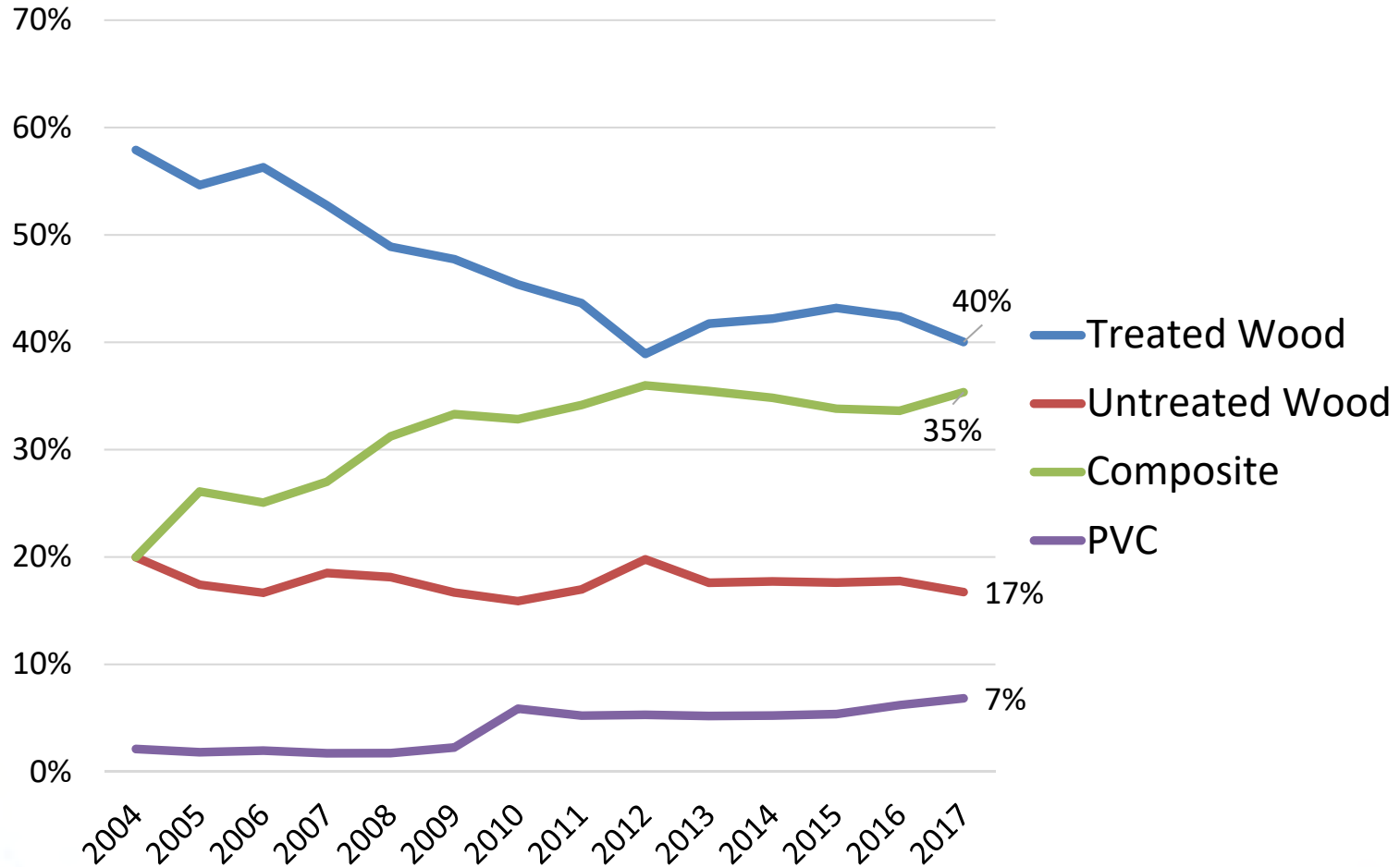
Source: Annual Consumer Practices Reports



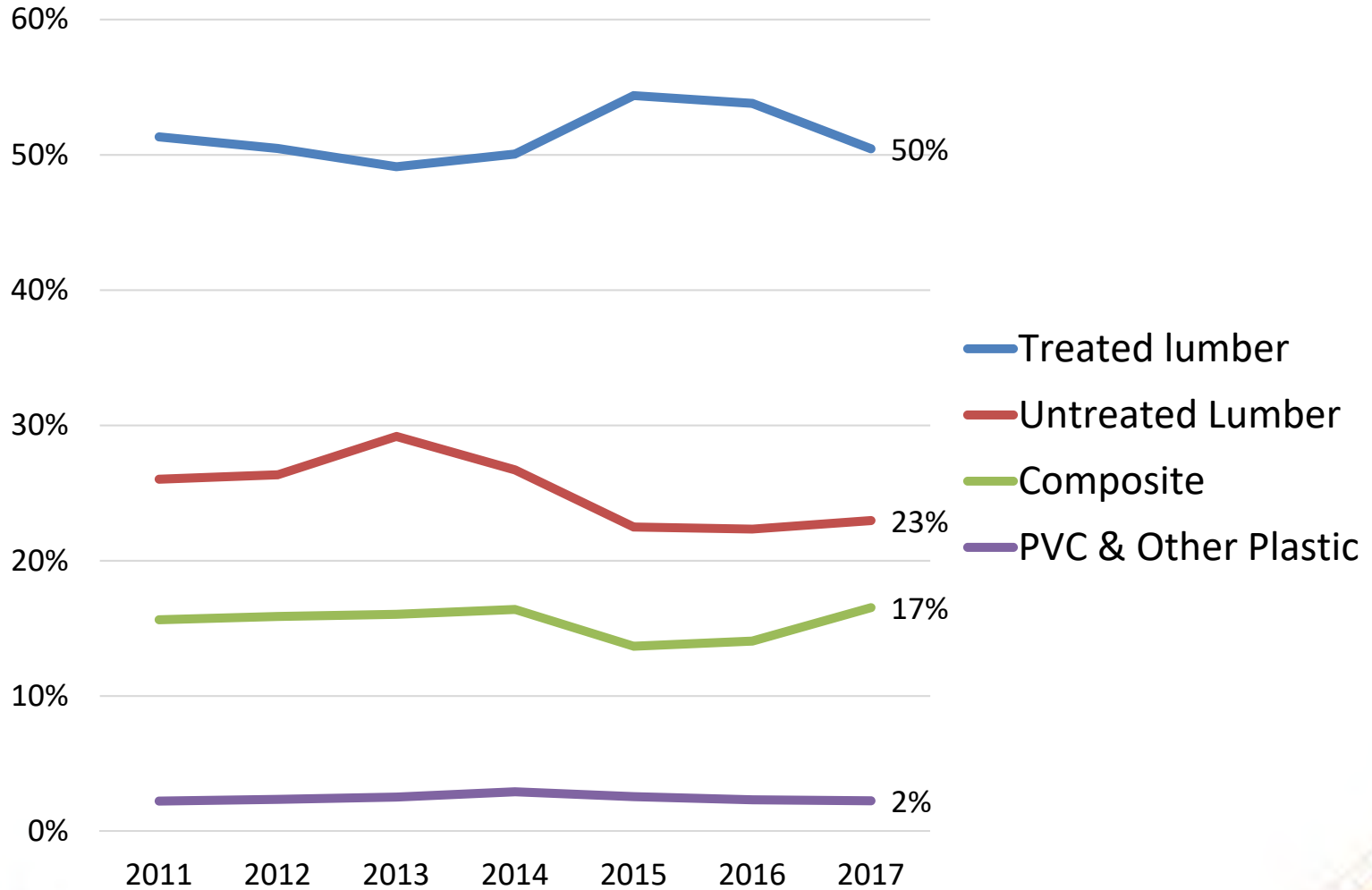
# Decking Volumes by Material Type in New Homes and Remodeling, 2017



# Shares of Raised Porch and Decking Material in New SFD Homes



# Shares of Raised Porch and Decking Material in Residential Remodeling



Source: Annual Consumer Practices Reports



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THANK YOU

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