Welcome to the 2018 Zero Energy Developments

A room full of experts, enthusiasm and exchange

Cathy Higgins, NBI Research Director

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We have a fantastic group of ZEDx Presenters – and you have a part as well!
Danielle Vitoff
Navigant Consulting, Inc.

Ellen Steiner
Opinion Dynamics

David Kaneda
Integral Group

Amanda Bogner
Energy Studio, Inc.

Brett Bridgeland
Seventhwave

Bill Maclay
Maclay Architects

Mike Collignon
Green Builder Coalition

Cathy Higgins
New Buildings Institute
Polling: Getting your perspective

- Phones out
- In silent
- Text app open

It’s anonymous

Richardsville School, Bowling Green, KY
Leslie Shao Ming Sun Field Station Woodside, CA
IDeAS Building, San Jose, CA
IAMU Office Building, Ankeny, IA
The 2018 Getting to Zero Status Update

Cathy Higgins
New Buildings Institute
What's in a name?

Emerging or Verified

Buildings Net Plan Ready Nearly

ZNE Nearly ZERO Energy

Emerging or Verified
Growth in Zero Energy Buildings

Growth by Construction Year

- ZE - Verified
- ZE - Emerging

700% growth in GtZ List since 2012

Growth in NBI’s Getting to Zero List

Updated for April GtZ Forum

- ZNE - Emerging: 443
- ZNE - Verified: 76
- Grand Total: 519

2018: 482 total

2016: 53

2012: 39
Spreading Success

California 243 161%
Northeast (NEEP) 74 103%
Southeast (SEEA) 50 81%
Southwest (SWEEP) 43 105%
Northwest (NEEA) 38 89%
Midwest (MEEA) 33 41%
South-Central (SPEER) 13 63%
Other 10 67%
Canada 15 50%
Energy Performance - *how low can they go?*

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<tr>
<th></th>
<th>Office</th>
<th>Education</th>
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<tr>
<td>CBECS 2012</td>
<td>52.7</td>
<td>50.8</td>
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<td>ZE - Verified</td>
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18 – 28 EUI

ZERO and beyond
What’s trending

Larger Buildings
44% of projects and 88% of floorspace are > 50,000 sf

Private Sector Growth
Private ownership is now 46% with 26% for-profit

Diversity of Types
66 building types but 70% are schools, office & multifamily
>60 ZE Building types
many building types are getting to zero but

Schools Rule

Discovery Elementary School, Arlington VI
Public efforts spur private attention to ZE

Nearly 50/50 public and private ZE ownership now
Announcing: NBI’s Zero Carbon Schools Initiative!

Wyck Knox, Principal Architect, VMDO

There isn’t a reason we can’t use public school construction anywhere in the U.S. to advance net zero, says Knox. Cost is certainly not the reason.

Savings to Salaries!

Architect: VMDO  |  MEP/ZE Design: CMTA
Recognition Section

From GtZ Status Update 2018:

- 70 Mechanical/Electrical Firms
- 101 Architecture Firms

Top ZE MEP Companies

- Integral Group
- CMTA Engineers
- PAE Engineering
- Stantec
- KPFF Consulting Engineers
- Interface Engineering

Top ZE Architect Firms

- EHDD
- Maclay Architects
- HGA Architects
- HMC Architects
- ZGF Architects
- BNIM
- Opsis Architecture

Photo: C. Higgins
With recognition to School House Rock
Please Stand Up

List Attendees

Slide photos from Chris Pyke
<table>
<thead>
<tr>
<th>Zero Energy List Attending</th>
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<tr>
<td>AKF Engineering</td>
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<td>American Geophysical Union</td>
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<td>United Therapeutics</td>
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<td>Washington University in St. Louis</td>
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<td>WSP Flack + Kurtz</td>
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Please Stand Up

Everyone!
Announcements

Reception

Time

"The secret of change is to focus all of your energy, not on fighting the old, but on building the new."

Socrates