



Building America

Retrofitting Central Space Conditioning Strategies for Multifamily Buildings

July 16, 2014

Moderator:

Gail Werren – National Renewable Energy Laboratory

Panelists:

Jordan Dentz – The Levy Partnership

Hugh Henderson – CDH Energy Corporation

Eric Ansanelli – The Levy Partnership

Peter Ludwig – Elevate Energy

Russell Ruch – Elevate Energy

Some Housekeeping Items

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- A video/audio recording of this Webinar and the slide decks will be made available at:
- <http://energy.gov/eere/buildings/building-america-meetings#current>

Agenda

- ✓ Welcome and Introductory Remarks
- ✓ Overview of Building America (buildingamerica.gov)
 - Gail Werren: National Renewable Energy Laboratory
- ✓ Presentations
 - Jordan Dentz: The Levy Partnership
 - Hugh Henderson: CDH Energy Corp.
 - Eric Ansanelli: The Levy Partnership
 - Peter Ludwig: Elevate Energy
 - Russell Ruch: Elevate Energy
- ✓ Questions and Answers
- ✓ Closing Remarks
- ✓ Survey

Overview of Building America



Who are we?

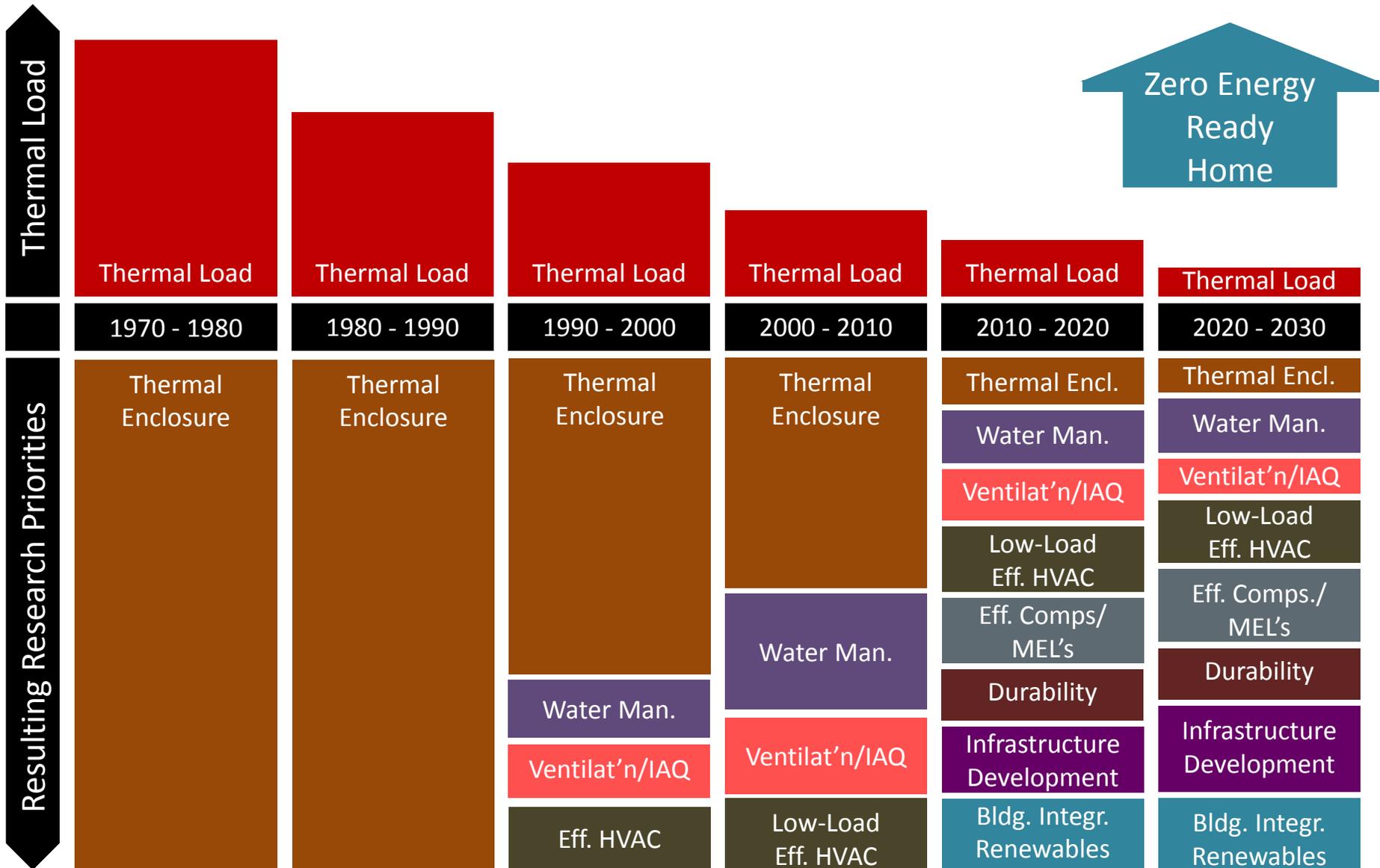


What do we do?

Building America Top Innovations



What are we researching?



What do we achieve?

Before Building
America
Pre-1995

- 3 times the energy
- IAQ, comfort, & durability problems

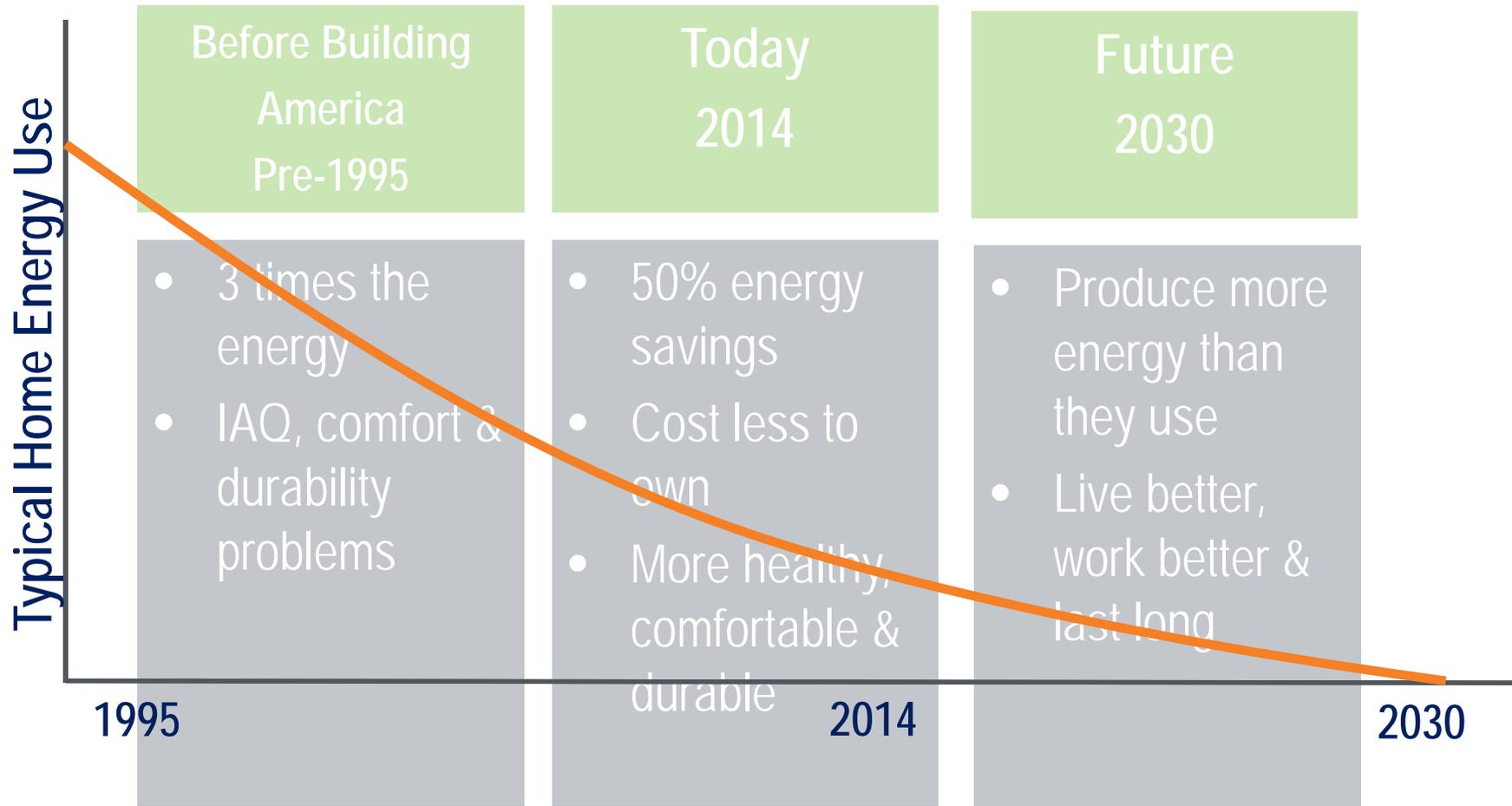
Today
2014

- 50% energy savings
- Cost less to own
- More healthy, comfortable, & durable

Future
2030

- 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 5: Retrofitting Central Space Conditioning Strategies for Multifamily Buildings

Jordan Dentz and Hugh Henderson (Advanced Residential Integrated Energy Solutions)



Jordan Dentz is a vice president with The Levy Partnership, Inc., leaders of the Advanced Residential Integrated Energy Solutions (ARIES) Building America team. He develops and manages building science research projects. He holds degrees in building technology from the Massachusetts Institute of Technology.



Hugh Henderson is a founding principal at CDH Energy Corp. , an energy consulting firm that evaluates energy technologies in a wide variety of applications through field measurement and simulation. He leads investigations into combined heat and power, cooling, and dehumidification in residential and commercial buildings. He is active in several ASHRAE committees and formerly worked at the FSEC and Carrier Corp.

Eric Ansanelli, Mechanical Engineer, The Levy Partnership



Mr. Ansanelli has gained fluency in steam heating through several years' experience in energy auditing, modeling and consulting in the New York area. His educational background combines engineering, ecology, and psychology.

Peter Ludwig and Russell Ruch, Elevate Energy (Partnership for Advanced Residential Retrofit)



Peter Ludwig leads the large and growing team that helps buildings become more energy efficient. As a native New Yorker, he understands firsthand how housing costs can affect families and communities, and this experience ensures his programs have a pragmatic focus on savings for building owners and affordability for renters. Peter's primary role is to refine and grow existing programs, find new opportunities for underserved markets, and manage and develop his staff—which has grown from four to nearly 20 members.



Russell Ruch is a senior energy analyst at Elevate Energy, which provides energy efficiency services for multifamily building owners in the Chicago region. He has co-authored two papers published by Building America on strategies for retrofitting multifamily buildings, including a study of centrally metered hydronic systems. Russell is a BPI Certified Building Analyst.

Time for Q&A

Hydronic Heating Retrofits for Low-Rise Multifamily Buildings

Jordan Dentz

Hugh Henderson

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Steam Systems, Retrofit Measure Packages, Hydronic Systems

Peter Ludwig and Russell Ruch

Peter.Ludwig@elevateenergy.org

Russell.Ruch@elevateenergy.org

Thermostatic Radiator Valve Evaluation

Jordan Dentz and Eric Ansanelli

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Survey

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

Up Next...

August 13, 2014 3pm ET

High Performance Enclosure Strategies: Part II, New Construction

The webinar will focus on effective strategies to address moisture and thermal needs of high performance building envelopes.

Thank You!

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

<http://energy.gov/eere/buildings/building-america-meetings#current>

Visit: *www.buildingamerica.gov*

