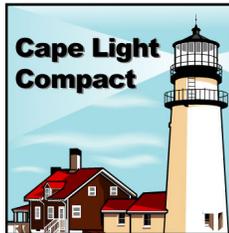




new buildings institute  
progress report  
2013 – 2014

thank you to our supporters



# a message from nbi ceo and board president

Engineering innovator Peter Rumsey recently wrote about the “beginner’s mind” in an NBI blog. The idea, says Peter, is that children or beginners have an advantage when problem solving because they come from a blank-slate perspective. No prior experiences or conventions influence their approaches, thus allowing uninhibited innovation to drive optimal outcomes.

There is no doubt that climate change is the greatest challenge of our time and requires new thinking about approaches that will curb carbon emissions and halt the serious life-changing impacts of a warming planet. As buildings account for nearly 40% of the carbon emissions and over 70% of the electricity consumption in the U.S., increasing their energy efficiency is critical to altering the current problematic course. How then do we apply a beginner’s mind to rethinking approaches to the built environment?

Thanks to a leading group of advocates—including designers, policymakers, building owners and others—we have already begun to answer this question with building projects that are achieving extremely low energy use, even zero net energy (ZNE) performance. ZNE buildings are so energy efficient they can be powered by on-site renewable resources and even create excess energy that can offset carbon-based power sources.

## OUR SIGHTS ARE SET ON 2030 – THE YEAR WHEN ALL BUILDINGS ARE TARGETED TO BE ZERO NET ENERGY.

New Buildings Institute (NBI) has been at the forefront of this movement, working to accelerate adoption of next practices in energy performance for the built environment. The ultra-high efficiency of ZNE buildings represents a near-term, viable solution to help curb the impacts of climate change and create more resilient spaces and communities that can stand up to extreme weather events. We envision a future where high performance buildings represent a positive driver for local economies, creating jobs and saving homeowners and businesses money on energy expenses.

While ZNE buildings are not our only focus, we have lately seen a confluence in our work toward zero. Deep energy retrofits, measured performance outcomes, advanced design solutions, energy codes and policies—the core areas of NBI’s programs—all relate to this ultimate goal of achieving wide-scale adoption of ZNE in the next few decades. ZNE cuts across everything with an ambitious goal and definitive target that owners can describe, design teams can strive for and occupants desire.

We call our initiatives “Getting to Zero” because we recognize that such an achievement is not a single point in time but an ongoing journey with multiple approaches and strategies. We have expanded our programs and services to work directly with organizations that are aiming to take ZNE buildings to scale. Our research, software, training, facilitation, policy and program efforts are designed to provide the practical approaches that will get us there.

A transformation in favor of ZNE buildings will not only reduce operating costs and create better places to work, live, and learn; it will have positive environmental impacts that benefit everyone. For nearly two decades NBI has been a catalyst for innovation, driving research, developing solutions, and advancing industry practices and policies that deliver positive change in the built environment. With a beginner’s mind and openness to pushing boundaries of what is possible, we will continue to work collaboratively where the need is greatest, with zero net energy buildings as our next logical guiding star.

*Ralph DiNola, Chief Executive Officer, New Buildings Institute, and  
David B. Goldstein, Natural Resources Defense Council, NBI Board President*

## Getting to Zero in the Built Environment

### ZNE Status Update and Online Database Provide Trends and Profile Buildings

NBI's groundbreaking research—the **Getting to Zero Status Updates** (<http://newbuildings.org/2014-zne-update>)—on trends, features, energy performance and tally of zero net energy buildings (ZNE) in North America offers the most comprehensive view of the landscape for ZNE. ZNE represents innovation in design, construction and operations that result in energy efficient structures that consume only as much energy as can be produced on-site with clean, renewable resources over the course of a year.

Building on this research, NBI continues to track and verify ZNE status with its 2015 list showing 191 verified and emerging projects, 24% of which are privately owned—a key trend toward greater adoption of zero net energy performance. Case studies on many of these projects and other ultra-low energy buildings can be found in the newly released **Getting to Zero Buildings Database** (<http://newbuildings.org/getting-to-zero-buildings-database>). This one-of-a-kind database documents best practices for over 280 high performance buildings.

### California Action Planning, Communications Spur Early Adopter Leadership

California leads the nation with the highest number of ZNE-verified buildings. NBI staff has been working to help advance ZNE in the Golden State, working with the California Public Utility Commission to support development and implementation of a commercial ZNE Action Plan and technical specifications.

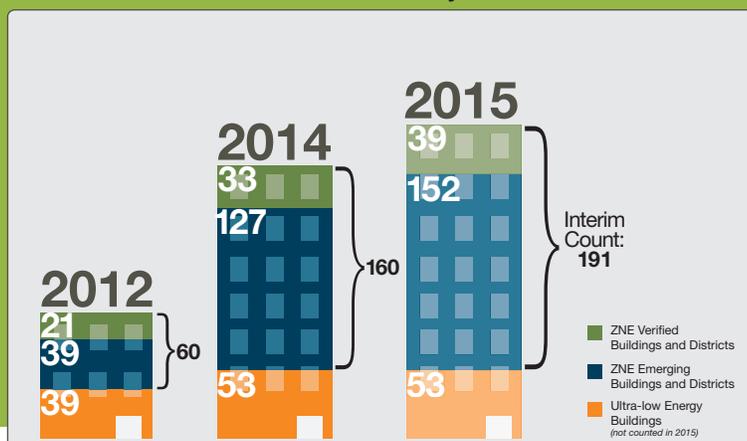
To increase market acceptance and participation in the state's zero net energy goals, NBI formalized an Early Adopter Network. In partnership with local utilities, we held five statewide workshops to facilitate planning and projects among nearly 500 government



ONE OF THE 5 EARLY ADOPTER WORKSHOPS IN CA. THE WORKSHOPS HAVE EDUCATED 500 PEOPLE ON ZNE.

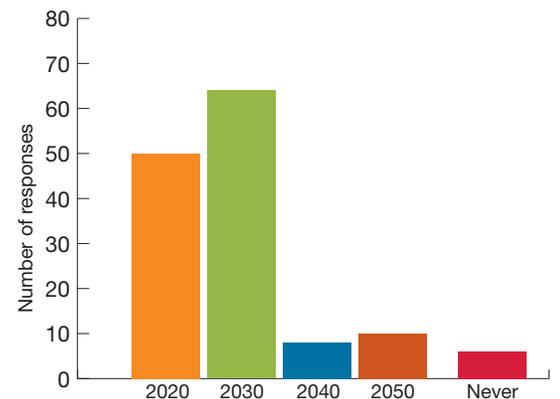


### Number of ZNE Projects—2015



Courtesy of New Buildings Institute | [newbuildings.org](http://newbuildings.org)

### Given your knowledge of and experience with ZNE buildings, when do you think ZNE will be considered a mainstream approach?



Based on a survey conducted by NBI of 140 leading practitioners in the sustainable buildings industry

and school officials. Educational resources, toolkits, case studies and a regular **ZNE Action Bulletin** (<http://newbuildings.org/zne-action-bulletin-0>) share ZNE-related news, policy, research, education opportunities and innovative buildings.

## Research Looks at Costs, Feeds Technical Guidance

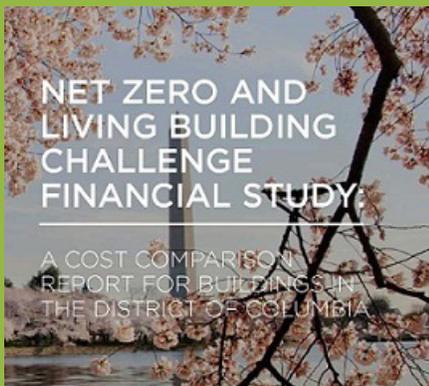
NBI has worked nationally with industry leaders to study the costs and technical feasibility of zero net energy buildings, including a financial study for the District of Columbia that looked at key financial aspects zero net energy. The **Net Zero and Living Building Challenge Financial Study: A Cost Comparison Report for Buildings** (<http://newbuildings.org/sites/default/files/ZNECostComparisonBuildingsDC.pdf>) established the cost ranges, paybacks and, most importantly, the return on investment (ROI) of zero net energy buildings in the District.

The study found that for a 1-3% added initial cost of construction, new developments could save up to 60% of their energy consumption. It also identified that although the cost premium for new commercial construction to get to net zero was 5-10%, the business/real estate ROI was close to 34%.

More recently, NBI, along with Rocky Mountain Institute and Fisher Nickel, examined the feasibility of developing a net zero energy quick-service restaurant for McDonald's. ([http://blog.rmi.org/blog\\_2015\\_03\\_17\\_efficiency\\_and\\_renewables\\_mcdonalds](http://blog.rmi.org/blog_2015_03_17_efficiency_and_renewables_mcdonalds)) The study found that at all three prototype locations—Chicago, Orlando and Washington, DC—net zero energy is possible on a stand-alone traditional McDonald's site without any reductions to the menu or service. Energy efficiency measures, particularly those focused on the kitchen equipment, combined with sufficient solar photovoltaics could significantly reduce energy



MC DONALD'S ZNE QUICK SERVE RESTAURANT RENDERING FROM STUDY PARTNER ROCKY MOUNTAIN INSTITUTE. USED WITH PERMISSION FROM MCDONALD'S CORPORATION



The *Net Zero and Living Building Challenge Financial Study: A Cost Comparison Report for Buildings* found that for a 1-3% added initial cost of construction, new developments could save up to 60% of their energy consumption.

costs to just 5-15% of a U.S. restaurant's current average energy cost. In addition to cost analysis, we are examining the promising technologies for ZNE performance. New **ZNE Technology Application Guides** offer details on applications for super-efficient luminaire lighting controls, indirect evaporative cooling and radiant heating and cooling.

## Zero Net Energy Events and Resources Help Educate, Build Momentum

NBI's findings on zero net energy progress have been presented by staff and cited by others at dozens of conferences and workshops. In 2014, NBI's zero net energy webinar series touched over 1,500 designers, owners and advocates; it remains the best intelligence on important aspects of ZNE. Additional educational resources help advocates explain zero net energy and its benefits.

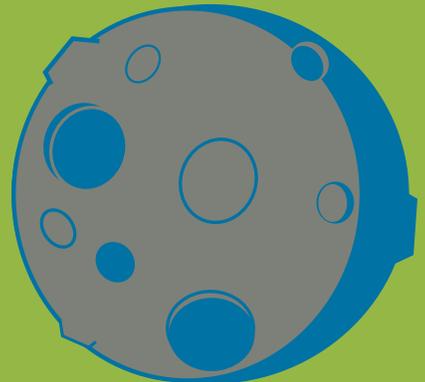
In October 2014, NBI partnered with Efficiency Vermont and National Grid on Net Zero Northeast, an in-person event gathering 100 local owners and design teams eager to learn more and pursue zero energy goals.

In early 2015, NBI held the second **Getting to Zero National Forum** in Washington, DC, on zero net energy policies, programs and projects. This event, developed and hosted in partnership with the National Association of State Energy Officials (NASEO) and the Rocky Mountain Institute, hosted over 250 national leaders in policies, strategies and practices that result in successful zero net energy buildings and communities. This event built on the first-ever **Getting to Zero National Forum** held Fall of 2013 in Denver, Colorado, in partnership with NASEO.



“It is amazing how far we have come in so few years. I have been involved in the goal of net zero buildings since 2003. At that time it was just a notion. Now it is real. **Better than putting a man on the moon!**”

- Kathy Bash, DMS Architects, Webinar participant



# Driving Better Building Performance

## A Focus on Outcomes

For nearly a decade, NBI has been a leading advocate for measured energy performance in buildings. This overarching focus on energy use data means that high performance buildings will **actually** save energy and reduce carbon emissions rather than relying primarily on predictive models that may or may not see real-world results.

In August 2014, NBI and the National Institute of Building Sciences convened a group of 70 practitioners in high performance building design, construction and operations to establish a clear path to transition the industry to more common reliance on measured, outcome-based performance for determining a building's efficiency in operation. It is also believed that this feedback will improve models used for estimating energy performance during design. The results of this summit outline industry needs and next steps, including the development of new tools, case studies and guidance to facilitate change in the marketplace.

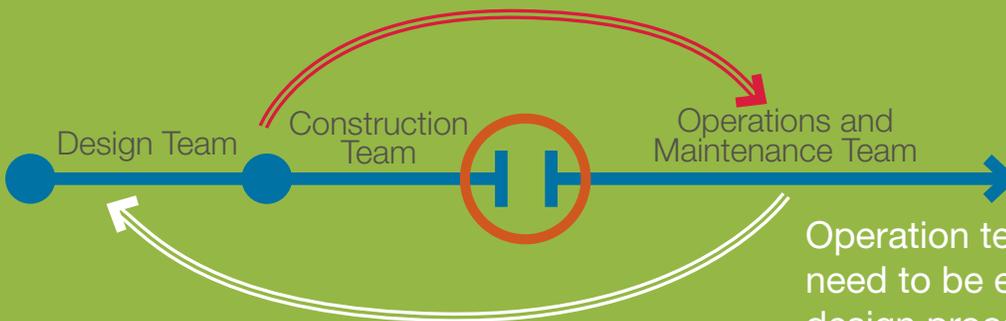
Building off of this **Getting to Performance Outcomes Summit**, NBI CEO Ralph DiNola led a sold-out 2014 GreenBuild workshop centered on formalizing the need to bridge the gap between design/construction and operations/maintenance to ensure optimized energy performance.

## Deep Energy Retrofits Upgrade Existing Building Efficiency

Realizing deep energy savings in existing buildings has long been a focus of NBI with research, case studies and national summits gathering thought leaders to consider ways to bring deep energy retrofits to scale. That groundwork has paid off in several ways, including the release of a 66-page report on **Realizing the Energy Efficiency Potential of Small Buildings** ([http://www.preservationnation.org/information-center/sustainable-communities/green-lab/small-buildings/130604\\_NTHP\\_report\\_sm.pdf](http://www.preservationnation.org/information-center/sustainable-communities/green-lab/small-buildings/130604_NTHP_report_sm.pdf)) and



RICE FERGUS MILLER'S OFFICE IN BREMERTON, WASHINGTON, REPRESENTS A STELLAR EXAMPLE OF A DEEP ENERGY RETROFIT.



Operation teams and tenants need to be engaged early in the design process and AEC team members need to be engaged during early and ongoing operations.

From the *Getting to Performance Outcomes Summit* report

the release of the web-based **Retrofit Savings Estimator** (<http://newbuildings.org/retrofit-savings-estimator>) software tool.

The report, released in the summer of 2013, was produced by the National Trust for Historic Preservation's Preservation Green Lab in partnership with NBI and outlines opportunities for energy efficiency solutions by building types and actions for stakeholders. It reported that while efforts to conserve energy commonly focus on larger structures, the reality is that 95 percent of all commercial buildings are less than 50,000 square feet in size. The report also estimates that investments in energy conservation could generate \$30 billion in annual energy cost savings, improving the financial performance of millions of small businesses.

These early research findings contributed to a U.S. Department of Energy investment of \$10 million for six deep energy efficiency projects to reduce carbon pollution and energy bills in small commercial buildings. NBI is partnering with one of the award recipients, Ecology Action of Santa Cruz, Inc., on a project to use low-cost, high-impact tools to analyze and implement deep energy retrofits and financing options appropriate for small buildings.

In 2014, NBI helped with the Northwest Energy Efficiency Alliance (NEEA) launch a Community Building Renewal pilot with the City of Boise that

looks at comprehensive, portfolio-wide building improvement policies. The project uses measured energy data to analyze consumption of existing building stock, sort by building type and tag the worst performers. Projects like this are intended to help cities create policy mechanisms to encourage those target buildings identified for improvement to significantly lower their total energy use. In most cities, the energy



code is the primary means of regulating building energy performance, but energy codes have a limited impact on already-existing buildings.

NBI also completed research for NEEA's Commercial Real Estate Initiative. The study, titled **Commercial Real**



**Realizing the Energy Efficiency Potential of Small Buildings**

June 2013

A REPORT BY:



IN PARTNERSHIP WITH:



*Realizing the Energy Efficiency Potential of Small Buildings* reports that while efforts to conserve energy commonly focus on larger structures, the reality is that 95 percent of all commercial buildings are less than 50,000 square feet in size. The study estimates that investments in energy conservation could generate \$30 billion in annual energy cost savings, improving the financial performance of millions of small businesses.

**Estate (CRE) Market Test Assessment** sought to better understand the delivery, partnership strategies and program channels for promoting the adoption of energy efficiency best practices in commercial real estate. It also makes recommendations about strategies for advancing energy efficiency best practices among the 1.6 billion square feet of commercial real estate in the Northwest states.

The capstone of NBI's work in existing buildings came early in 2015, when staff finalized a **Retrofit Savings Estimator** with The Weidt Group. The web-based software tool helps building owners and other users quickly evaluate the potential energy savings associated with existing building retrofit strategies and identify the most promising measures that should be part for a building performance upgrade.

## Advanced Buildings® for New Construction

NBI continues to offer advanced design guidance under its Advanced Buildings program. Efficiency programs in nine states support Advanced Buildings tools and guidance.

In 2014, NBI released the next generation of Advanced Buildings new construction guidance, called simply the **New Construction Guide** (<http://newbuildings.org/new-construction-guide-online>). A new four-tiered structure makes the *Guide* adaptable

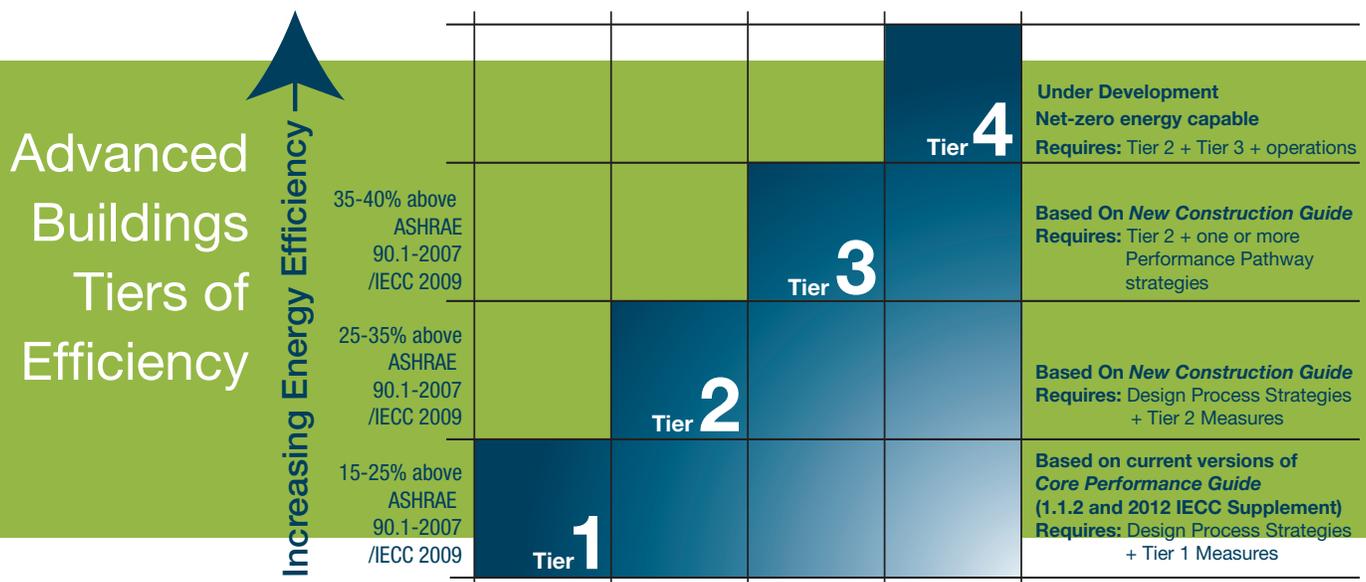
to energy code levels no matter where a building is being built and can take a building's efficiency to levels on par with zero net energy.

In late 2014, the U.S. Green Building Council approved the **New Construction Guide** as an alternative path for the LEED energy prerequisite. Advanced Buildings was also adopted by the Northeast Collaborative for High Performance Schools and Architecture 2030 as a design resource and sanctioned to meet 2030 Challenge goals to carbon-neutral buildings.

In 2014, NBI released the latest resource in the Advanced Buildings Design Toolbox, **Rooftop Unit HVAC Efficiency Primer** (<http://newbuildings.org/hvac-primer>) that offers guidance through a repair, replace, retrofit decision-making framework for improving the performance of packaged rooftop units.



FRANCIS BOUCHER, PROGRAM MANAGER FOR NATIONAL GRID'S COMMERCIAL AND INDUSTRIAL ENERGY EFFICIENCY GROUP, DISCUSSES THE **NEW CONSTRUCTION GUIDE** AT AN EVENT.



# Infusing Innovation into Energy Codes

## Setting Higher Standards

Energy codes set the minimum standard for efficiency levels of the country's building stock. In recent code development cycles, major model energy codes have seen substantial increases in efficiency stringency due to efforts by NBI and partners such as The American Institute of Architects, the National Institute for Building Sciences, Building Owners and Managers Association and others.

These partners and NBI were able to rewrite sections of the 2015 International Energy Conservation Code (IECC) and the International Existing Building Code (IEBC) to clarify and strengthen application of these codes to existing commercial buildings as well as "historic buildings" increasing the impact of the code on retrofit projects. Advancements were also made in better controls for lighting and daylighting and new technology applications for HVAC systems.

Last fall, the partners achieved successful adoption of major provisions in the 2015 IgCC for an outcome-based compliance path, clarification of the zero net energy performance index (zEPI), renewable energy credits and demand response.

## Supporting Adoption of Advanced Energy Codes Locally

NBI staff helps local jurisdictions with adoption of advanced energy codes. For Boulder, Colorado, NBI was charged with developing the country's most advanced energy code—the Boulder Energy Conservation Code—which achieves a goal of 30% beyond 2012 IECC. The code was developed using bundles of measures selected from NBI's *Advanced Buildings New Construction Guide*.

NBI also supported the State of Vermont in development of technical measures, evaluation approaches and implementation plans for its upcoming code cycles. NBI participated early in this process by providing a framework document outlining the relative stringencies of the requirements for various codes and standards. Additionally, NBI helped inform the scope of a stretch code for the state reviewing and providing comments as part of the development process. With this stretch code, Vermont joins the growing number of jurisdictions across the nation that are using the stretch codes to tie more energy savings to a wide variety of "carrot-and-stick" mechanisms.



“Vermont has finalized an update to its Commercial Building Energy Standards (CBES), making it the first state in the country to adopt a building energy code based on the 2015 International Energy Conservation Code (IECC).”

—Blog post by NBI Project Manager Mark Lyles

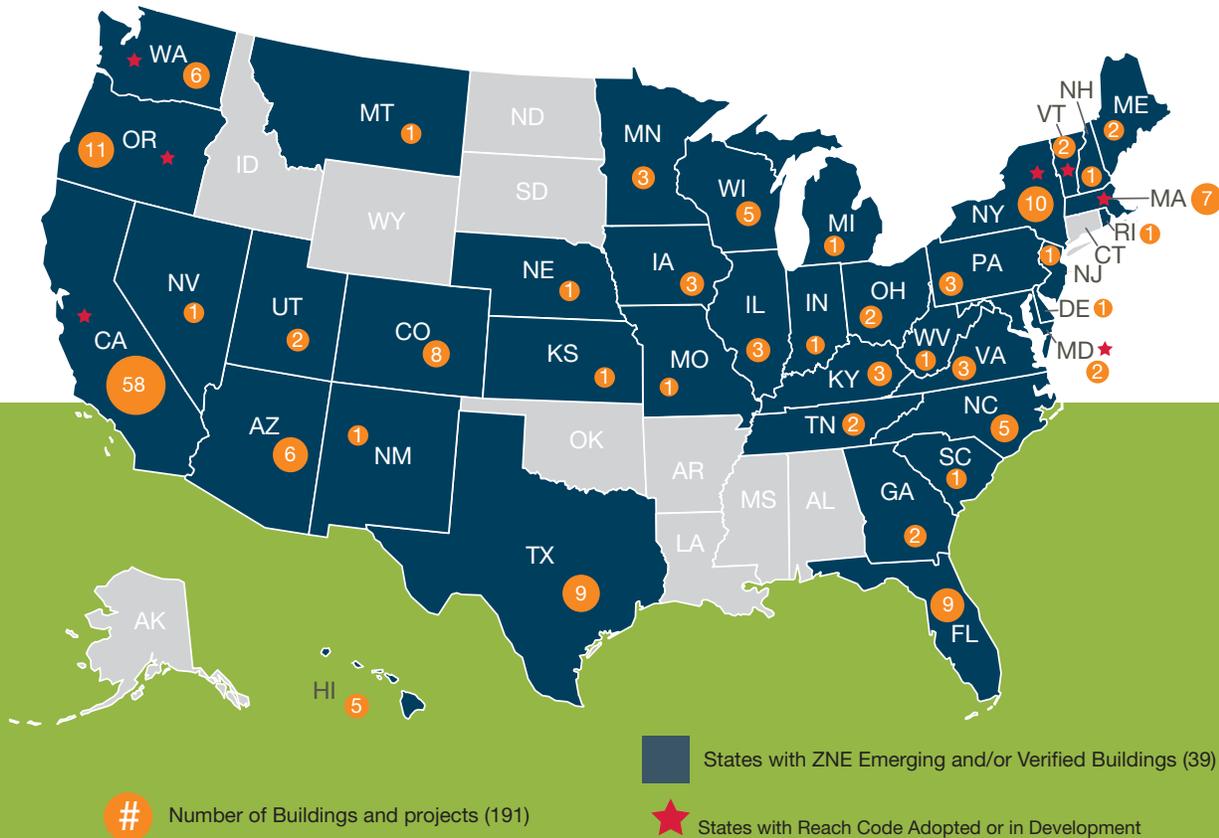
Similarly, NBI has supported the Energy Trust of Oregon on development of code roadmaps for the state and is partnering with Conservation Services Group (CSG) in conducting energy code training to educate code officials on the advanced energy codes in the Commonwealth of Massachusetts.

In California, NBI participated on a team of technical and policy experts to conduct a “top-down” code study that sets energy savings targets for code updates based on state energy policy goals and provides focus for strategies and tactics to accelerate market transformation to fast-track code readiness. In addition, staff worked with Southern California Edison to development implementation plans for new measures in the next two code cycles of the state energy code, Title 24 (2016 and 2019).

## Code Roadmaps to Zero

NBI code experts researched and developed 10 Select Policies for Changing the Landscape of ZNE Buildings, which have become the basis for other standards and policy tools. This document is informing cities and states across the country and serves as the framer of policy direction for the Pacific Coast Collaborative (PCC) on zero net energy that will impact statewide policies in Oregon and Washington. The PCC, which includes Oregon, Washington, California and British Columbia, represents the fifth largest economy in the world and has made commitments to pursue zero net energy building standards in the region.

## Stretch Codes Drive Higher Building Efficiency



## Most popular blogs:

### 2013

California Leading by Example  
(<http://newbuildings.org/blog/california-leading-example>)

Existing buildings get new emphasis and clarity in IECC and other I-Codes (<http://newbuildings.org/blog/existing-buildings-get-new-emphasis-and-clarity-iecc-and-other-i-codes>)

A Positive Trend is Unfolding in the Building Industry  
(<http://newbuildings.org/blog/positive-trend-unfolding-building-industry>)

Bold Action on Climate Change  
(<http://newbuildings.org/blog/bold-action-climate-change>)

### 2014

Zero Net Energy Buildings: The Future Is Now  
(<http://newbuildings.org/blog/zero-net-energy-buildings-future-now>)

The Widespread Success of ZNE Hinges on the Bottom Line, But Whose? (<http://newbuildings.org/blog/widespread-success-zne-hinges-bottom-line-whose>)

2015 IgCC gives cities and states something to be thankful for (<http://newbuildings.org/blog/2015-igcc-gives-cities-and-states-something-be-thankful>)

New buildings database offers important lessons on achieving low-energy buildings (<http://newbuildings.org/blog/new-buildings-database-offers-important-lessons>)

## In the news:

PECI helps affirm usefulness of new plug load metrics by Andy Geigerich in *Sustainable Business Oregon* (<http://www.bizjournals.com/portland/blog/sbo/2013/11/peci-helps-affirm-usefulness-of-new.html>)

Getting to Zero: The New Wave of Building Efficiency by Cathy Higgins in *Green Technology Magazine* ([http://www.green-technology.org/green\\_technology\\_magazine/index.php?CID=189](http://www.green-technology.org/green_technology_magazine/index.php?CID=189))

New Energy Code Approach Could Be Industry Game-Changer by Greg Zimmerman in *Facilitiesnet* (<http://www.facilitiesnet.com/energyefficiency/article/New-Energy-Code-Approach-Could-Be-Industry-Game-Changer-Facilities-Management-Energy-Efficiency-Feature--15369>)

Net Zero Roundtable by Marcy Marro in *Metal Architecture* (<http://www.metalarchitecture.com/articles/magazine-features/net-zero-roundtable.aspx>)

Vision 2020: Focus on the Outcome, Not Just the Design by Mark Frankel in *Ecobuilding Pulse* ([http://www.ecobuildingpulse.com/vision-2020/codes-standards-and-rating-systems/vision-2020-focus-on-the-outcome-not-just-the-design\\_o](http://www.ecobuildingpulse.com/vision-2020/codes-standards-and-rating-systems/vision-2020-focus-on-the-outcome-not-just-the-design_o))

# timeline

1997

New Buildings Institute is founded

2000

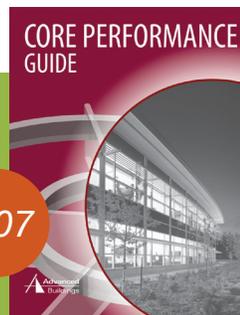
NBI receives initial \$6 Million Public Interest Energy Research (PIER) Award, the first of five consecutive PIER awards.

The predecessor to Core Performance E-Benchmark was a nationally recognized, comprehensive specification manual for high-performance commercial buildings.



2005

2007



Core Performance whole building design guide released.

Core Performance becomes the basis for a comprehensive update of the 2012 International Energy Conservation Code (IECC) resulting in the largest efficiency increase in IECC history.



2010

# statement of financial position + activities

## FY 2014      FY 2013

### Assets:

Cash	549,486	761,378
Receivables	300,373	359,431
Other assets	38,650	45,200
<b>Total:</b>	<b>888,509</b>	<b>1,166,009</b>

### Liabilities and net assets:

Current liabilities	314,386	181,877
Net assets	574,123	984,132
<b>Total liabilities &amp; net assets:</b>	<b>888,509</b>	<b>1,166,009</b>

### Revenues:

Sponsor revenue	1,160,000	1,097,500
Project revenue	1,030,276	1,296,324
Product revenue	6,388	8,044
Interest Income	971	7,576
<b>Total revenues:</b>	<b>2,197,635</b>	<b>2,409,444</b>

### Expenses:

Program expenses	1,840,630	2,549,460
Product expenses	504,624	622,913
Administrative expenses	262,390	113,928
<b>Total expenses:</b>	<b>2,607,644</b>	<b>3,286,301</b>

2011



The Sensitivity Analysis compares the magnitude of energy impact that various design features, operations and tenant behaviors have on total building energy use.

NBI holds a Getting to Zero National Forum in partnership with the National Association of State Energy Officials (NASEO). The event featured the policies, programs and projects driving ultra efficiency in buildings.

2013

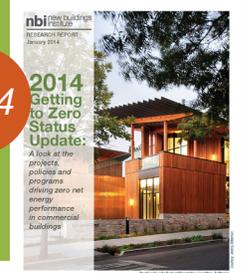
GETTING TO  
**zero**  
NATIONAL FORUM

2014



The New Construction Guide offers a comprehensive approach to new commercial construction projects that achieves efficiencies up to 30% higher than conventional buildings.

2014



The 2014 Getting to Zero Status Update examines the numbers, locations, types, ownership as well as policy and program drivers for zero net energy (ZNE).

# board of directors\*

## **David B. Goldstein**

*Co-Director, Energy Program  
Natural Resources  
Defense Council  
President*

## **Michael McAteer**

*Director, Commercial Energy Efficiency Services  
National Grid  
Vice President*

## **Ed McGlynn**

*Principal  
Nextant, Inc.  
Treasurer*

## **Doug Baston**

*President  
North Atlantic Energy Advisors  
Clerk*

## **Gregg Ander**

*Consultant*

## **Marge Anderson**

*Executive Vice President  
Seventhwave*

## **Jan Berman**

*Senior Director of Energy Efficiency Strategy  
Pacific Gas & Electric*

## **Jeff Harris**

*Chief Transformation Officer  
Northwest Energy Efficiency Alliance*

## **Nancy Jenkins**

*Manager, DSM Strategy and Compliance  
Southern California Edison*

## **George Malek**

*Energy Efficiency Director  
ComEd*

## **Steve Nadel**

*Executive Director  
American Council for an Energy Efficient Economy*

## **Brendan Owens**

*Chief of Engineering  
U.S. Green Building Council*

## **Kurt Stenberg**

*Consulting Engineer*

*\*As of 7/2015*



THE J. CRAIG VENTER INSTITUTE HOSTED A BUILDING TOUR IN CONJUNCTION WITH ONE OF NBI'S EARLY ADOPTER WORKSHOPS IN CALIFORNIA.

**Ralph DiNola**, CEO and LEED Fellow, leads NBI's strategic vision and operations. For more than 20 years, he has served as a consultant to developers, institutions, governments and Fortune 500 companies seeking quantum advances in their building practices and projects. He has been honored with the Better Bricks Green Building Advocate Award and was voted one of the 50 most influential Portlanders by *Portland Monthly Magazine*.

**Jim Edelson**, Director of Codes and Policy, has been at the forefront of national and state commercial energy code development for over 20 years. Jim has served on multiple codes boards and Advisory Committees in Oregon, Wisconsin, for the International Code Council, and ASHRAE.

**Mark Frankel**, Technical Director, is involved in national coalitions to improve building performance feedback, market adoption strategies for zero net energy and deep energy retrofits, and in the development and implementation of innovative codes and programs focused on building performance outcome and benchmarking.

**Sean Denniston**, Senior Project Manager, manages the Advanced Buildings program and NBI's work in the multifamily sector. His work includes analysis and review of data relative to commercial building energy performance and prediction, code and energy program effectiveness and energy technologies.

**Heather Flint Chatto**, Project Manager, works on NBI's zero net energy-related projects including early adopter leadership in California. She manages multiple Champion teams engaged in technical, market and policy recommendations and implementation of California's Zero Net Energy Action Plan.

**Anna Gabis**, Controller, is responsible for the accounting functions of the organization and acts as the financial "point" person in the office. She supports the executive leadership team and collaborates with the office administrator to maintain budgets, accounts payable and receivable and financial forecasting.

**Susan Grant Harris**, Communications Specialist, has over 15 years of experience in communications and information systems management. Her work at NBI focuses on communication tools, project documentation and knowledge sharing.

**Mark Lyles**, Project Manager, provides technical support, research assistance and data analysis and management to several key areas, including the Advanced Buildings program and trends in zero net energy. Additionally, he supports the NBI codes and policy team in advancing key codes and policies.

**Alexi Miller**, Senior Project Manager, shares information and insights about emerging technologies and advanced strategies as part of wide-ranging efforts to improve the energy performance of the built environment. As a technical resource he supports various projects including the Getting to Zero Buildings Database, FirstView® and the NBI Building Information Network.

**Connie Umphress**, Communications Manager, has 10 years of experience in graphic and web design, public relations and marketing. She is responsible for NBI's communications program including brand management and electronic communications.

**Jackie Waadevig**, Office Administrator, works to keep the office running smoothly. She spends her time on accounting tasks, office management and administrative support for NBI staff.

\*As of 7/2015



NBI STAFF PARTICIPATING IN RIDE TO WORK DAY AND OFFICE CELEBRATIONS

## vision

We believe in a built environment that makes a positive contribution to a sustainable society through dramatic improvements in energy performance.

## mission

NBI takes leading-edge practices and technology applications for high performance buildings and translates them into innovative and practical solutions for the energy efficiency and commercial building industries.