

TO ZERO AND BEYOND

Final Report: Net-Zero North American Leadership Summit 2015 Boston, March 2-4

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NZEC members accelerate market adoption!

This March in snowbound Boston, after three days of intense sessions in mostly windowless rooms, about 50 energy leaders emerged from their final workshop of the 2015 Net Zero Energy Coalition Summit with a passionate commitment to accelerate market adoption.

As members of the Net Zero Energy Coalition (NZEC) they agreed to launch a massive effort to build greater awareness of the benefits of zero-energy buildings and communities; to prepare the workforce to build zero-energy projects; and to support those efforts with an industry-leading clearinghouse of policy, finance, design and technology information.



Among those who made commitments were representatives from EEBA (Energy & Environmental Building Association), Seventh Wave (formerly Energy Center of Wisconsin), the US DoE, Pacific Gas & Electric, BASF and many others who have been leading the shift to zero energy.

Photo: Summit plenary speakers (from left) MA State Senator Jamie Eldridge; Steven Strong, president, Solar Design Associates, Inc.; Dr. Cathleen Fogel, CA Public Utilities Commission; Bill Maclay, architect and author, *The New Net Zero*; Carter Scott, president, Transformations, Inc.; Rick Gilles, senior partner, Barn Raisers.

Background

This year's summit was held in tandem with NESEA's BuildingEnergy15 conference. Since our first Summit in October 2013, hundreds more zero energy homes have been built, states and cities across the US – including Massachusetts and Boston – have implemented more aggressive zero energy goals, and many supporting technologies (solar, lighting, heat pumps, etc.) have made great headway.

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But that was not enough for attendees in Boston. They believe that we can get to zero and beyond even faster through collective action.

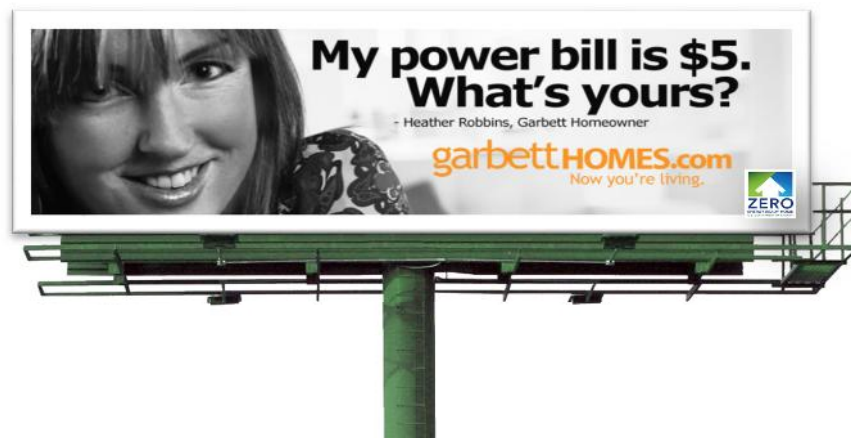
Collaborating to leverage resources is the key to getting to zero and beyond, so NZEC members will focus on developing collective action initiatives in these three areas over the next two years. Membership spans the North American continent and represents a wide array of organizations – homebuilders, utilities, non-profits, architects, education institutions, product manufacturers, and others who serve the construction industry.



Photo: Summit breakout group working on ZNE adoption strategy.

Building Greater Awareness

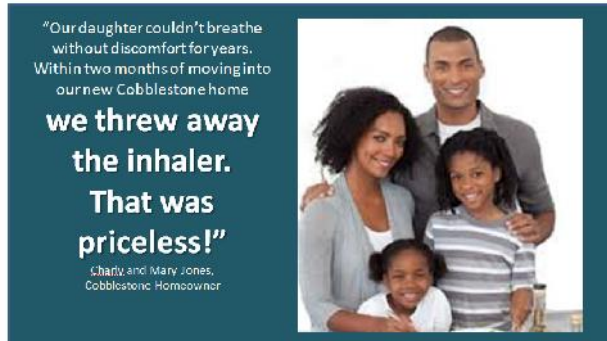
Yes, but awareness of what? When you have a group of 50 professionals who live zero energy every working day, it's hard for them to know what others don't know.



In the summit's market awareness sessions this was the constant challenge. People

like Sam Rashkin, Chief Architect, U.S. Department of Energy, Building Technologies Office, has led the way in redefining the language of zero-energy from 'insider speak' to 'why should I care speak' He used the ad below as an example of how messaging can give reasons for homeowners to care about zero energy:

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He explained that, in the future, we will build homes that live better, work better, and last better. The future home is healthier, with fewer pollutants and cleaner air; more comfortable, with even temperatures and humidity; and smart, with advanced systems and controls. It's built to last, meeting more stringent durability standards.

But that's not all. With these future homes, we could eliminate 71 percent of carbon emissions globally. The U.S. Department of Energy calls it a zero energy ready home (ZERH), and builders across North America have already built hundreds of them.

So why isn't every builder offering this home today? In October 2013, nearly 200 zero-energy leaders from across North America converged in Irvine, CA, to explore this question at the first Net-Zero North American Leadership Summit. With the price of solar energy reaching parity with the grid, proven technologies, and a wealth of knowledge about how to build zero energy projects, the thought leaders identified these market barriers: lack of awareness, policies, financing mechanisms, and education.

A year and a half later, zero energy marketing efforts are still few, decentralized, and lack a compelling story. In March 2015, it felt like we were at a tipping point.

News from California seemed to wake up everyone to potential momentum. Derek Jones, Expert Strategic Analyst with Pacific Gas & Electric, shared analysis that it is technically feasible for 77% of all new construction in 2020 to be zero net energy, but that significant policy and market barriers still exist.

David Hewitt, a consultant, showed New Buildings Institute data comparing commercial building activity in 2012 with 2015. The number of ultra-low energy commercial buildings went from 39 to 53; zero energy emerging buildings and districts grew from 39 to 152 and zero energy verified buildings and districts from 21 to 39.

In a look at how the future might bring a different approach, NZEC Board member Richard Willingham, president of motum b2b marketing, said, "For a long time I've imagined a future when everyone will be able to live, work or play in a zero-energy

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building. Perhaps it will take the game-changing imaginations of brands like Apple, Google or Tesla to create a world where traditional construction gives way to new ideas.”

He described that world as one where consumers can demand the ‘best building that money can buy’ in the same way they demand the best computers and cars that money can buy.

Sam Rashkin reminded us, a bit tongue in cheek, about the competition that zero energy home leaders face. He described it as ‘aging housing stock with high utility bills, poor comfort, health risks, moisture problem risks, excessive bugs and pests, durability issues, and obsolete technology.’

He later summed up what keeps NZEC members working together. “If every homebuyer acted in their self-interest, they would ask for a zero energy ready home. But markets are far from perfect. It’s going to take a collective impact process to accelerate zero energy housing.”

Preparing the Workforce

For successful market transformation, the workforce needs to deliver. NZEC members plan to determine where the greatest educational needs are, and mobilize to fill those gaps.

NZEC member Barbara Hernesman with CalCERTS observed, “An educated supply chain is essential to deliver zero energy buildings. Tools such as competency models, curriculum mapping, and skill-set development play an important role in providing a reliable, qualified workforce.”

Creating A Super Database

At the top of our priority list is a project that is already well underway, initiated by the Northeast Sustainable Energy Association (NESEA) – creation of a [zero-energy residential case study database](#).

NZEC is working with members to dramatically expand the reach of that database beyond the Northeast, by gathering case studies from across the continent. The resulting resource will be part of a larger online hub for all things zero energy.

Chris Williams, VP at Avalon Master Builder, sees the database as a critical resource. “To be successful in promoting and building zero-energy homes, we need to learn from and build on other builders’ successes. The database will solve this challenge.”

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Peter Amerongen, CEO of Habitat Studio, echoed a similar point of view, “Our learning curve was reduced dramatically by being able to look at previous advanced houses in our climate. Having a forum for what works and what doesn’t at our fingertips will help builders trying net zero for the first time. It will also help experienced builders find better, more cost-effective solutions.”

Everyone can contribute to the push for zero energy. Why not share some basic data about your zero energy, near zero, or zero energy ready homes now? Here’s what we’re trying to find out:

How many residential net-zero buildings are in North America?

This is our most frequently asked question, and we are finally going to answer it. NZEC is launching a major effort to take an inventory of projects on the path to zero and collect case studies from across the continent. NZEC will make them available via the [zero energy database](#) recently unveiled by NESEA. We will collect known case studies from project teams within our network. This collective impact initiative will create an invaluable resource for sharing knowledge and catalyzing the market.

We need your help in making this a success! Help out by:

1. List your ZNE projects in our [online form](#) – just basic information, about 1 minute per project.
2. Spread the word to your mailing lists and network.
3. If you don’t have enough details for the form, email contacts for any residential ZNE projects you know about to debralittle1@gmail.com.

Sign up for the NZE Coalition’s newsletter

[<http://netzeroenergycoalition.com/discover/newsletter-signup>] to learn more.