





### **Building America**

High Performance Enclosure Strategies: Part II, New Construction

August 13, 2014

#### **Moderator:**

**Gail Werren – National Renewable Energy Laboratory** 

#### **Panelists:**

Peter Baker – Building Science Corporation
Vladimir Kochkin – Home Innovation Research Labs
Lois Arena – Steven Winter Associates

### Some Housekeeping Items

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### Agenda

- ✓ Welcome and Introductory Remarks
- ✓ Overview of Building America (buildingamerica.gov)
  - ➤ Gail Werren: National Renewable Energy Laboratory
- ✓ Presentations
  - Peter Baker: Building Science Corporation
  - Vladimir Kochkin: Home Research Innovation Labs
  - Lois Arena: Steven Winter Associates, Inc.
- ✓ Questions and Answers
- ✓ Closing Remarks
- ✓ Survey





# Overview of Building America



### Who are we?







Lawrence Berkeley National Laboratory























### What do we do?

### **Building America Top Innovations**

1.
Advanced
Technologies
& Practices

House-as-a-System Business Case

2.

3.
Effective
Guidance and
Tools

4.
Infrastructure
Development

Building Science Solutions

New Homes w/Whole-House Packages

High-Performance Home Solutions

Educating Professionals

Energy Efficient Components

Existing Homes w/ Whole-House Packages

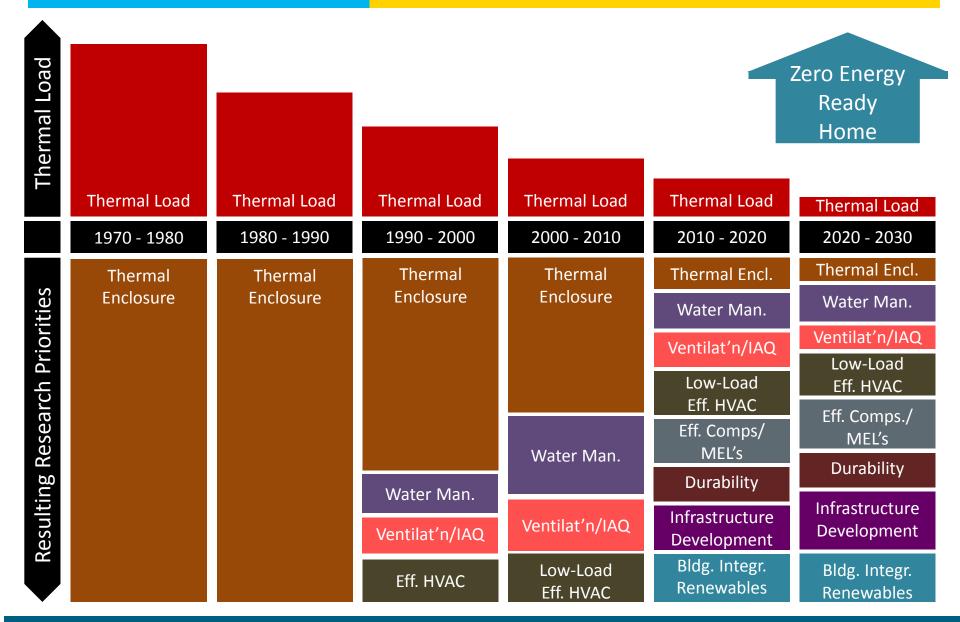
High-Performance Home Metrics Recognizing Value in Transaction
Process

Assured Health and Safety Whole-House Program Support

**Research Tools** 

Informing Code/Standards Process

### What are we researching?



### What do we achieve?

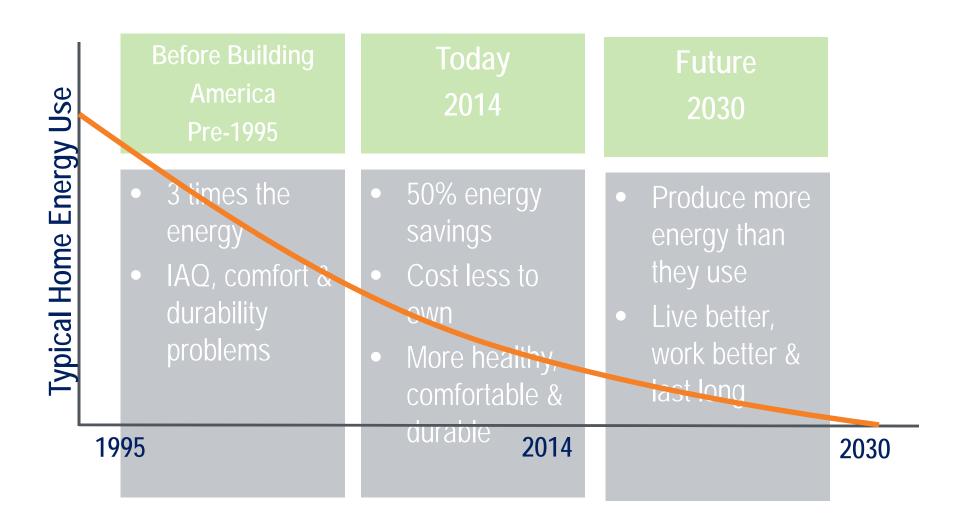
Before Building
America
Pre-1995

Today 2014

### Future 2030

- 3 times the energy
- IAQ, comfort, & durability problems
- 50% energy savings
- Cost less to own
- More healthy, comfortable, & durable
- Produce more energy than they use
- Live better, work better, & last longer

### What do we achieve?



### Where can I find resources?

**Building America Solution Center:** 

Proven Innovations from World-Class Research

... at Your Finger Tips



https://basc.pnnl.gov/



### **Building America Webinar Series - 2014**

Topic 6: High Performance Enclosure Strategies: Part II, New Construction

# Peter Baker, Senior Associate, Building Science Corporation



Peter Baker is responsible for providing building forensics and design reviews, setting enclosure design standards, as well as working as project manager for the Building America Program. He is responsible for conducting field investigations of commercial and residential buildings with assembly or system problems, providing explanations of the identified problems and developing retrofit recommendations

# Vladimir Kochkin, Director of Applied Engineering, Home Innovation Research Labs



Vladimir Kochkin oversees engineering research programs at Home Innovation Research Labs on the structural, environmental, and energy performance of residential construction. He also manages our ANSI process for the development and maintenance of the National Green Building Standard™. - See more at: http://www.homeinnovation.com/about/blog?auth=vladimir%20kochkin#sthash.qXnoQ07B.dpuf

# Lois Arena, Senior Engineer, Steven Winter Associates, Inc.



Lois Arena is employed by Steven Winter Associates, Inc., with over 19 years of experience in the building science field. She has extensive experience with new and existing residential buildings including on-site testing and diagnostics, design assistance, and energy modeling. Lois currently works on the DOE's Building America program and conducts advanced systems research. She received her master's degree in engineering from the University of Colorado's Building Science Program and holds Passive House, BPI, and RESNET certifications.



### Time for Q&A

Cladding Attachment Over Thick Exterior Insulating Sheathing

Peter Baker

pbaker@buildingscience.com



NextGen Advanced Framing
Vladimir Kochkin
vkochkin@nahbrc.com

In-Field Hygrothermal Performance of High R-Value Walls in Climate Zones 5

Lois Arena

larena@swinter.com





### Survey

- How did we do?
- Your feedback is important!



# Up Next... 3pm ET

### September 24, 2014

Multifamily Ventilation Strategies and Compartmentalization Requirements



### Thank You!

# PDF copies of the presentations in this Webinar are available at:

http://energy.gov/eere/buildings/buildingamerica-meetings#current

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