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ENERGY STAR Window, Door, and Skylights

Welcome



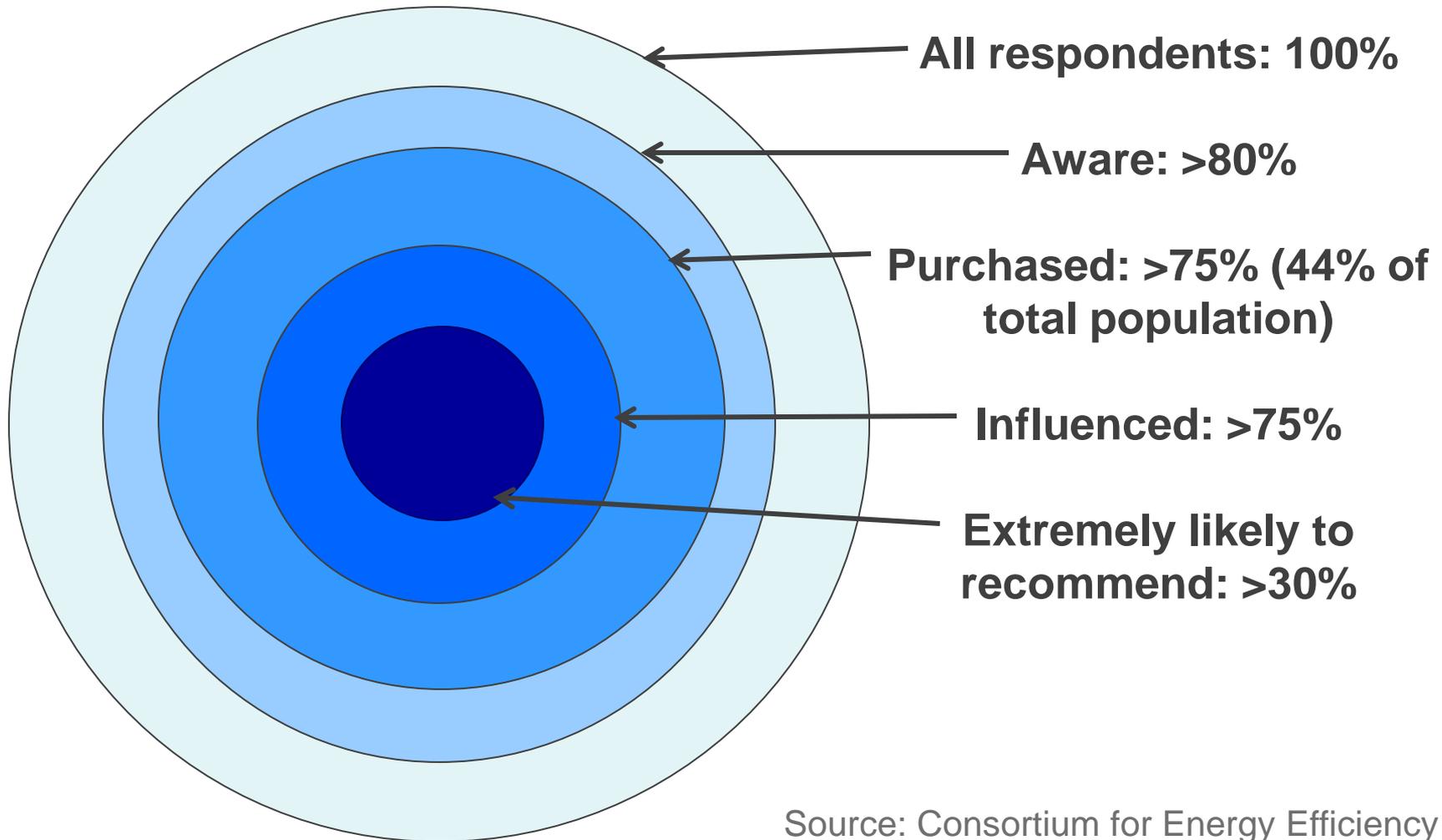
- **Thank you for participating**
- **Please mute phones and laptops**
- **Please hold questions until the end of the day**
- **Clarifying questions about slides may be asked during the presentations**
- **Meeting is not being recorded**
- **Presentations will be put on the www.energystar.gov/windows web site**

Agenda



- **Brand Recognition**
- **Code versus ENERGY STAR**
- **Guiding Principles**
- **Market Share**
- **Windows Criteria Over Time**
- **Program Elements Considered for Adoption**
- **Program Elements Remaining Unchanged**
- **New Additions to Program Requirements**

ENERGY STAR: A Powerful Brand

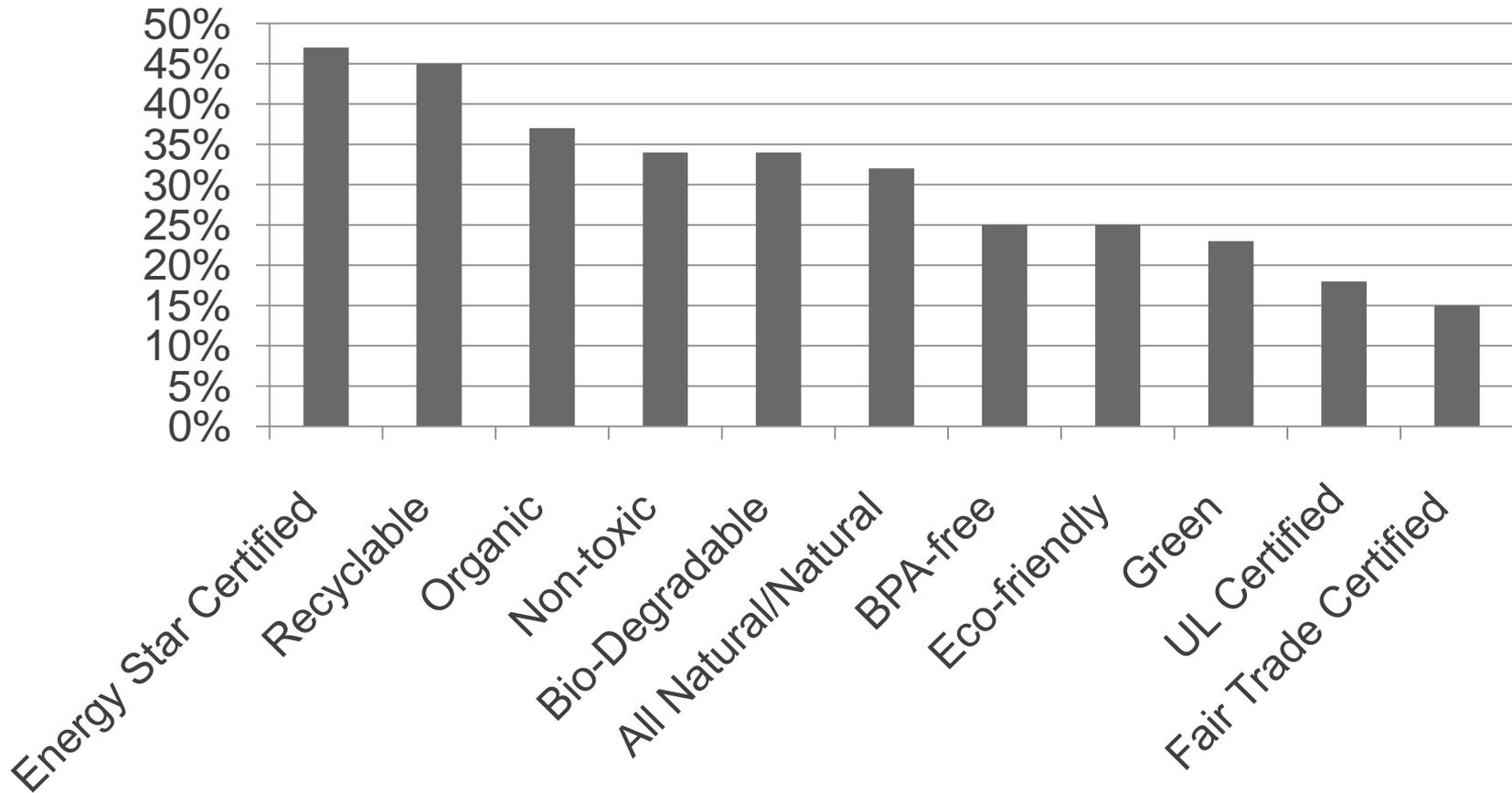


Source: Consortium for Energy Efficiency (CEE) Household Survey 2011

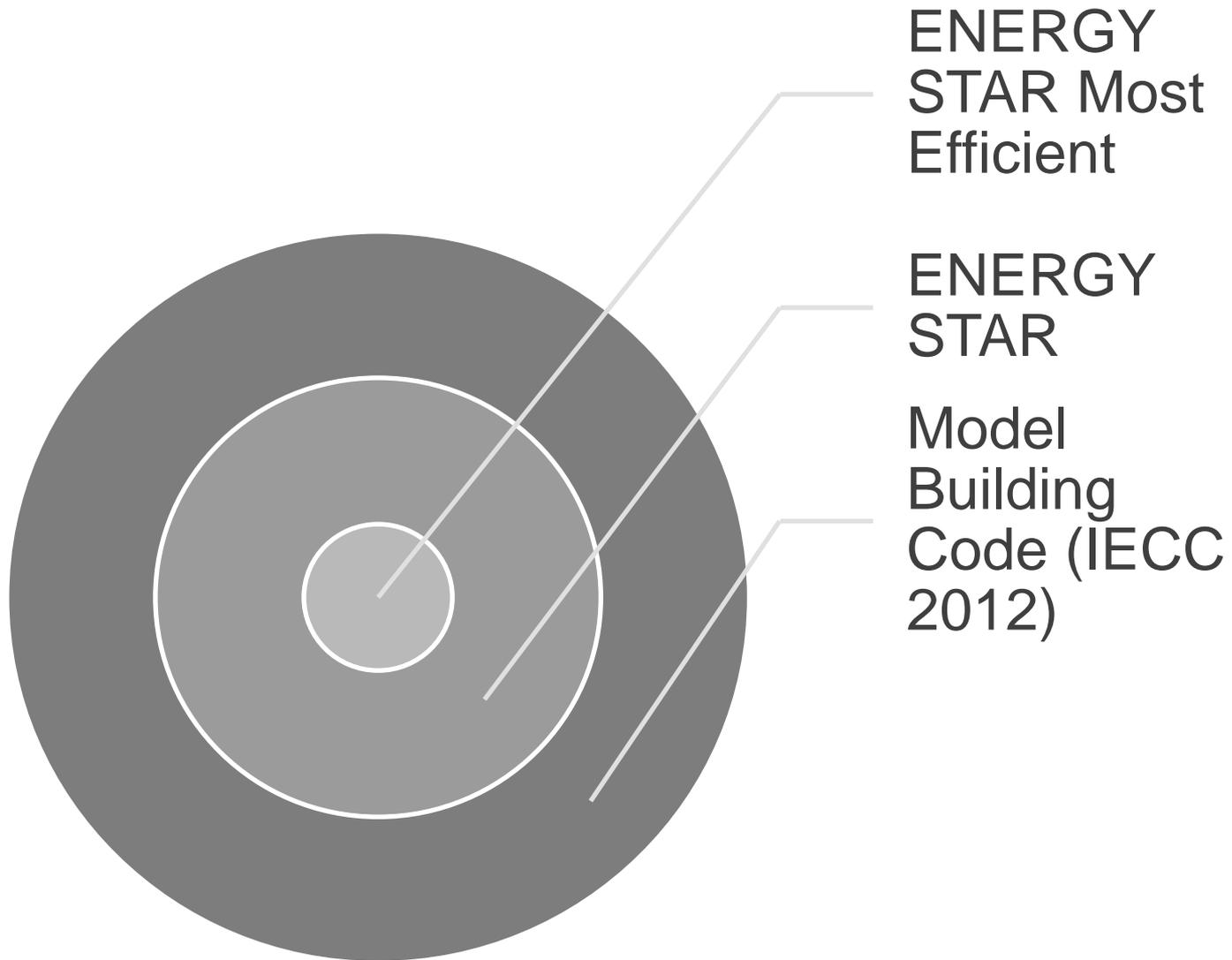
Brand Recognition



Purchased Product because of Label or Claim
(% of 18+ online population/base: heard of any description)



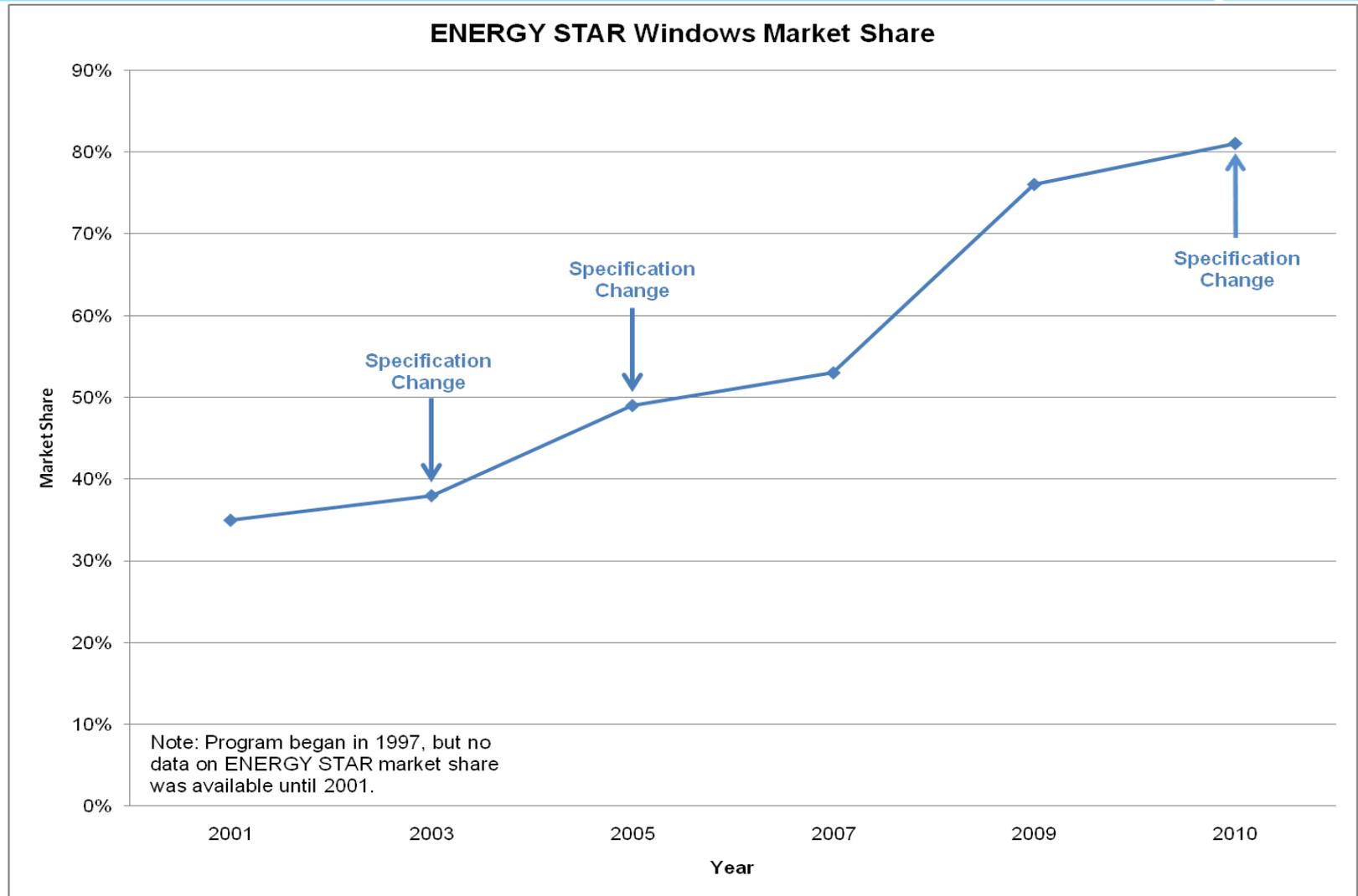
Code versus ENERGY STAR



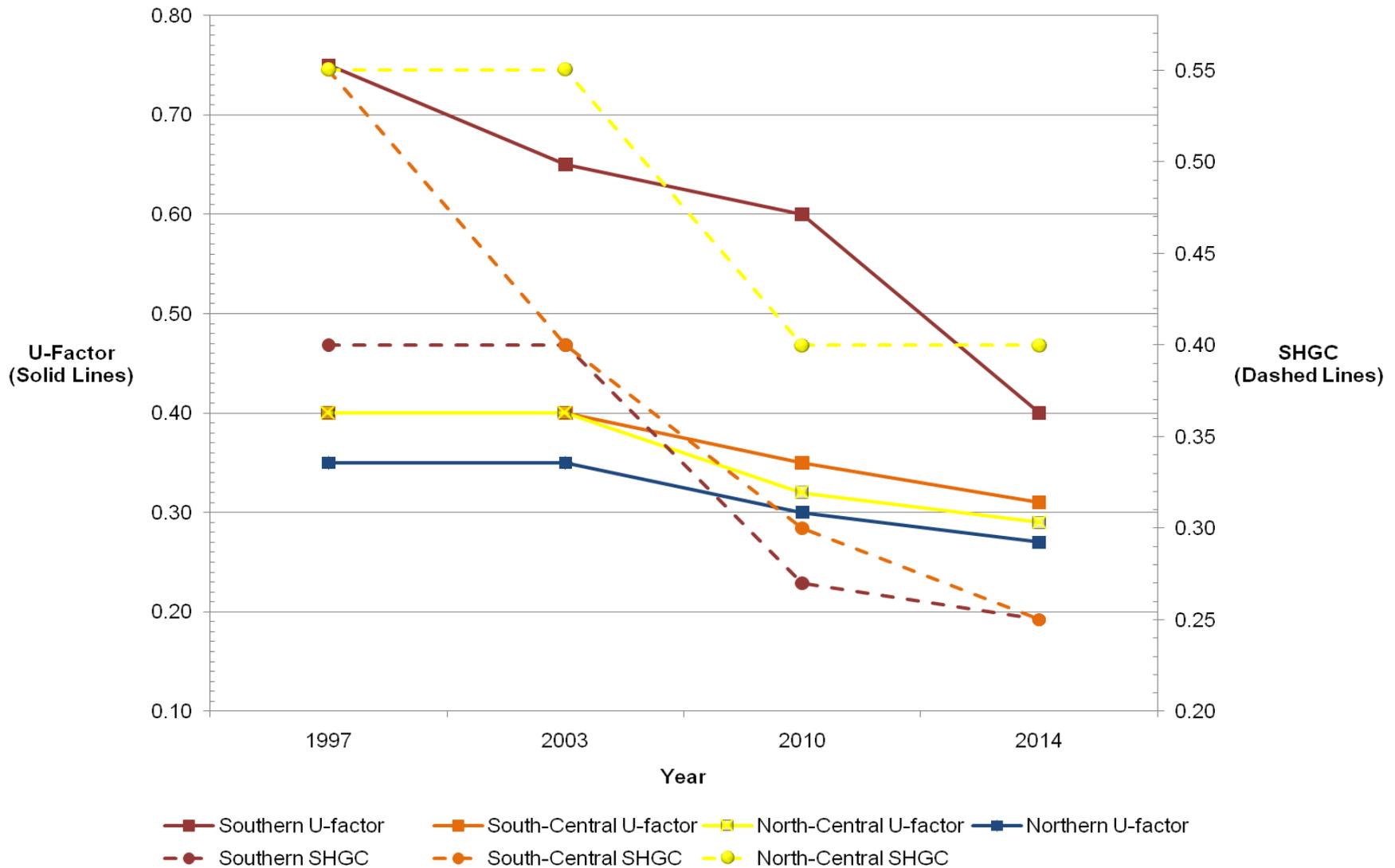
Guiding Principles

1. Significant national energy savings
2. Performance maintained or enhanced
3. Reasonable payback periods
4. Qualifying products are broadly available
5. Performance can be measured and verified with testing
6. Labeling effectively differentiates products

Market Share



ES Windows Criteria Over Time



Program Elements Considered for Adoption



- Structural Requirements
- Products Installed at High-Altitude
- Impact-Resistant Products
- Daylighting Criterion
- Lifecycle Analysis (LCA)

Structural Requirements



- NAFS-certifying organizations cited by stakeholders:
 - AAMA
 - WDMA
 - Keystone
 - NAMI
- Report summarizes comments received
- Structural requirements may be reconsidered for Version 7.0

High-Altitude Products

- Report summarizes findings from Version 5.0 criteria revision
 - < 3% of population at high elevation
 - “Sub-zones” too small for label
- Several manufacturers have found work-arounds
- Report summarizes comments, which largely support EPA decision

Impact-Resistant Products



- Small population
- Cost-effectiveness sought for most common products
- No database
- No manufacturers have volunteered data
- Impact-resistant products that meet the spec are available

Daylighting Criterion



- “Daylighting” is a property of a room or a whole building
- Evaluation of light-to-solar gain ratio
 - Does not correspond closely to VT
 - Does not appear to add value
- Additional SHGC and VT analysis to be highlighted later today

Lifecycle Analysis (LCA)



- Most stakeholders support exclusion at this time
- EPA agrees that industry participation is important
- EPA ENERGY STAR will focus on “use phase”
- EPA ENERGY STAR will work with other programs (some already at EPA) to address other phases of the lifecycle

Program Requirements



- Program Elements Remaining Unchanged
 - ENERGY STAR Climate Zones
 - Classification of Tubular Daylighting Devices
- New Additions to Program Requirements
 - Air Leakage – Matches 2012 IECC
 - ≤ 0.3 cfm/ft² for windows, sliding doors, skylights
 - ≤ 0.5 cfm/ft² for swinging doors
 - Installation Instructions
 - List of 7 elements to be included in instructions
 - Not a review and approve program, but could be “checkbox” item for verification testing

Installation Instruction Elements



- 1. List of hardware and tools needed**
- 2. Diagram & description of products and parts**
- 3. General guidance on removing old products and preparing opening (diagram optional)**
 - Lead paint hazard should be mentioned
- 4. Flashing details or refer to flashing manufacturers instructions – diagram required**
- 5. Shimming details (diagram optional)**
- 6. Sealing and weather proofing details (diagram optional)**
- 7. Variations of above based on product options**