



Zero Net Energy Building Controls Characteristics, Energy Impacts, and Lessons

October 12-14, 2016
Getting to Zero National Forum 2016
Denver, CO

Connect to what's next™

www.caba.org

CABA (Continental Automated Buildings Association)

Vision

- CABA advances the connected home and intelligent buildings sectors.



Mission

- CABA enables organizations and individuals to make informed decisions about the integration of technology, ecosystems and connected lifestyles in homes and buildings.




<p>AUSTRALIA BARBADOS BELGIUM BRAZIL CANADA CHINA COLUMBIA CROATIA ENGLAND FINLAND ESTONIA FRANCE GERMANY INDIA ITALY</p>		<p>JAPAN KOREA MEXICO PANAMA POLAND RUSSIA SINGAPORE SOUTH KOREA TAIWAN THE NETHERLANDS UNITED ARAB EMIRATES UNITED KINGDOM USA VENEZUELA</p>
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CABA extends its reach to a Global Market with 350+ members and 25,000+ industry professionals worldwide.

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CABA Board of Directors


















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About this Research “Zero Net Energy Building Controls”

- CABA commissioned New Buildings Institute (NBI) to conduct this research with a collaborative framework that engaged funders from a cross-section of building technology solution providers.
- Research Objective: Characterize Controls Technology & Strategies in Zero Net Energy (ZNE) Buildings.



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CABA Members are Collaborating & Funding this Research:



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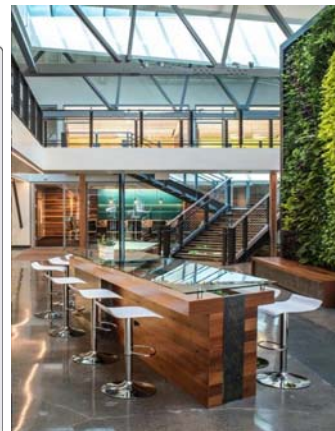
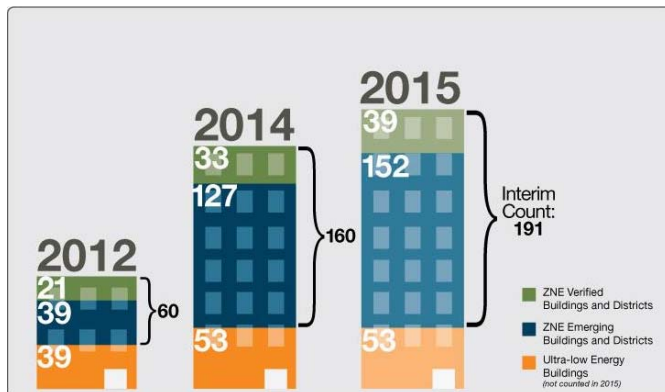
Background – Getting to Zero Net Energy Buildings

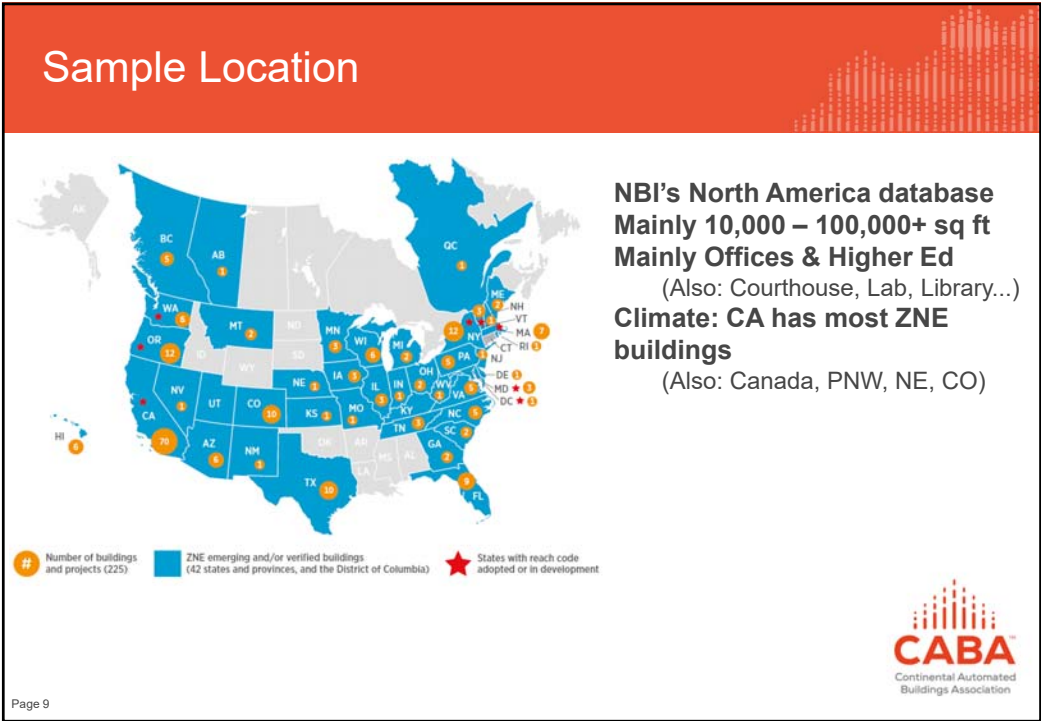
A Zero Net Energy (ZNE) building generates as much energy as it consumes annually. Also known as Net Zero Energy.

- **Zero** = 'nothing'
- **Net** = On-site Energy Production (renewable) minus Energy Use, over 1 year
- **Energy** = All energy (electric, gas, steam, liquid fuel etc.) consumed on site



Sample Group





Research Overview

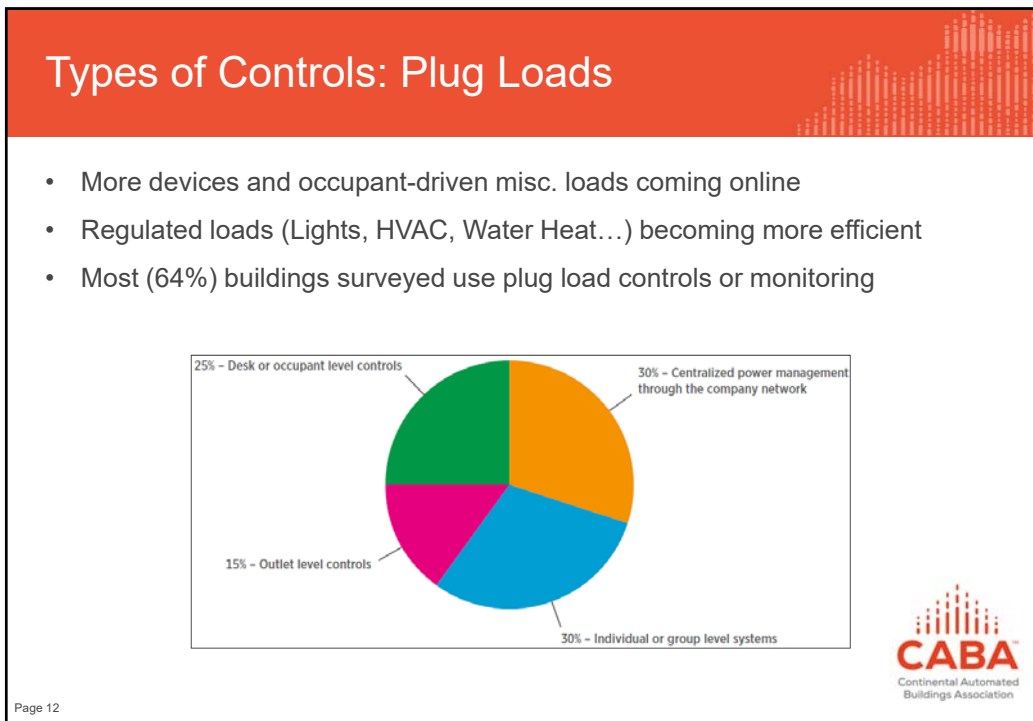
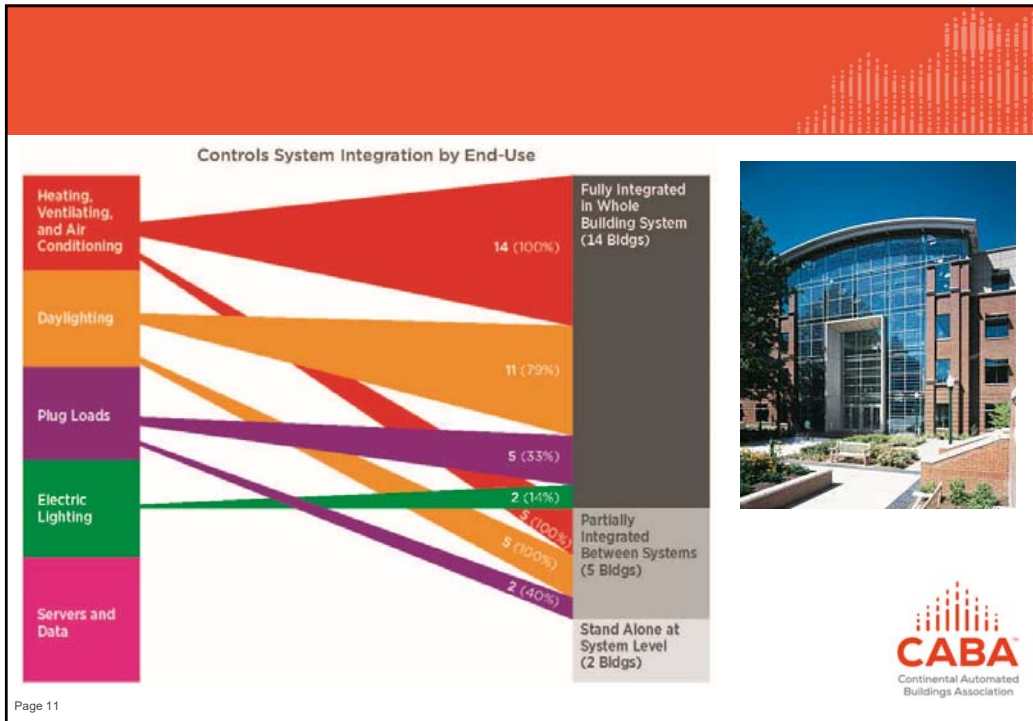
Investigate Building Energy Monitoring & Controls Systems in Low-Energy and ZNE Buildings

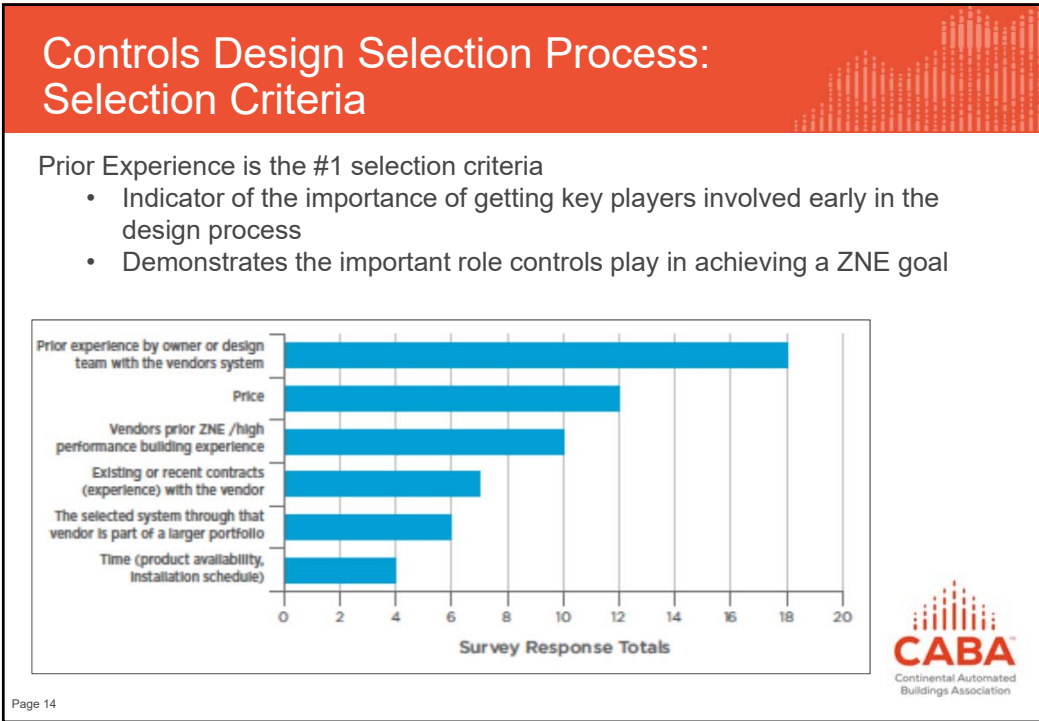
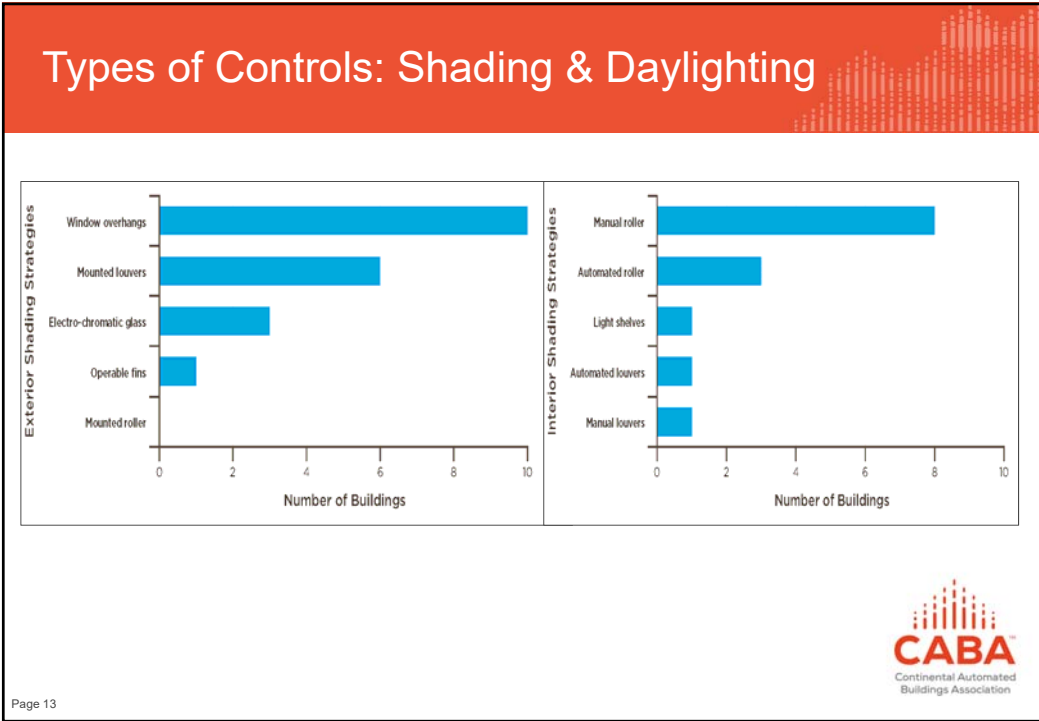
Areas of inquiry and participants:

1. **The Selection and the System.** What did they choose and why.
Design Firms
2. **The Energy Impact.** Savings assumptions in modeling and attribution in use.
Design Firms and Operators
3. **The Use and User Experience.** How is it being used, what is effective and lacking.
Operators and Occupants

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- ZNE is driven by good design, High Performance Systems and Shading**


- Controls are at the Nexus of Energy Performance**


- New Roles & Old Relationships**


- Occupants are a new Operator**





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CONTACT CABA

**Continental Automated Buildings Association
(CABA)**

**1173 Cyrville Road, Suite 210
Ottawa, ON K1J 7S6
613.686.1814
Toll free: 888.798.CABA (2222)
Fax: 613.744.7833
caba@caba.org
www.CABA.org
www.twitter.com/caba_news
www.linkedin.com/groups?gid=2121884**

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