



Home Innovation
RESEARCH LABS

VINYL PRODUCTS IN CONSTRUCTION: MARKET TRENDS AND OPPORTUNITIES

Vinyltec 2019

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
- #1 in green home building certification (NGBS)
- Building codes and standards developers
- Partners with ICC-ES to fast-track issuance of ESRs

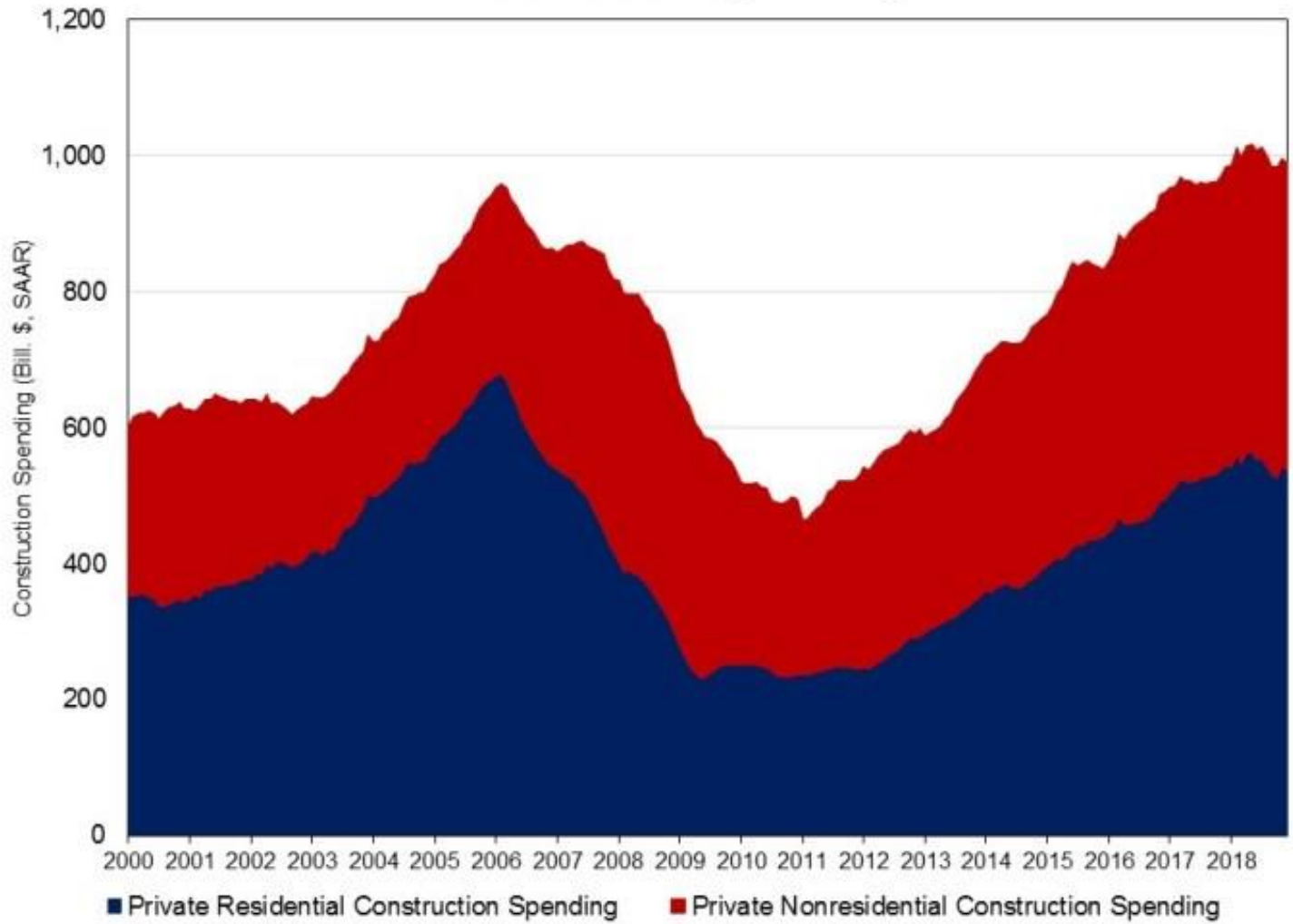


Purpose and Outline of Presentation

1. Review of changes sweeping home construction and remodeling industries
2. Review of building materials trends in new homes and remodeling
 1. Flooring
 2. Windows & Patio Doors
 3. Siding & Exterior Finishes
 4. Exterior Trim & Fascia
 5. Decking
 6. Exterior Railing
 7. Fences & Privacy Walls



Construction Spending



Source: NAHB / US Census



Top Trends Shaping the Building Materials Industry

- Skilled labor shortage
 - Cost of labor also increasing
 - Cycle time lengthened (from 6 months to 7 months to complete a home)
 - Industry environment favors easy-to-install and pre-finished materials
 - Conditions are right for some off-site housing solutions
- Construction materials costs increasing
 - Building products up 2 times CPI (4% in 2018)
- Lower availability of residential development property
 - Higher density suburbs (smaller and narrower lots, less privacy etc.)
 - Remodeling outlook very good—improve/expand instead of buy new
- More rigorous energy codes
 - Air tightness requirements of homes
 - Higher R-value + continuous insulation on exterior walls
 - Windows—next in line for sweeping upgrades



Trends Shaping the Building Materials Industry

- Demographics
 - Younger home owners/buyers—transitioning from renting
 - Smaller, more affordable single family homes
- More durable products
 - Favoring plastics in many categories on interior & exterior
- Technology improvements
 - Plastics with decorative + wear layers gaining much ground
 - flooring, decks, siding, windows, countertops and more
- Design trends favoring simpler styles (more euro and urban) and contemporary design—primarily interiors but also exteriors
 - Exteriors incorporate lines suggestive of traditional styles
 - Wood, stone, concrete, and steel—with multiple textures on exterior
 - Open floorplans still popular but defined living spaces
 - Painted cabinets & wood floors in kitchen
- Blurring transition from indoor to outdoor living—window walls or lots of glass, upgraded outdoor living space



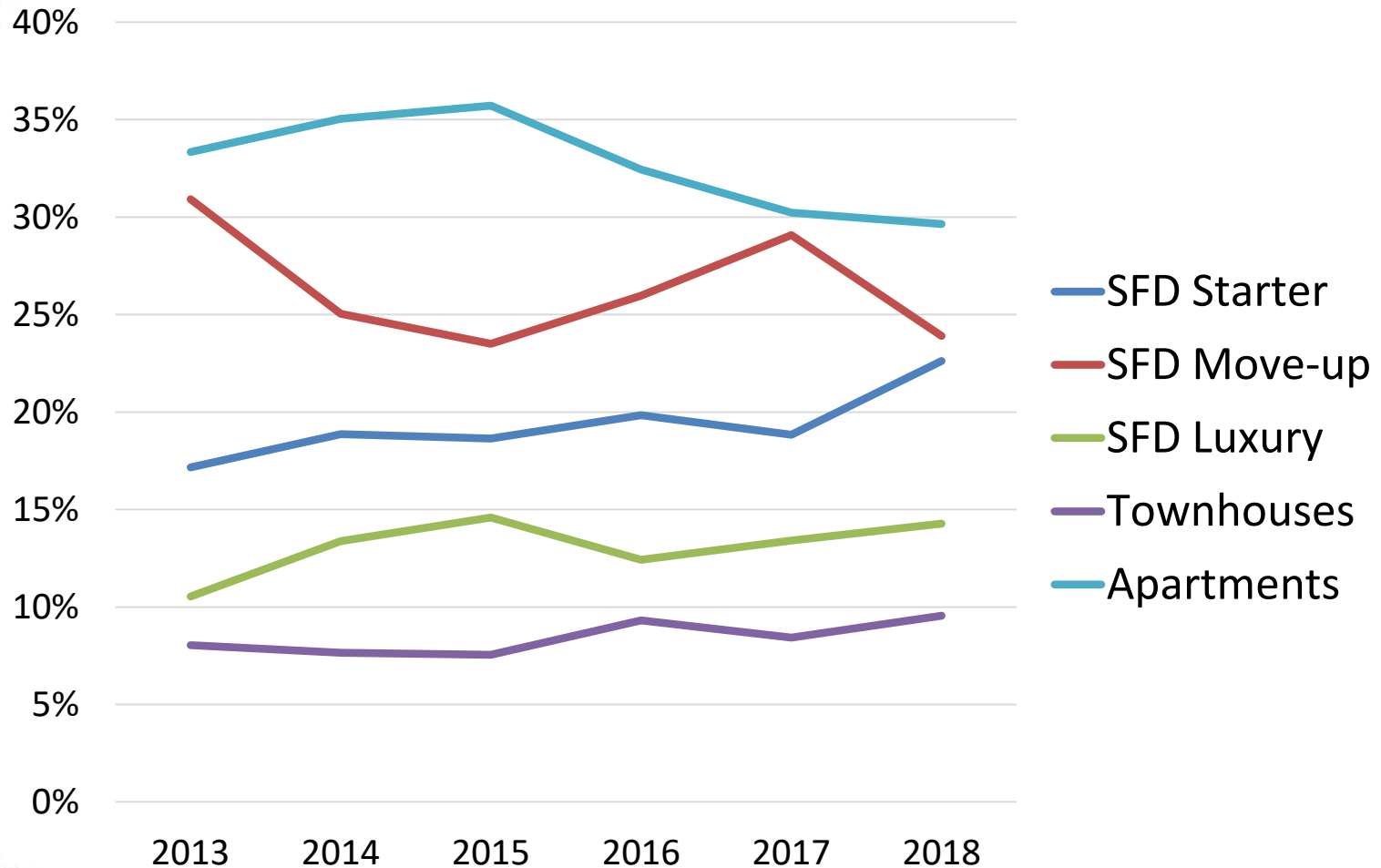
Basis for Presentation Data: Annual Building Product Tracking Studies

- Home Innovation has been tracking annual materials purchases since 1995
 - Builder Practices Survey of 1,550 U.S. Builders
 - Consumer Practices Survey of 100,000+ U.S. households
- Decades of custom market research, sponsored by hundreds of building materials manufacturers
- Support of development and launch of hundreds of new building products

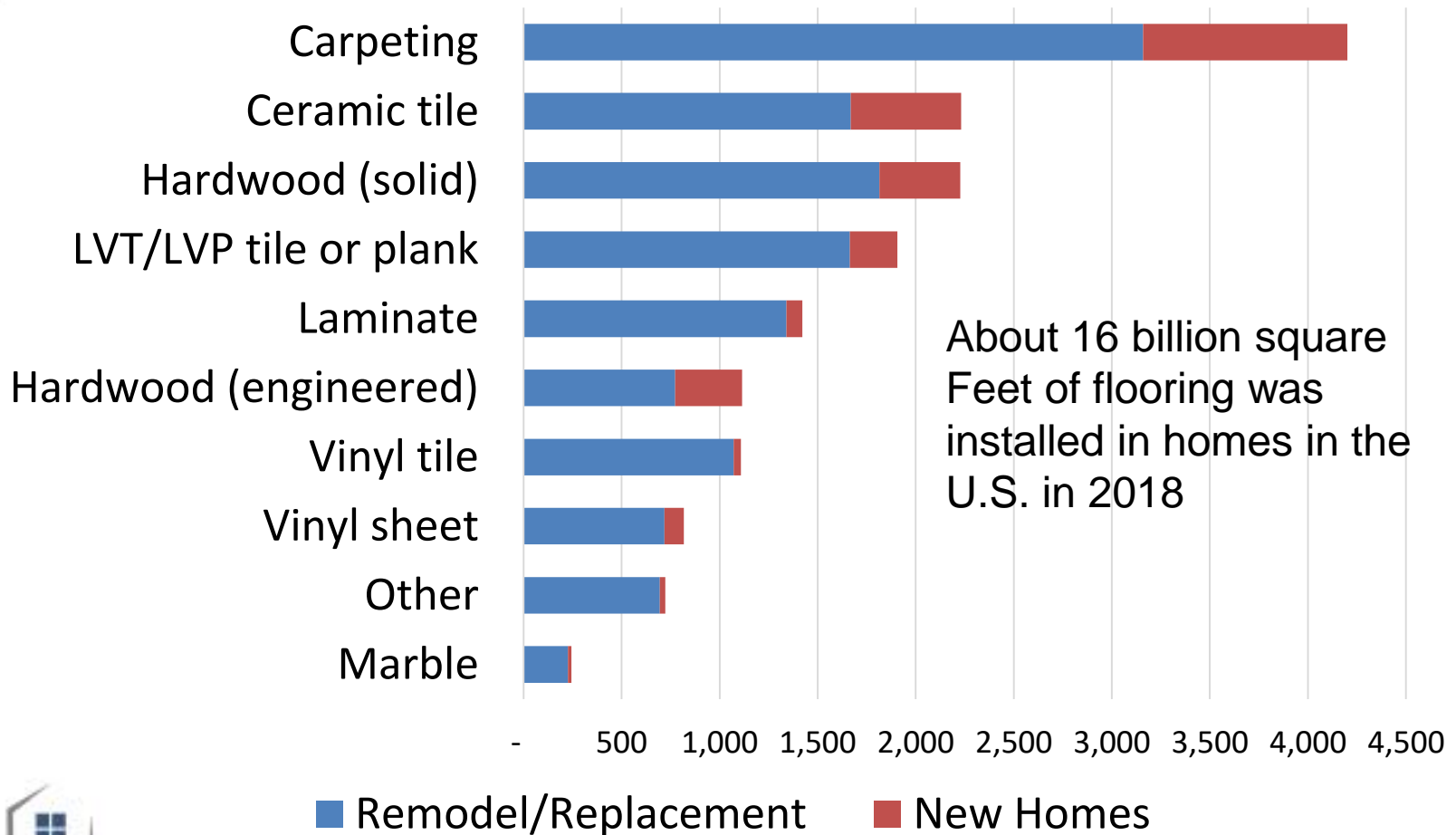


U.S. New Housing Mix Trend

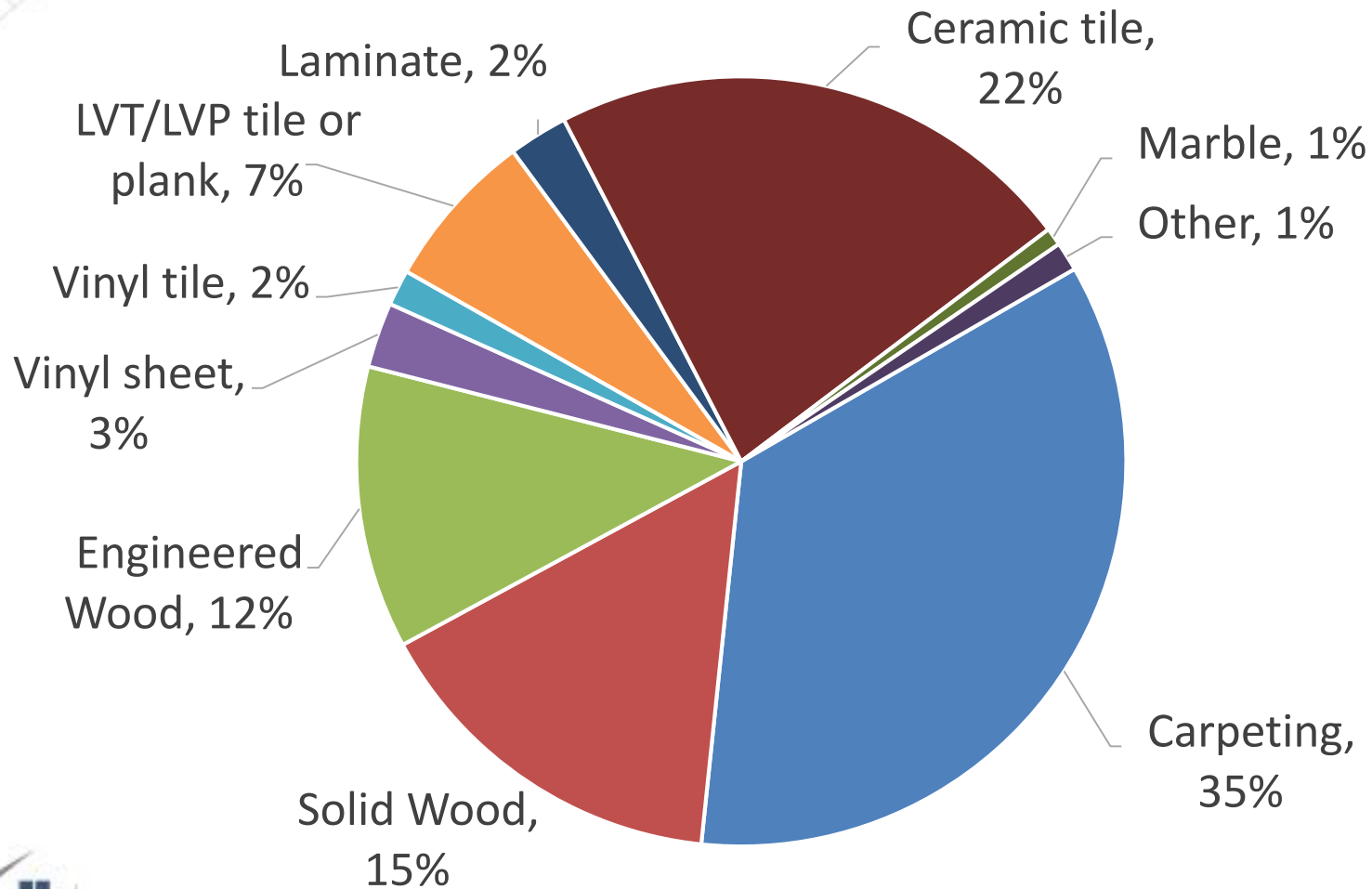
(based on annual housing units starts)



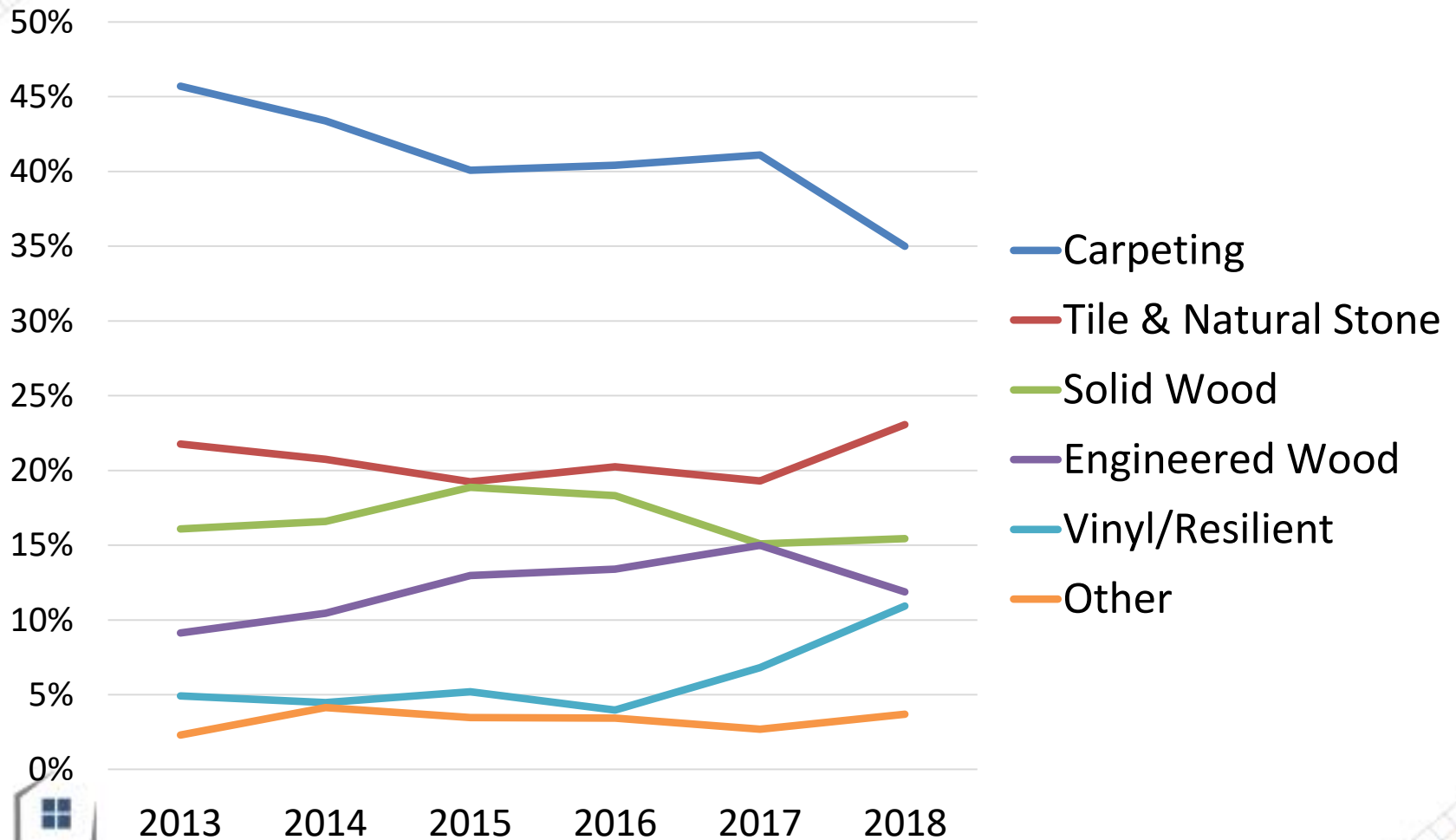
Residential Flooring Installations 2018 (millions of SF)



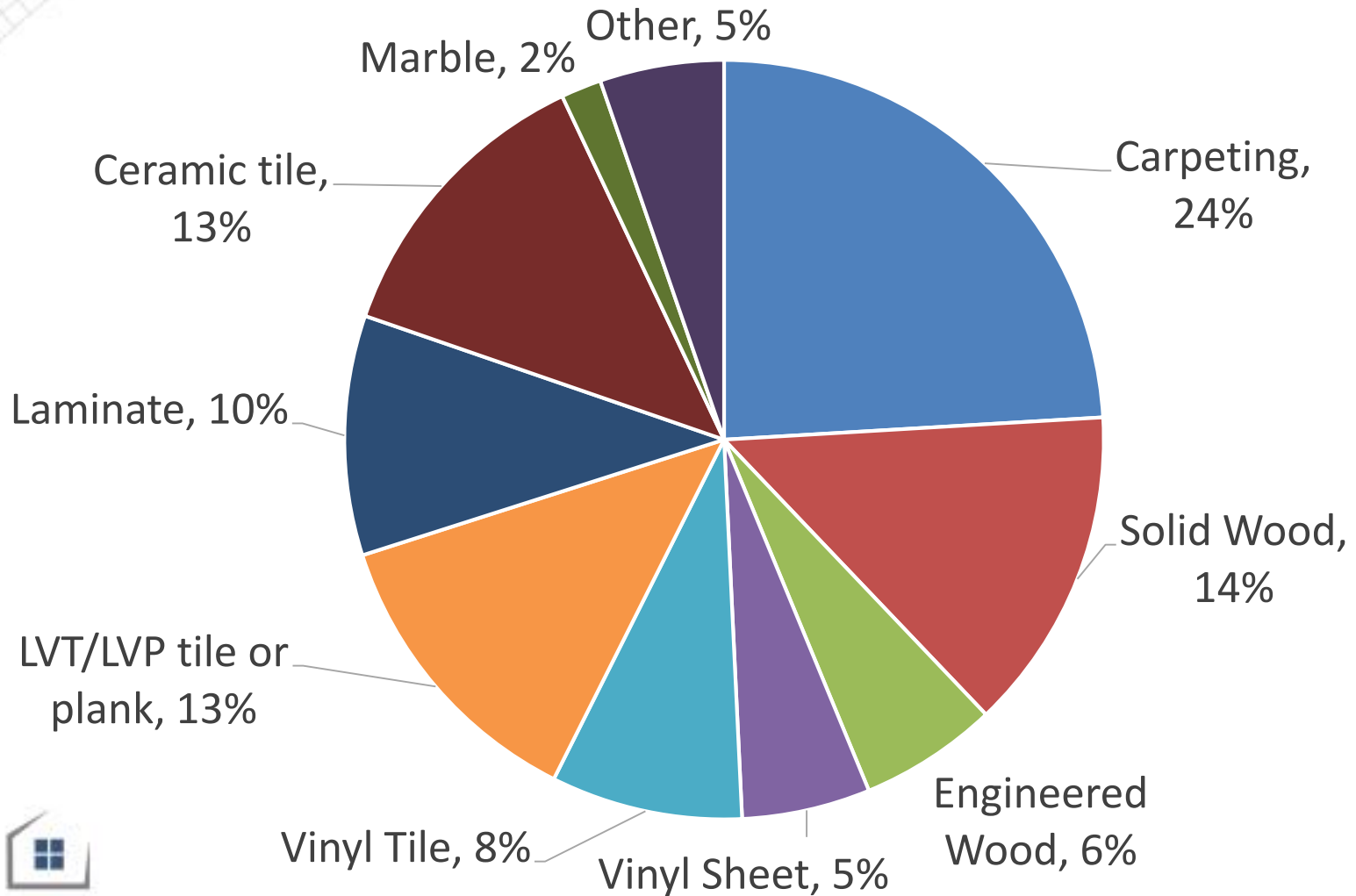
Flooring in New Single Family Homes, 2018



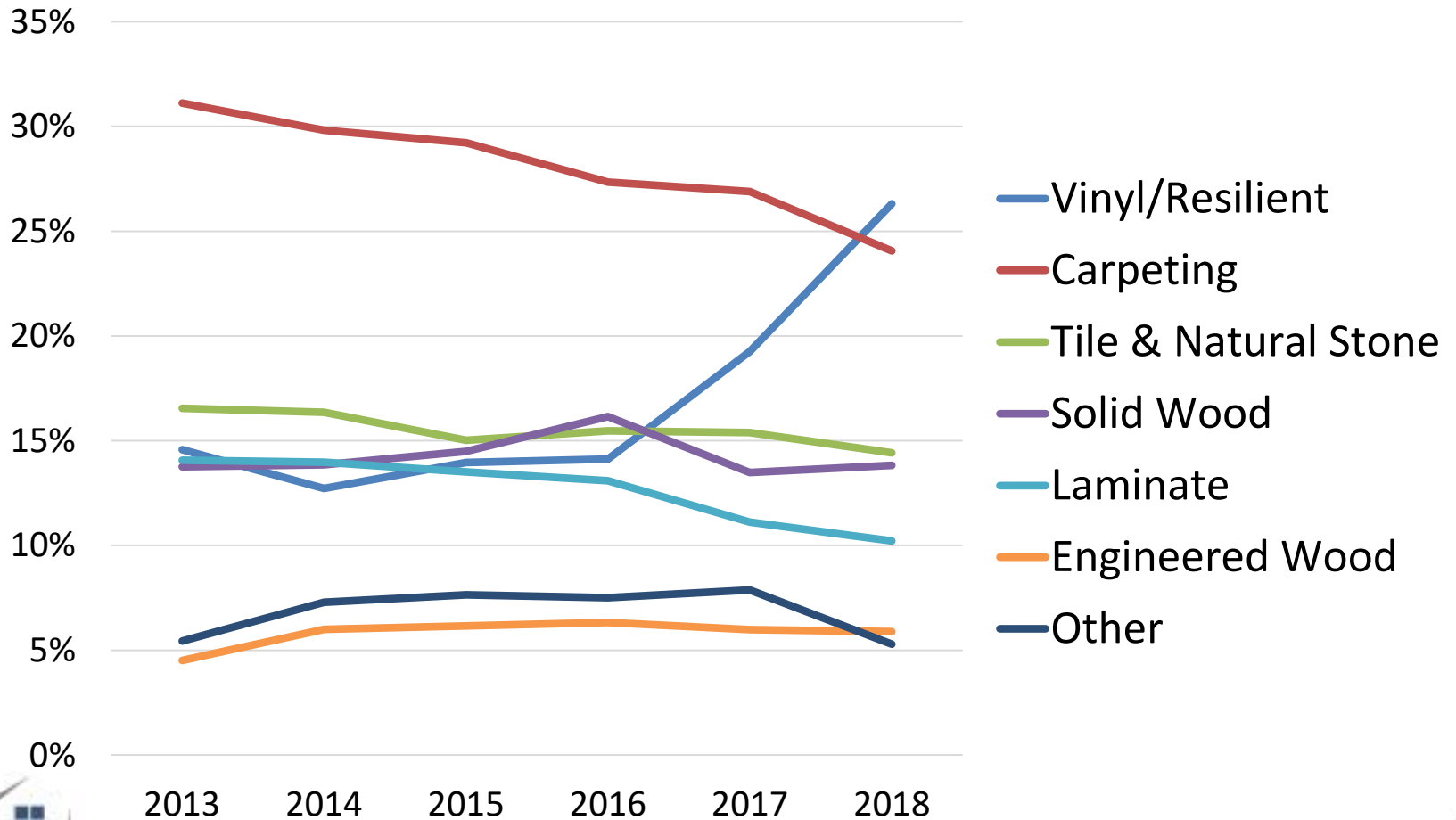
Flooring Shares in New Single Family Homes



Flooring in Residential Remodeling

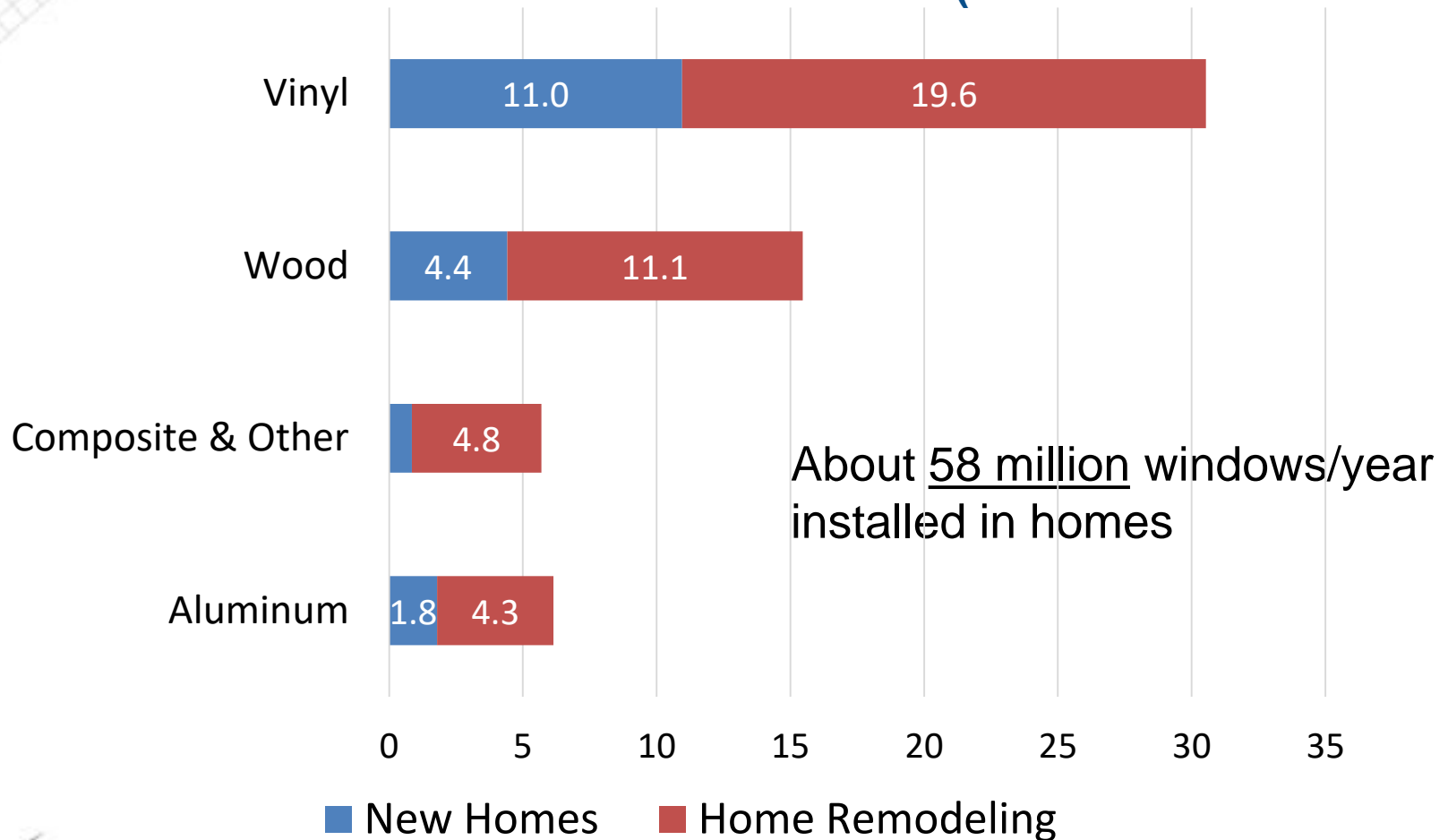


Flooring in Residential Remodeling



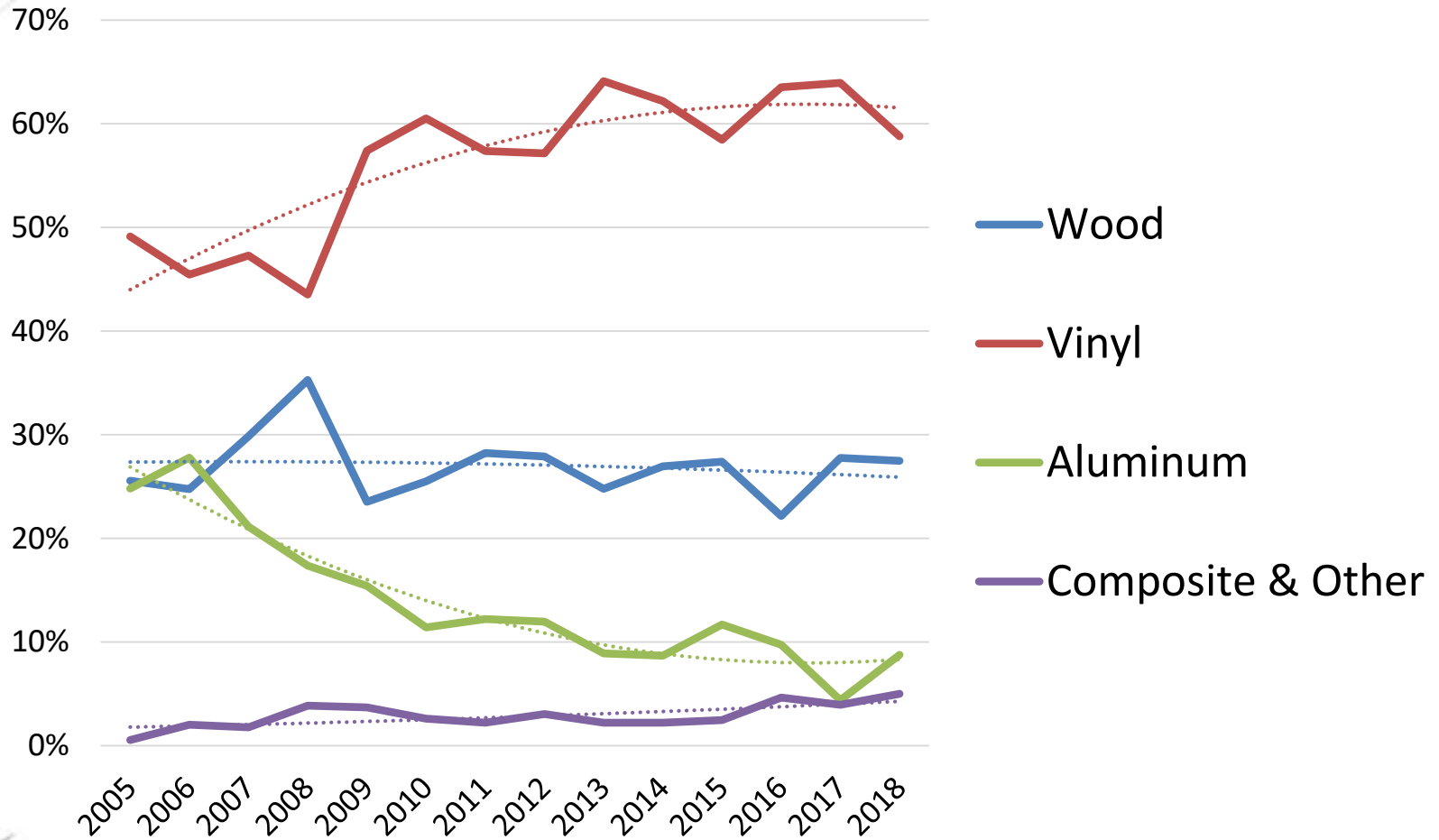
Windows Installed in New U.S. Homes and Home Remodeling, 2018

(millions of window units)

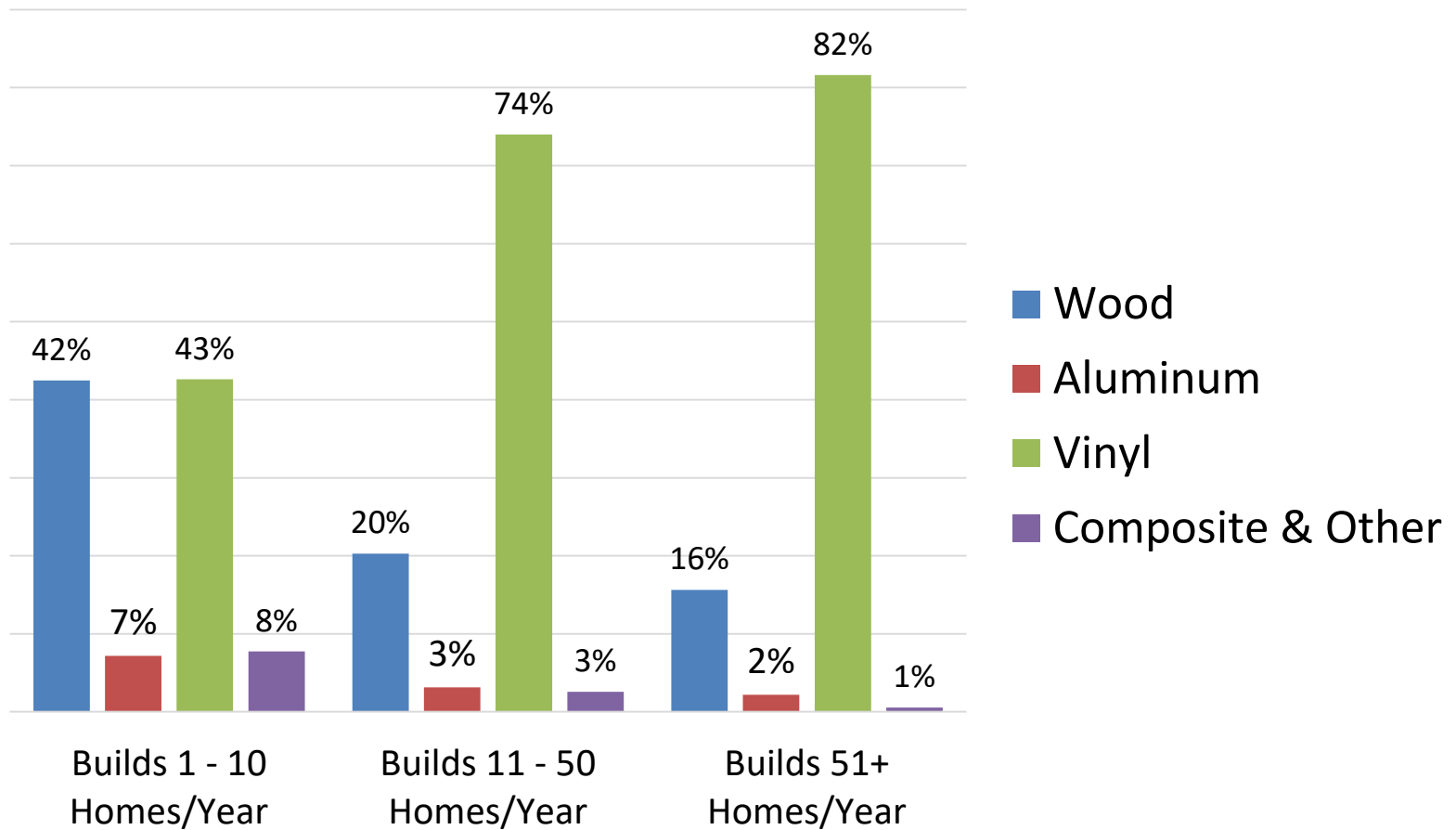


About 58 million windows/year installed in homes

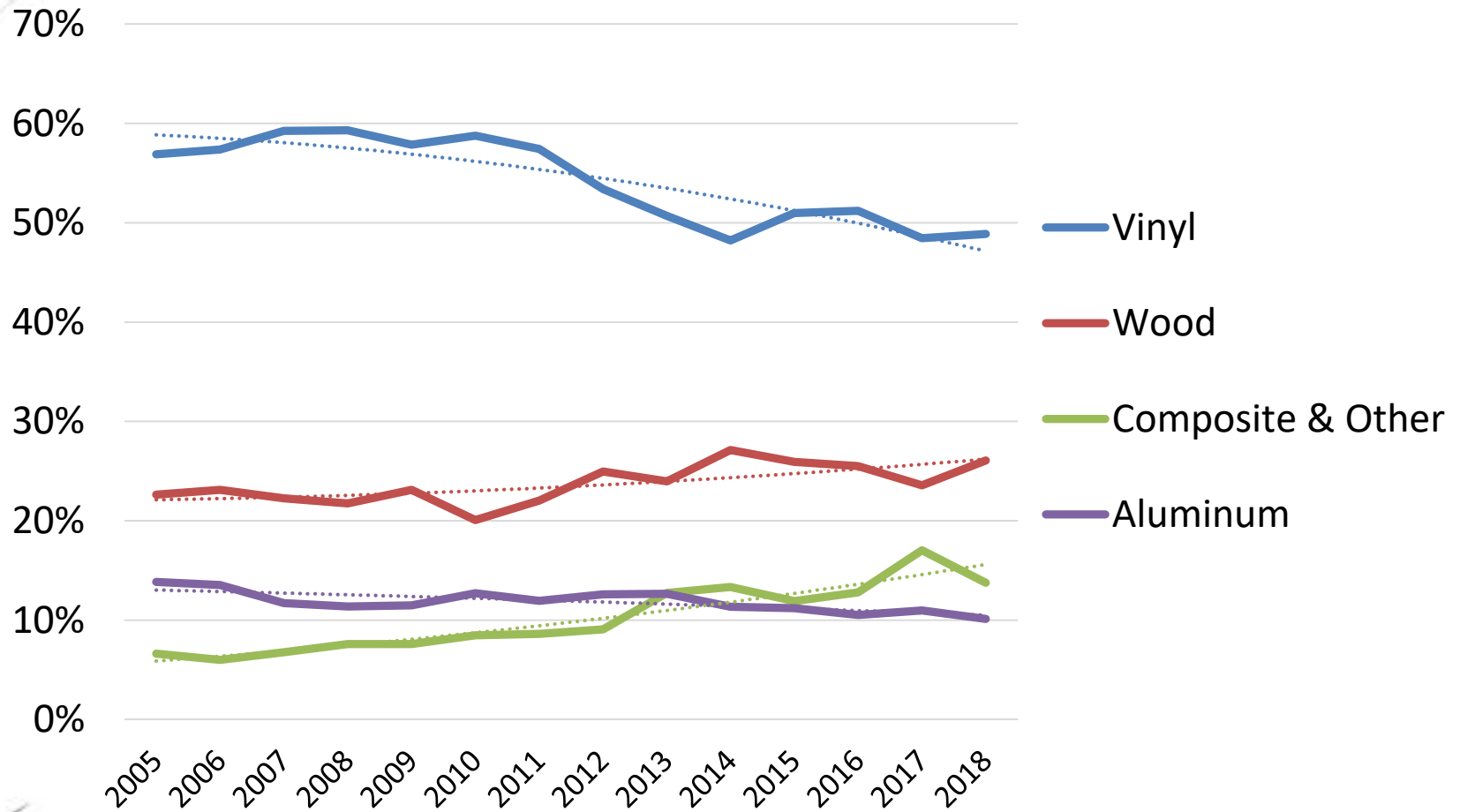
Trends in New SFD Home Window Frame Materials



Window Frame Materials in New U.S. Homes by Size of Builder, 2018

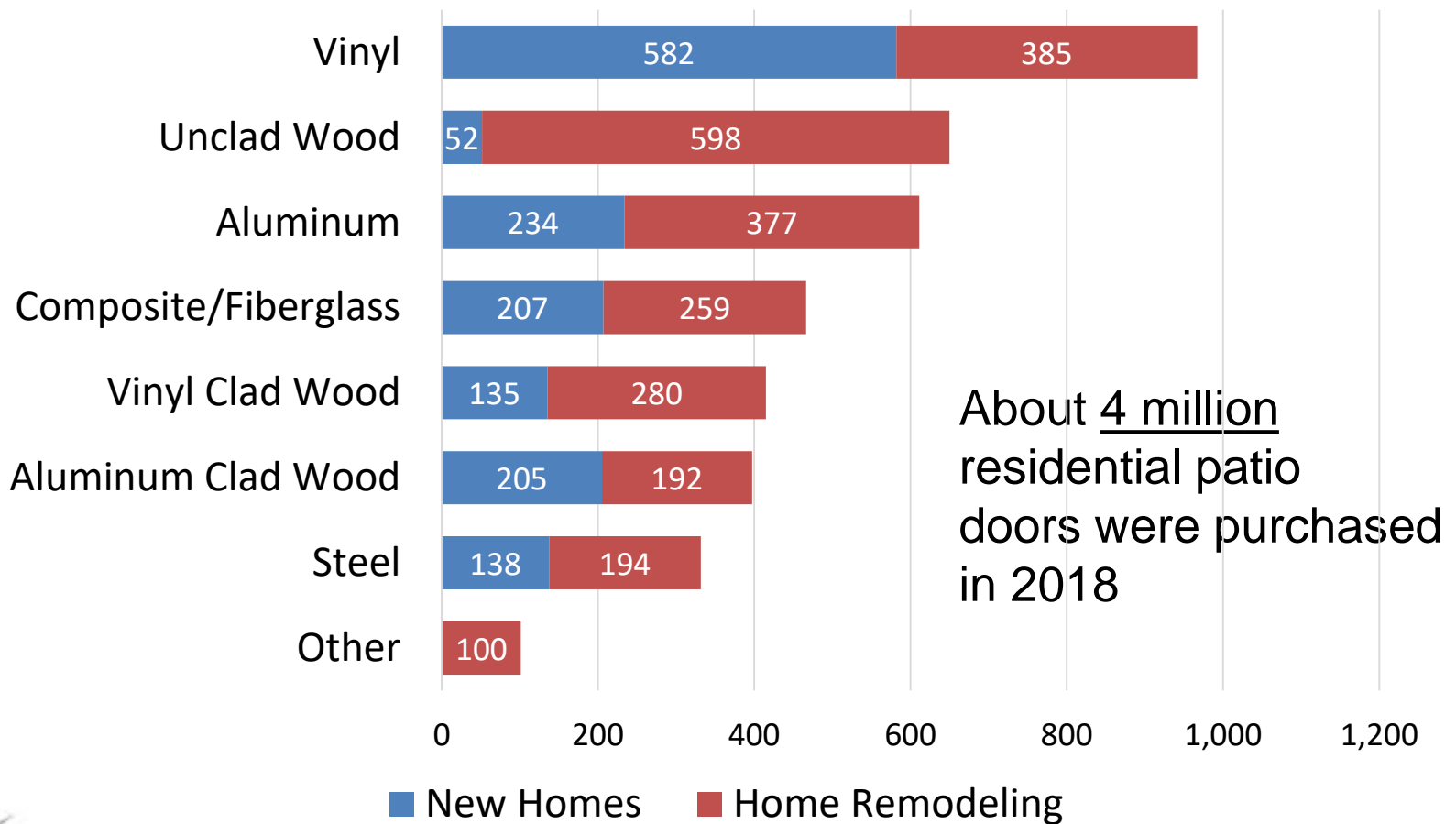


Windows in U.S. Home Repair, Replacement, and Remodeling



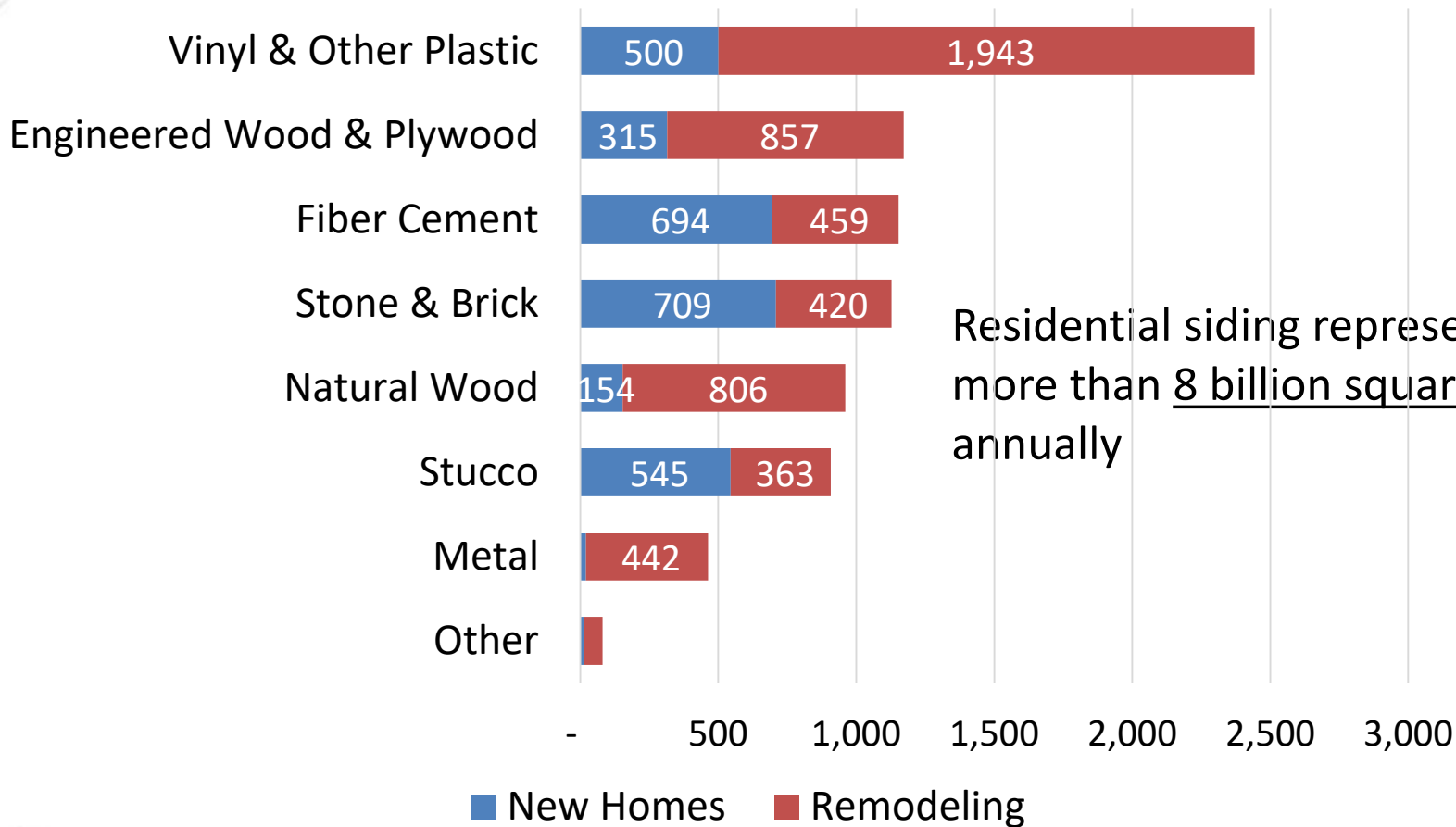
Patio Doors Purchased for New Homes and Remodeling, 2018

(thousands of units)

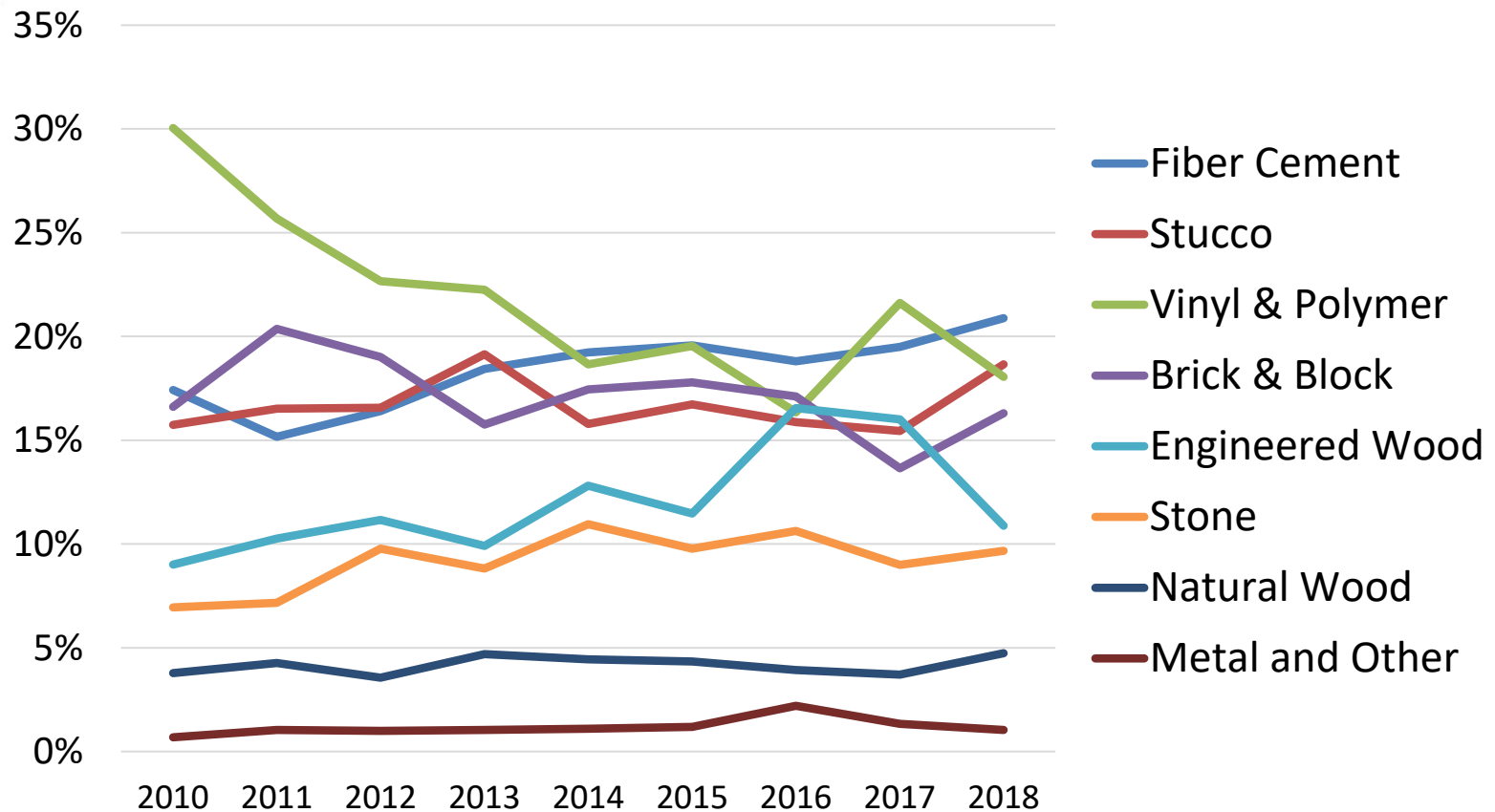


Siding in New Homes and Remodeling, 2018

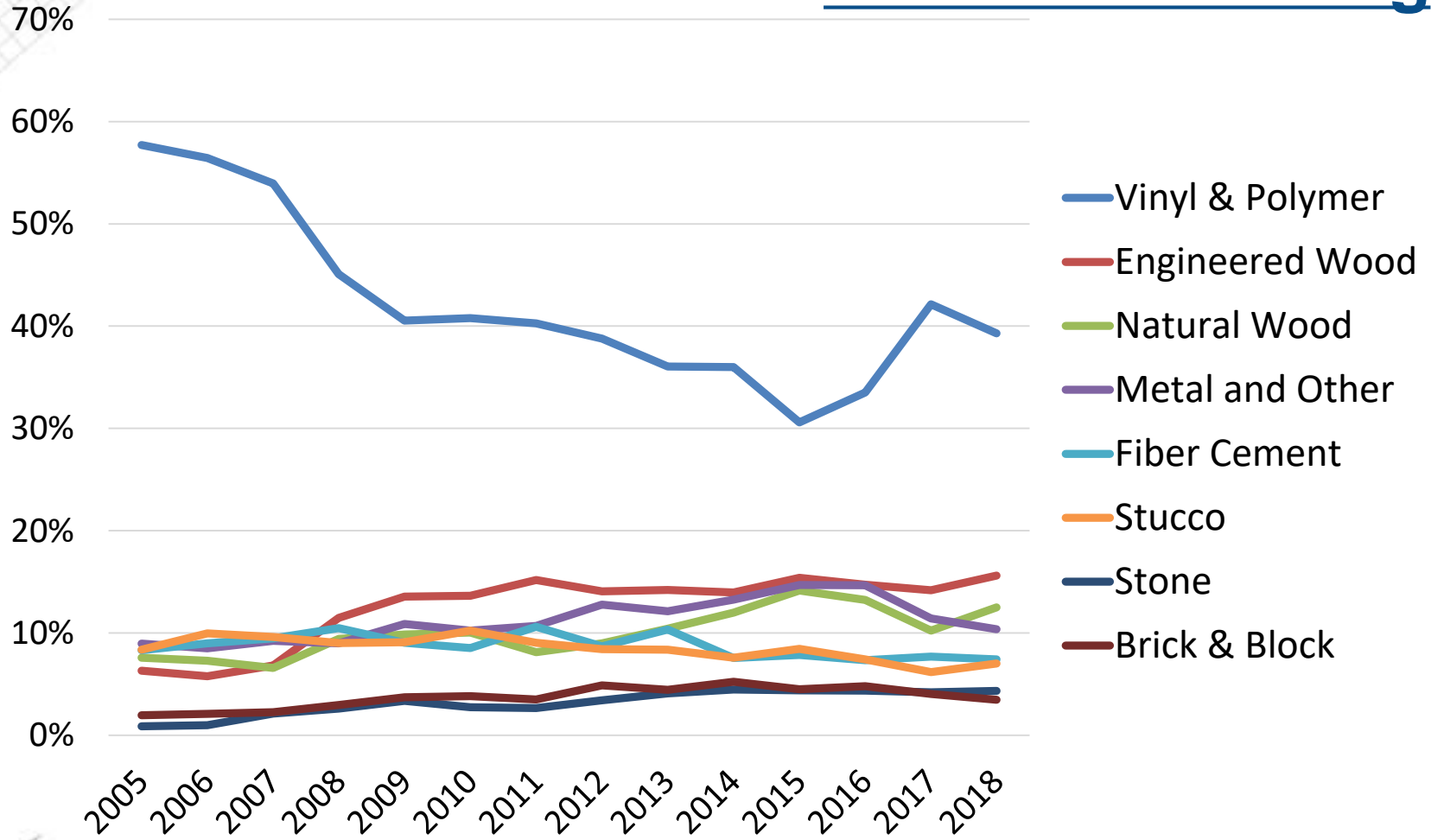
(millions of SF)



Siding on New SFD Homes

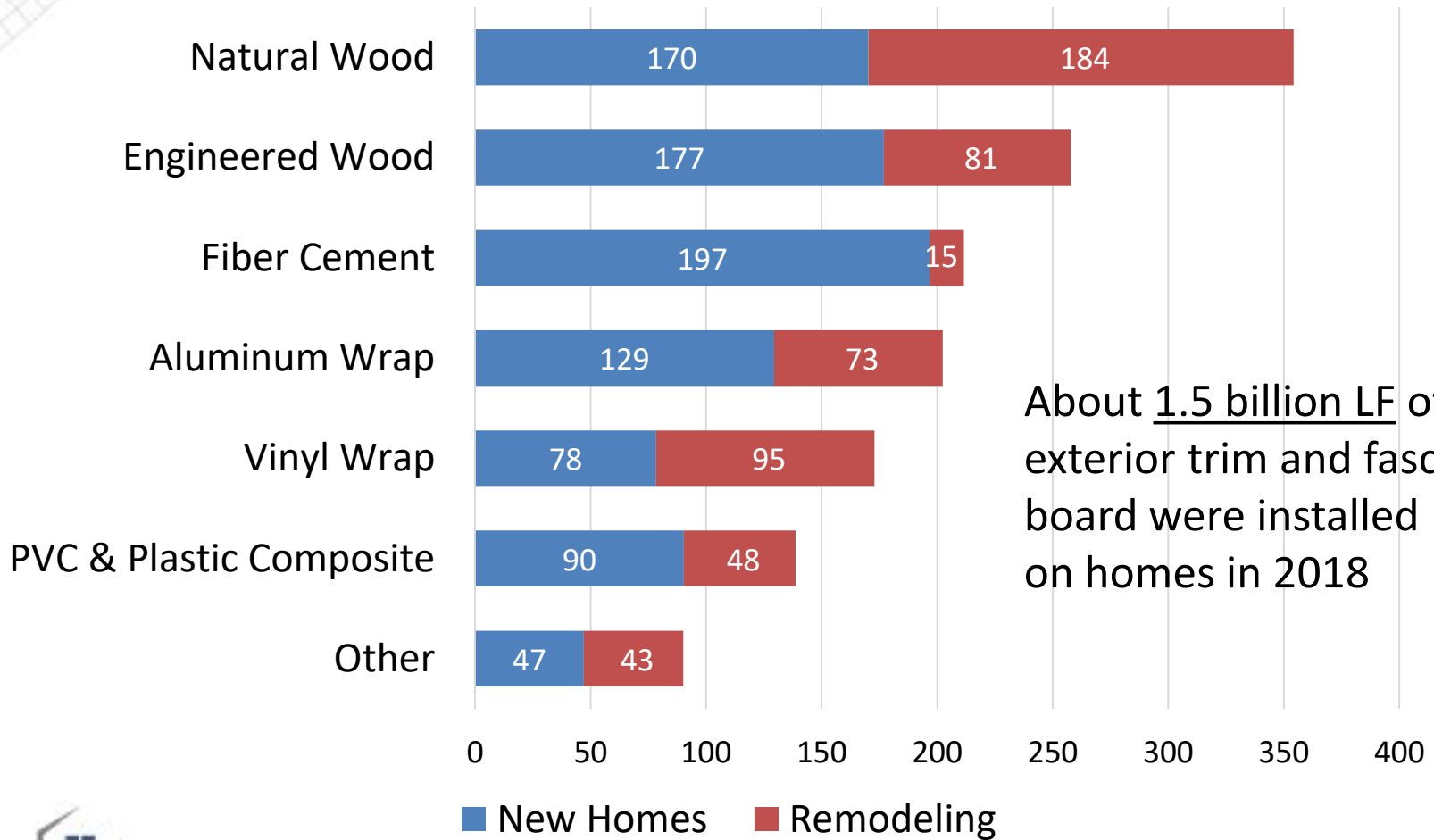


Siding in Home Remodeling



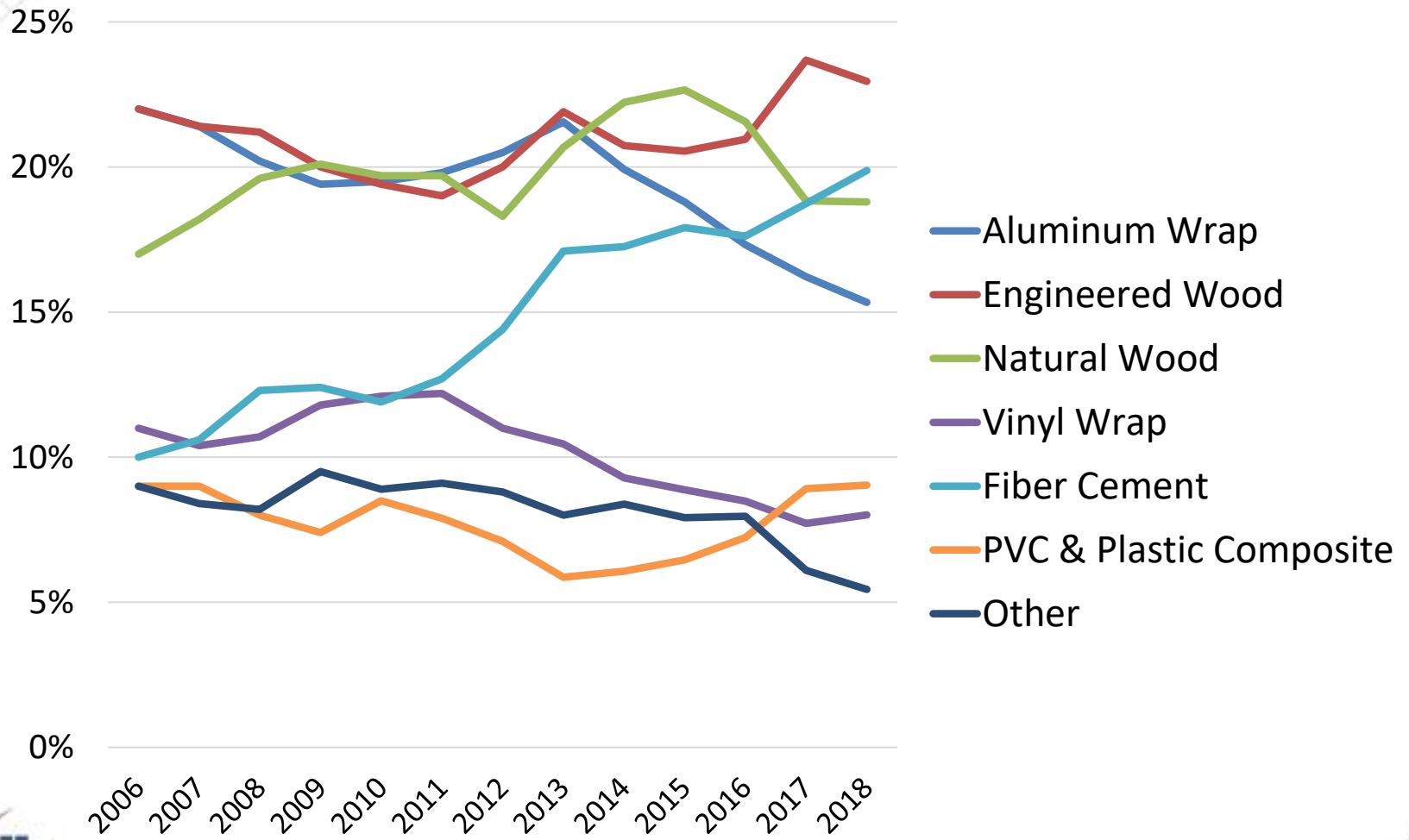
Exterior Trim & Fascia Board for New U.S. Homes, 2018

(millions of LF)

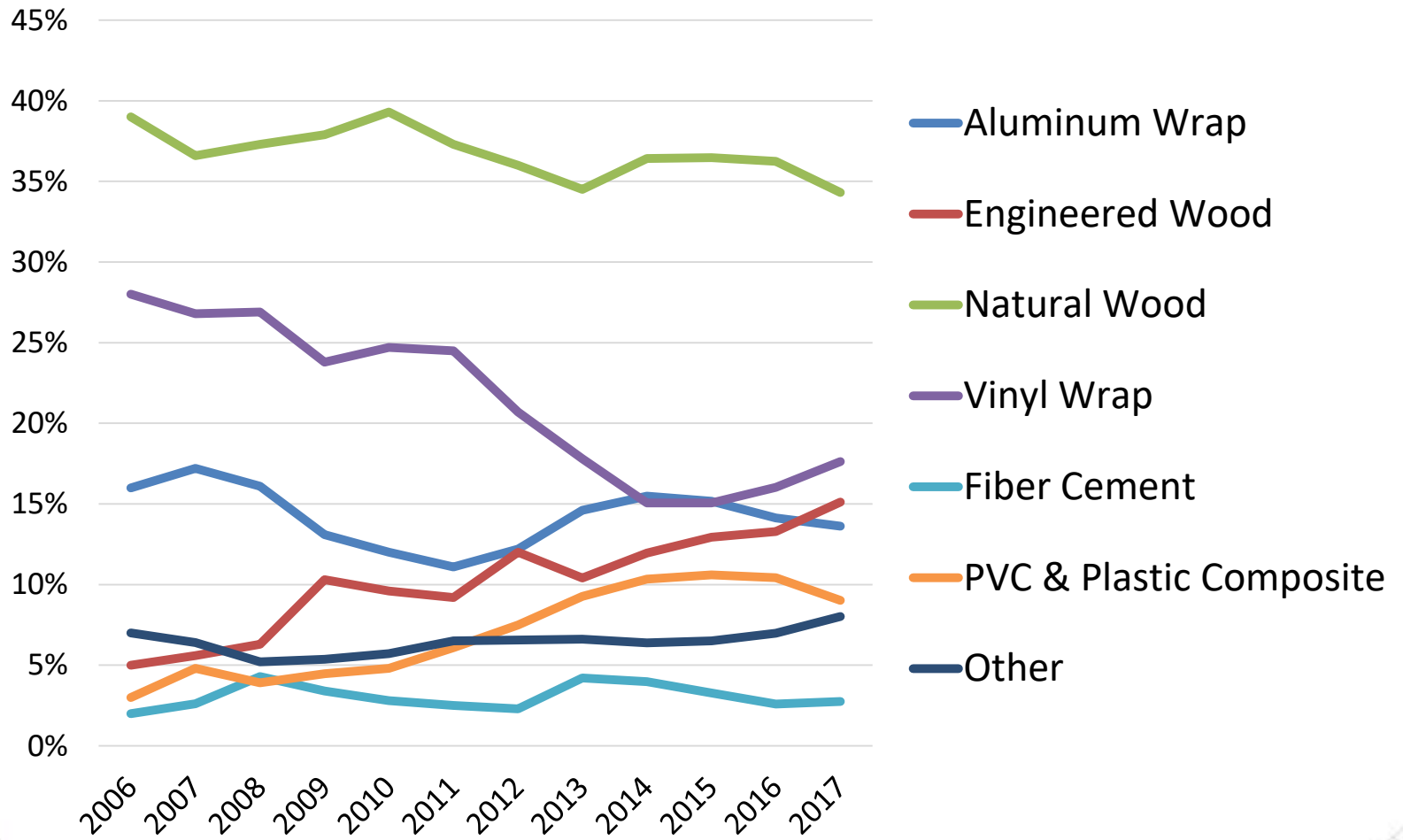


About 1.5 billion LF of exterior trim and fascia board were installed on homes in 2018

Exterior Trim & Fascia Board for New U.S. Homes



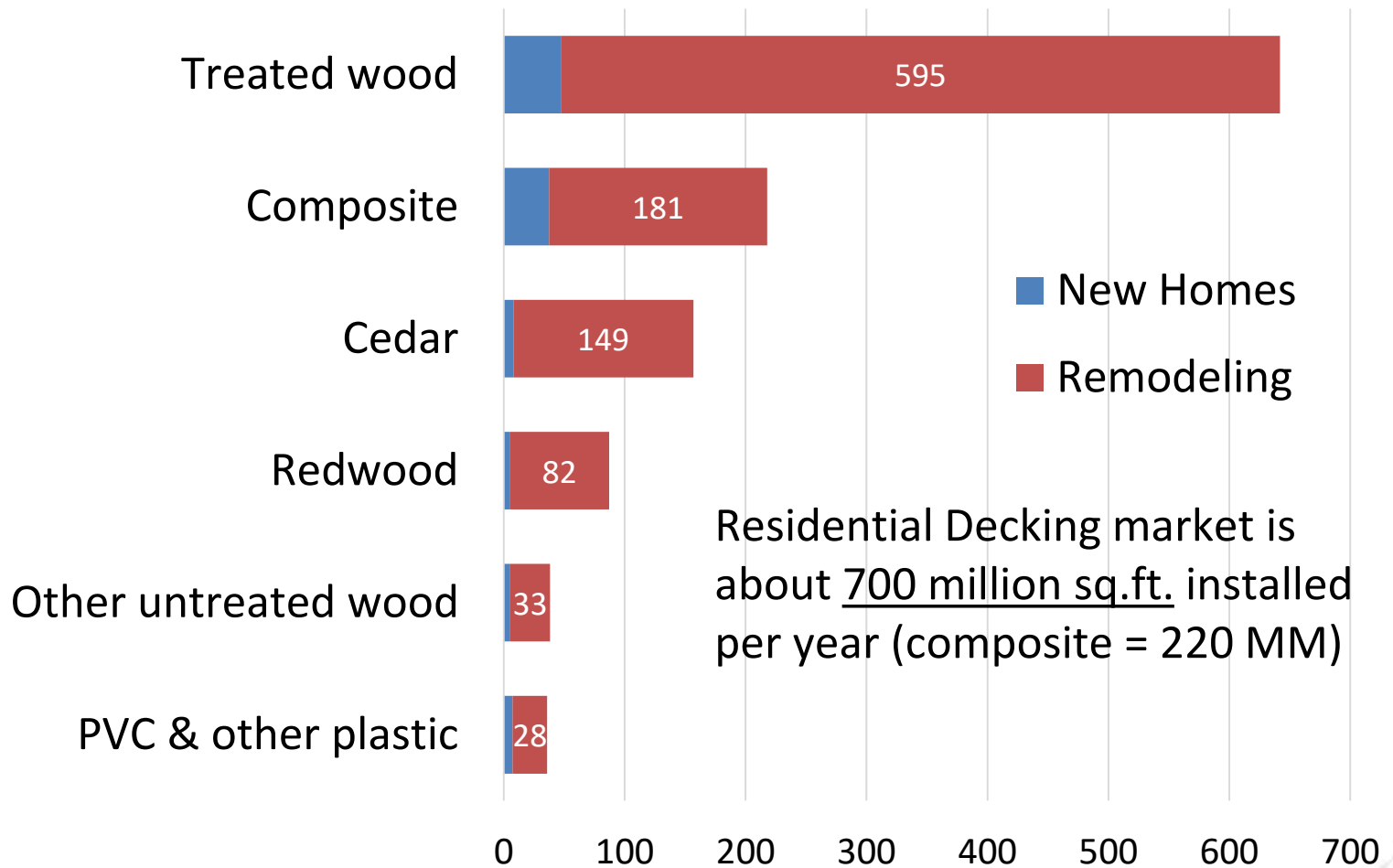
Exterior Trim & Fascia for U.S. Home Remodeling



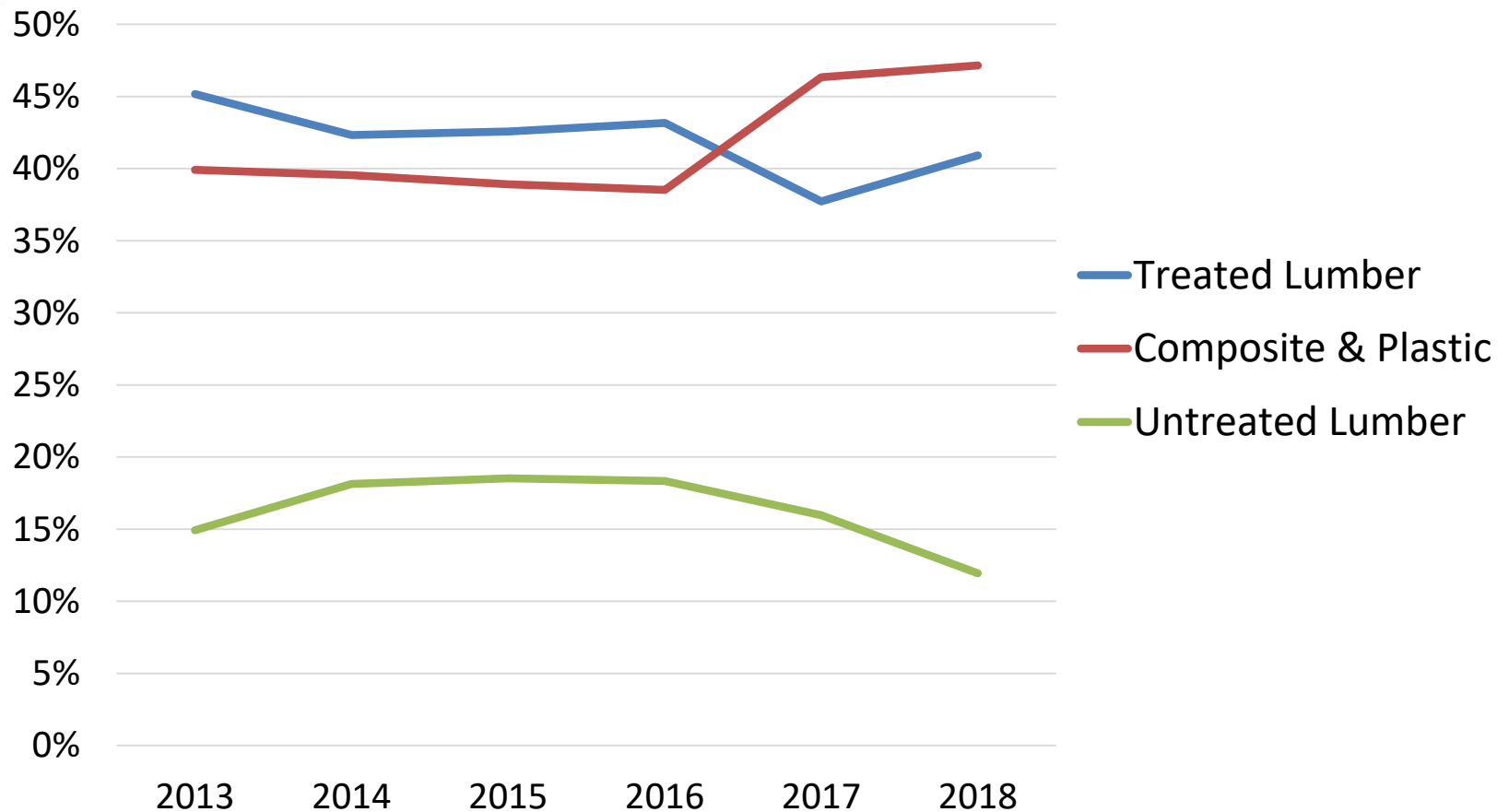
Source: Annual Consumer Practices Reports

Porch & Deck Surfacing in New Homes and Remodeling, 2016

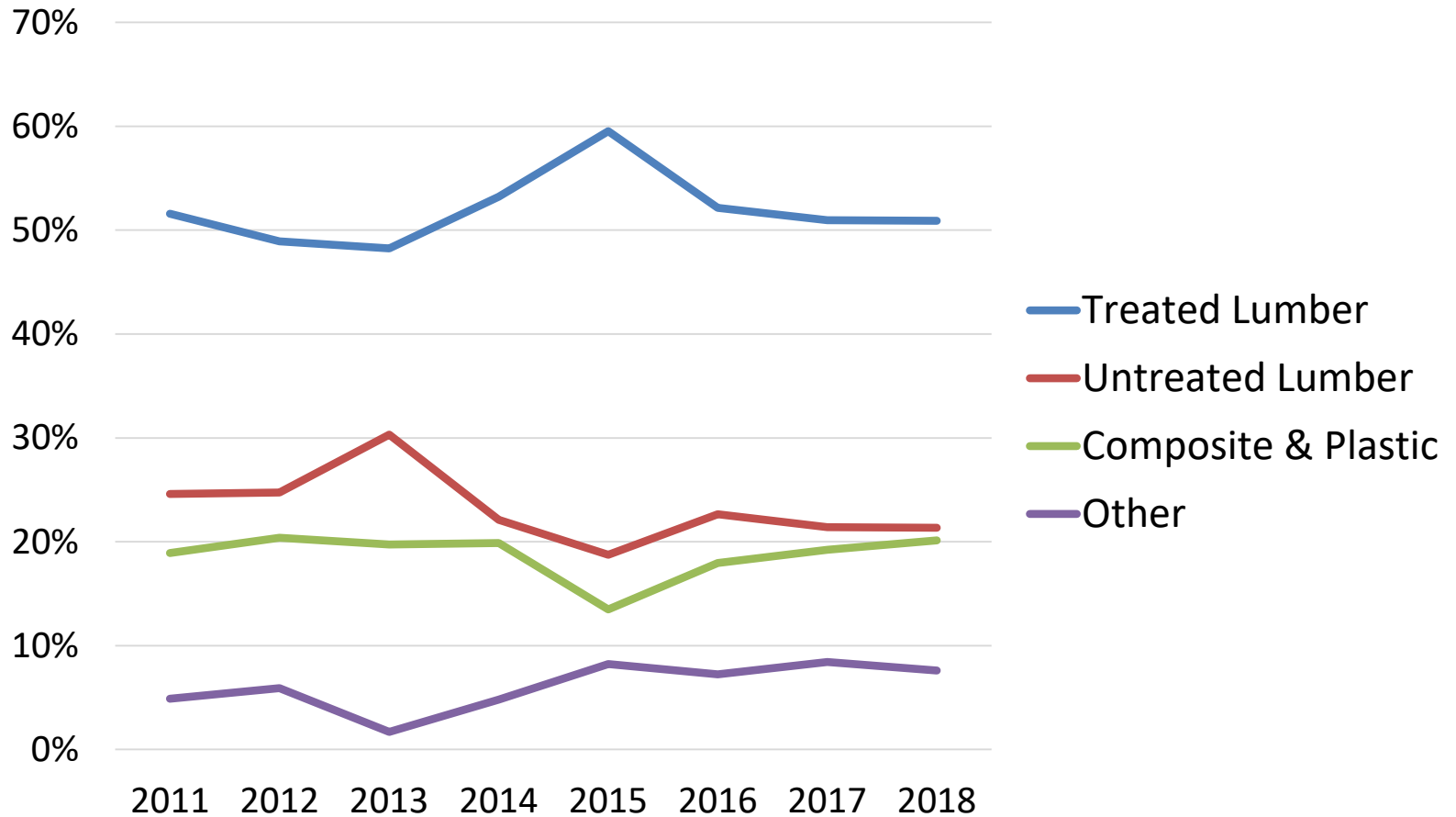
(millions of sf installed)



Raised Porch and Deck Material in New SFD Homes

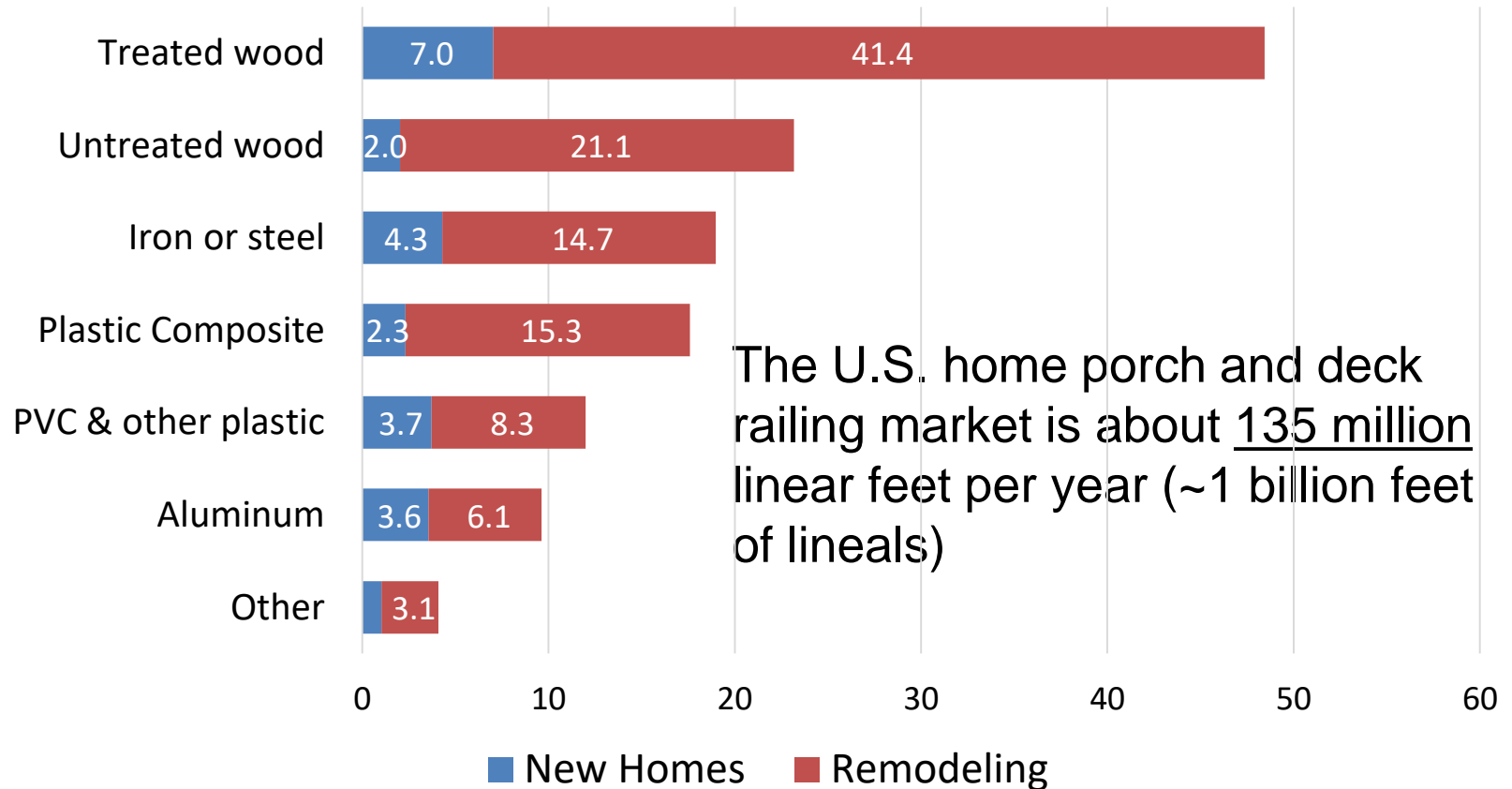


Porch and Deck Surfacing Material in U.S. Residential Remodeling

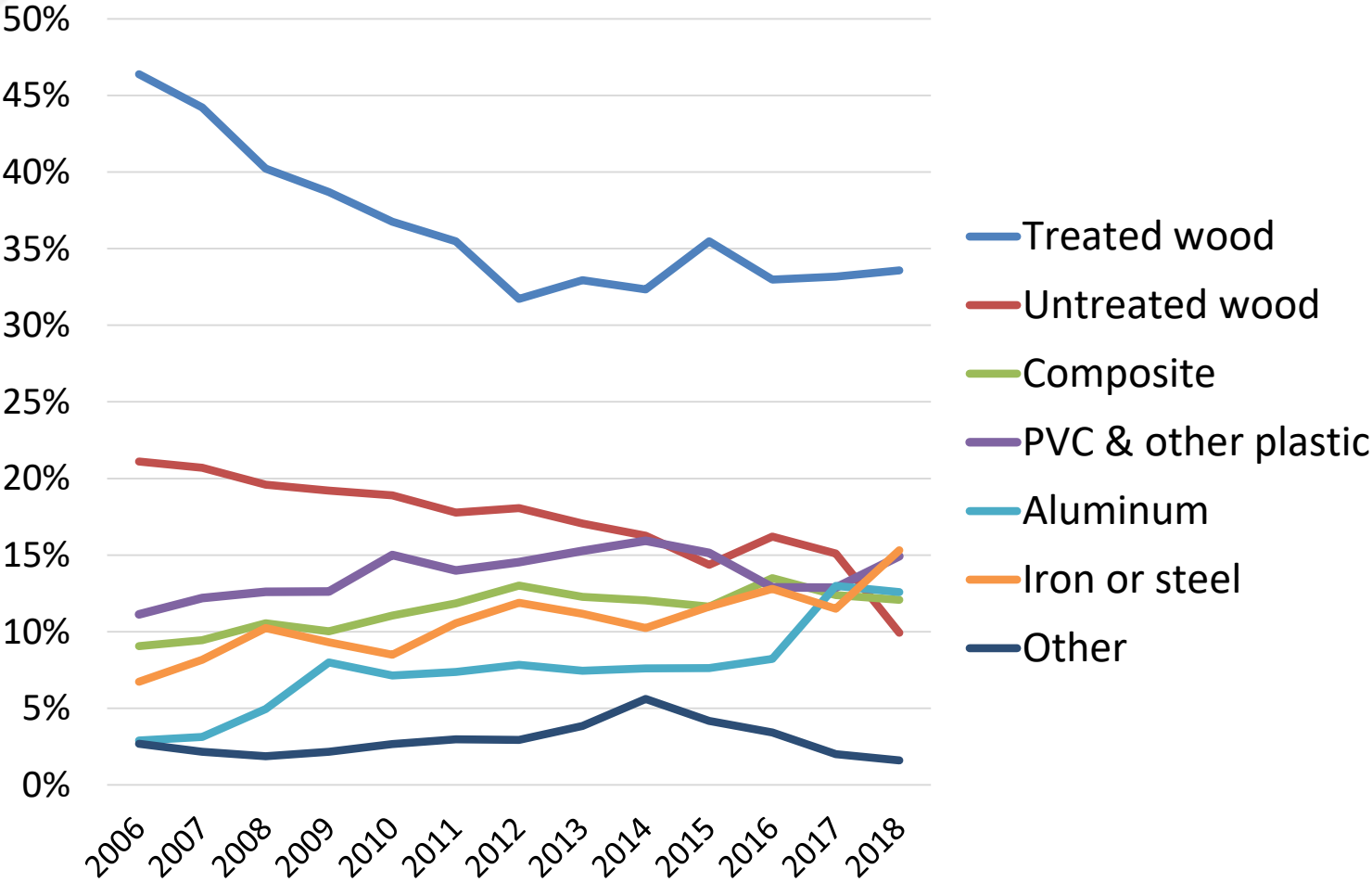


Porch and Deck Railing Systems on New Homes and Remodeling, 2018

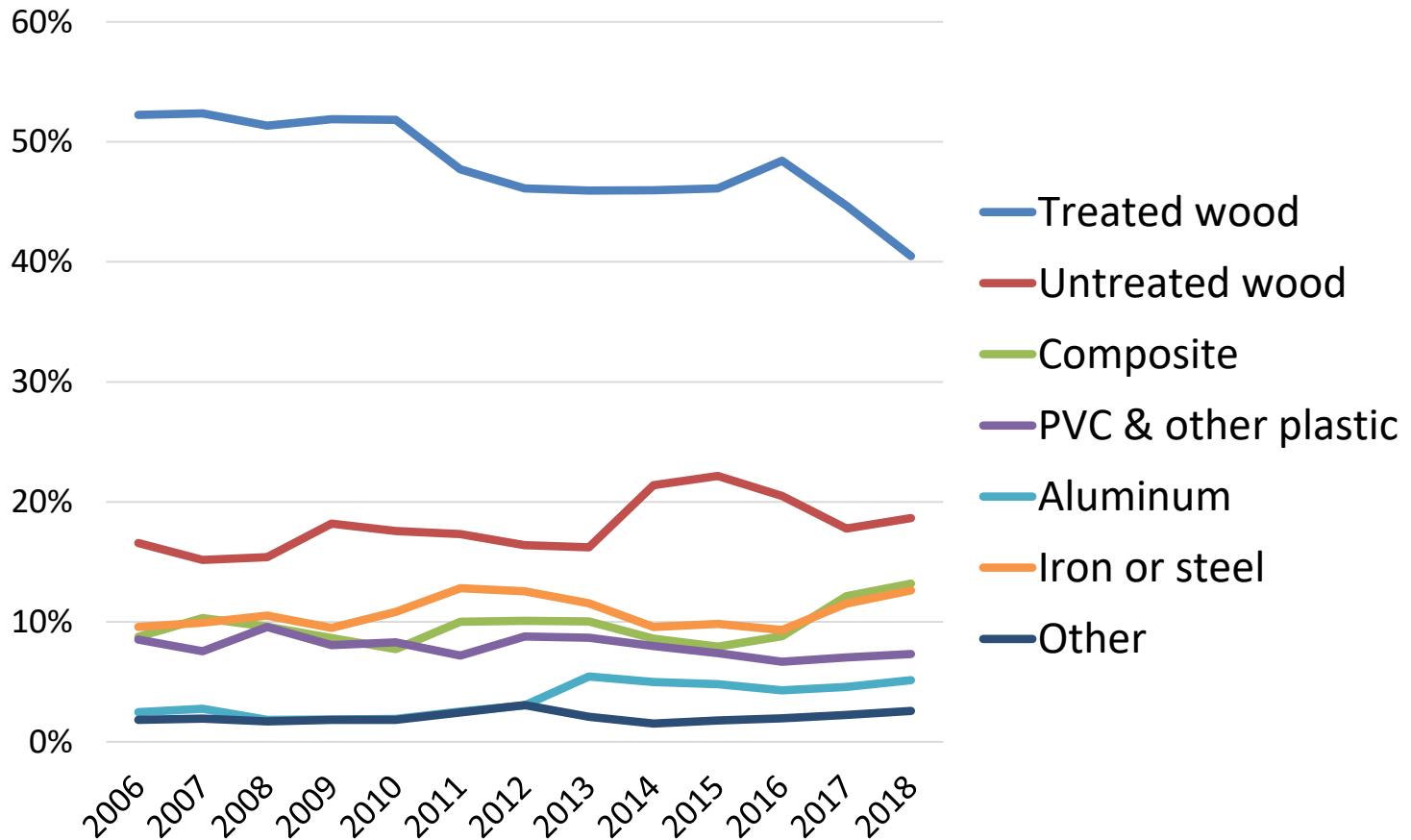
(millions of linear feet)



Deck and Porch Railing in New U.S. Homes

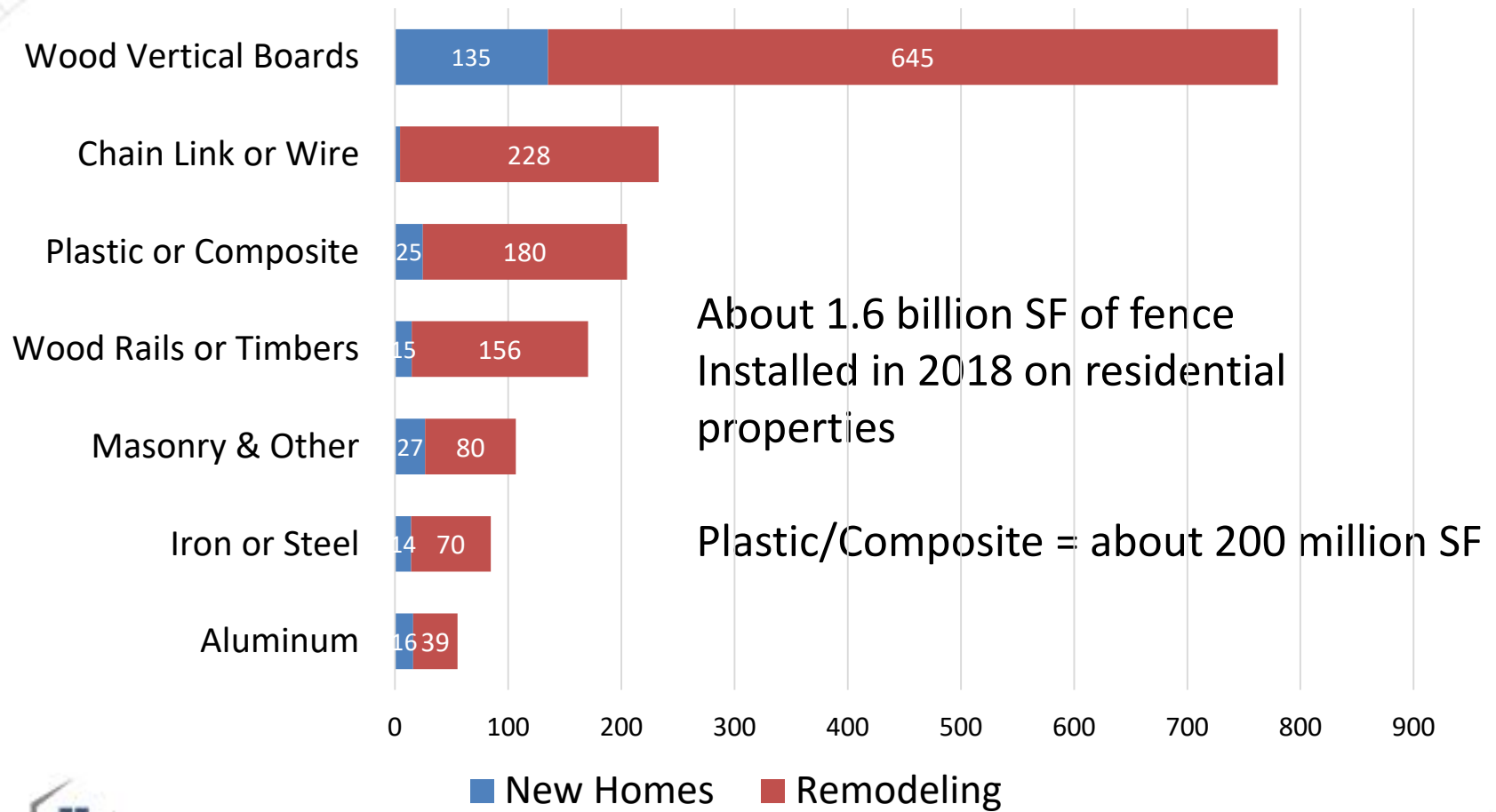


Deck and Porch Railing in U.S. Home Remodeling

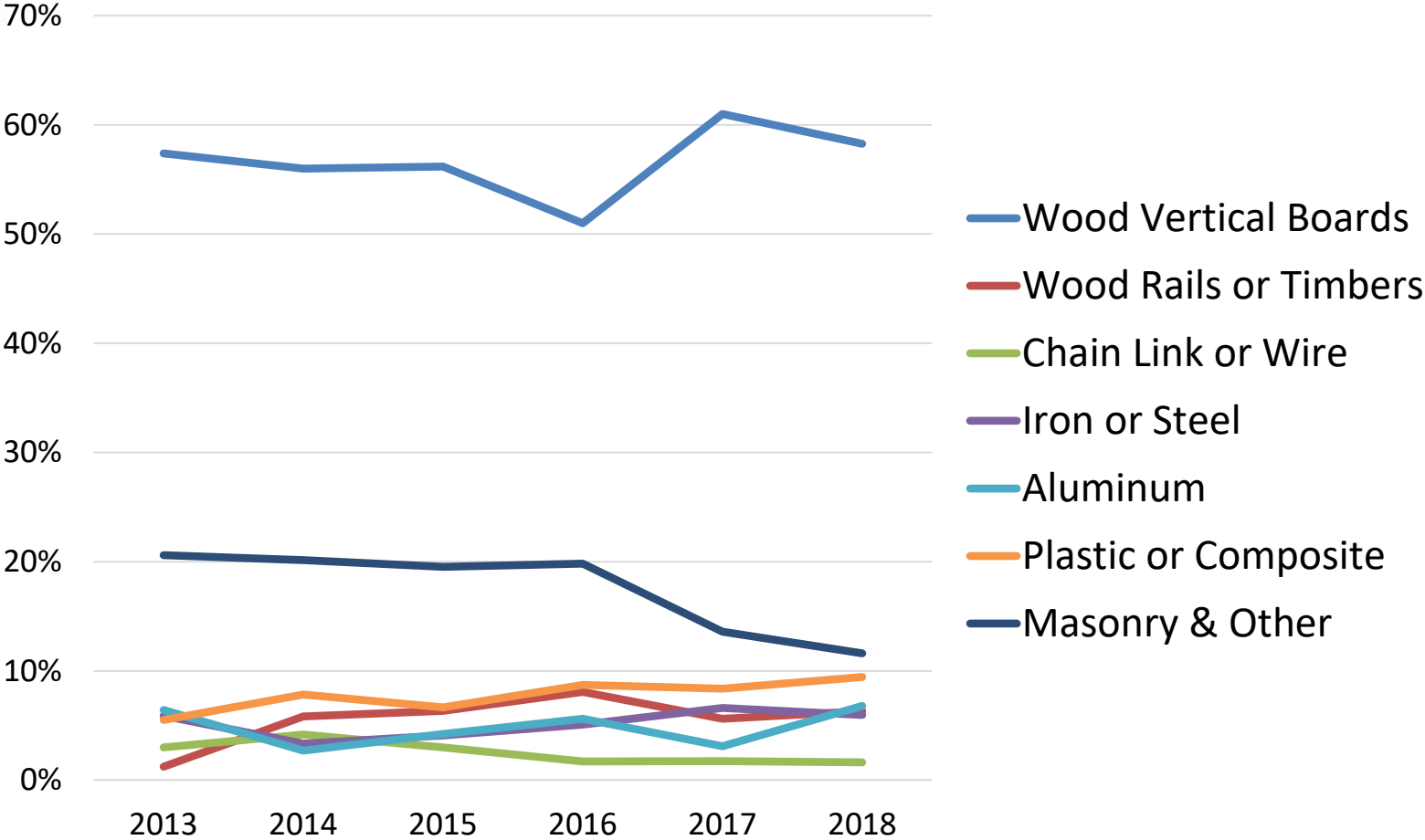


Fences & Privacy Walls Installed in New Homes and Remodeling, 2018

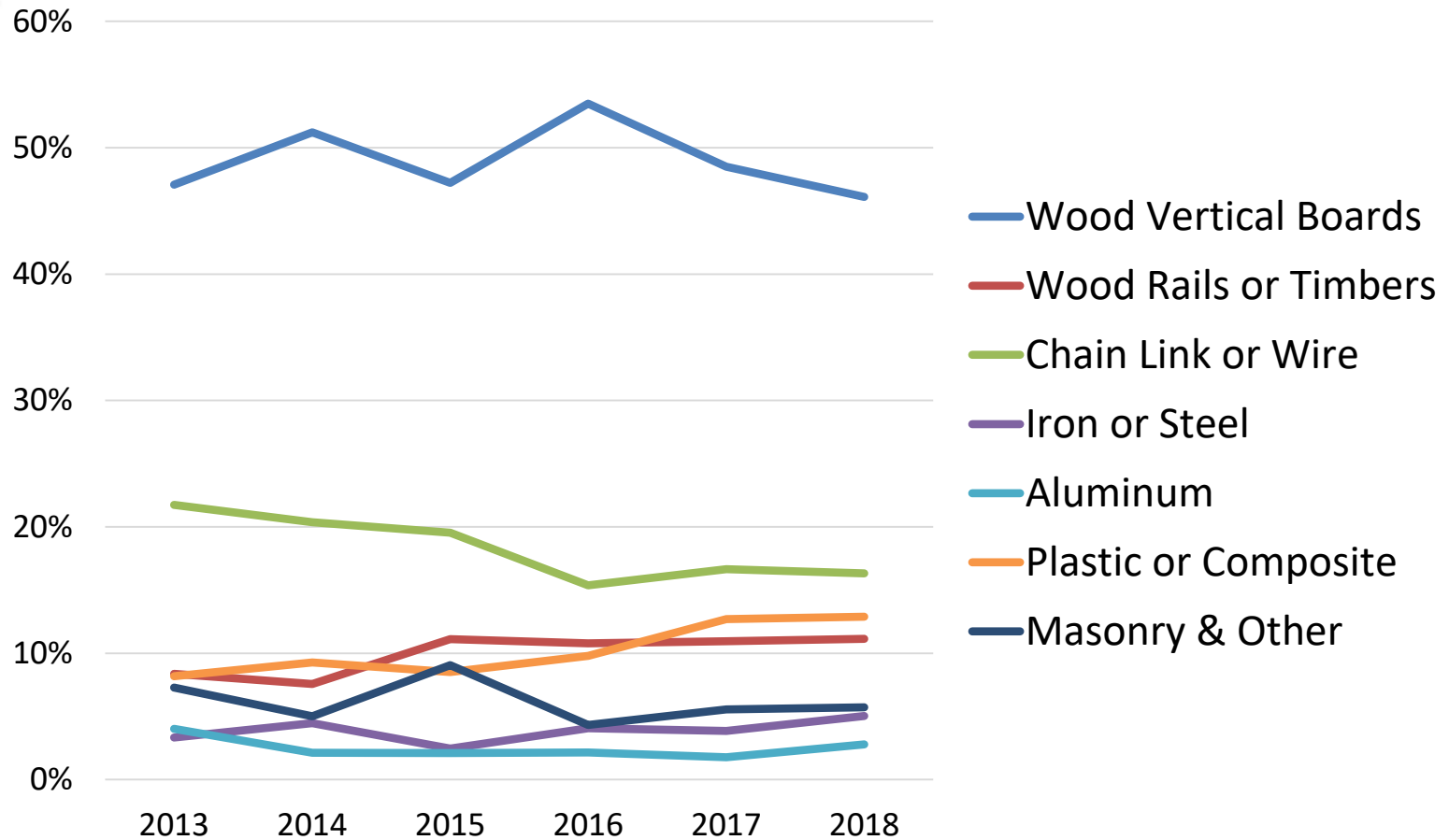
(millions of SF)



Fence & Privacy Wall Trends in New U.S. Homes



Fence & Privacy Walls Installed in U.S. Home Remodeling





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