

CANADIAN NET-ZERO ENERGY HOMES
AN INTEGRATIVE PATH TO CLEANER ENERGY AND A
HEALTHIER ENVIRONMENT

Presentation to the Standing Committee on Natural Resources

Coalition Membership



Supporting Members

Thomasfield Homes, Canadian Energy Efficiency Alliance

Advisory Team

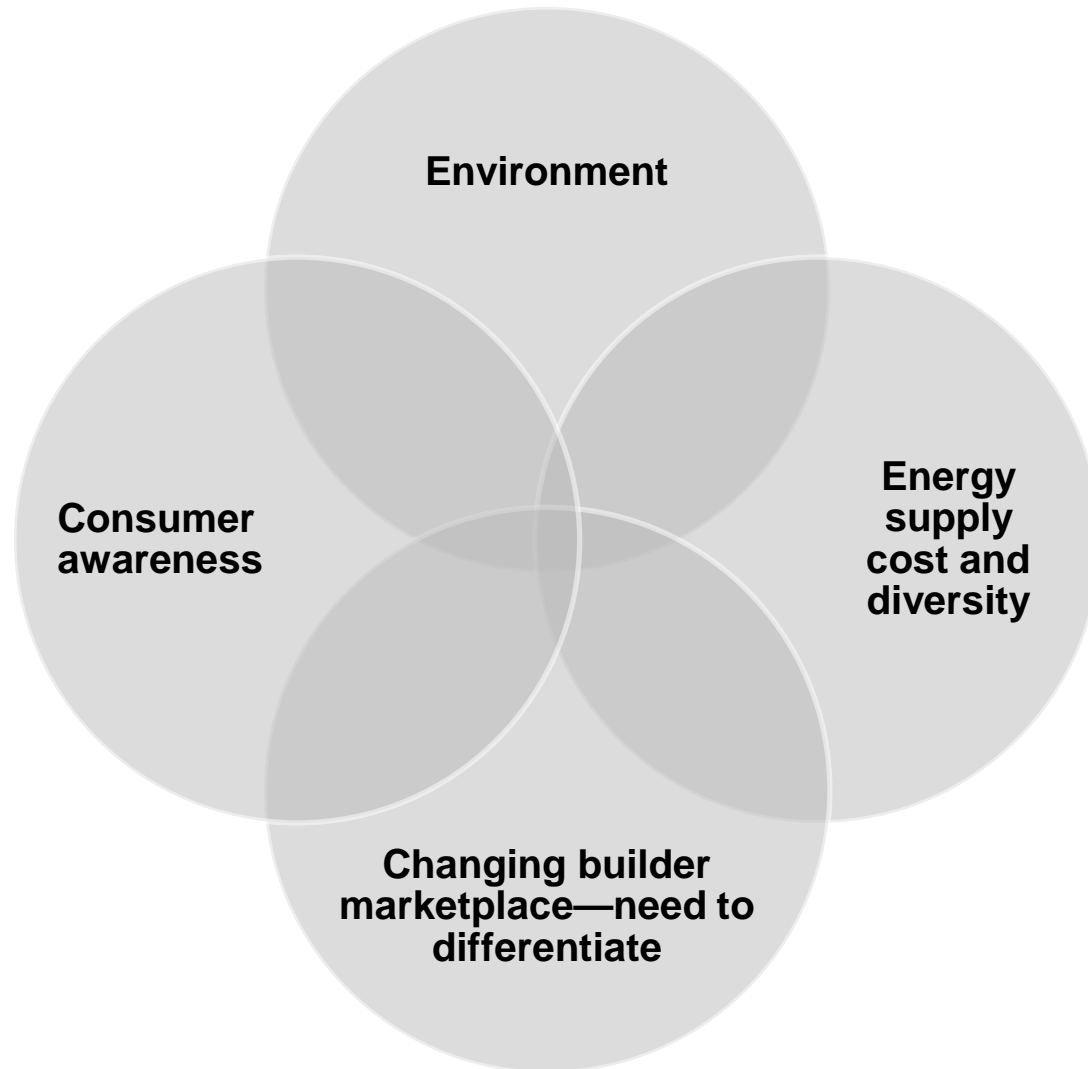
Howell Mayhew Engineering Inc.
Solar Buildings Research Network

What is a net-zero energy home

A net-zero energy home is capable of producing, at minimum, an annual output of renewable energy that is equal to the total amount of its annual consumed/purchased energy from energy utilities.

Net Zero Energy Home Coalition Vision:
All new home construction meeting Net-Zero Energy Home Standard by 2030.

Drivers for NZEHs in Canada



NZEH Coalition Goals

Increasing the network of knowledge and industry participation

Through community scale demonstrations, develop a new approach to design and construction that will transform the marketplace



A new culture of conservation and consumer participation

Change conventional energy and environment policy paradigms and programs



A new definition on the green building continuum

Justification for net-zero energy homes

Dual role of power plant and effective demand side management conservation program

Reduced dependence on expensive imported peak electricity.
Peak load shaving.

Reduced need for transmission and distribution infrastructure

An integrated approach to deploying available renewable energy technologies into the marketplace.

Integrating sustainable living and sustainable community development

Net-Zero Energy Home Approach

An integrated, holistic approach that is used to optimize performance.

- Climate-responsive, location-specific, flexible design
- High levels of insulation
- Daylighting techniques
- Renewable energy systems
- High performance windows
- Energy efficient appliances and lighting
- Tight construction to minimize air leakage
- Mechanical ventilation with heat recovery
- House electricity “kill-switch” to minimize standby power loss
- Advanced metering
- Healthy housing materials and finishes
- Building materials with low or reduced embodied energy
- Water conservation and-use including drain water heat recovery

Federal Demonstration Initiative

National design-build-demonstration to challenge designers, builders and developers

Vision is that Net Zero Energy Healthy Housing will be an important component of Canada's clean energy future--EquilibriumHomes

15 projects selected

Construction commenced in 2008

Goat communityscale demonstrations by 2010



A Coordinated Strategy for NZEHs

Community scale demonstrations

- Adopt a 1,500 NZEH target to be completed over the next five years in each Canadian province
- Incremental approach involving net-zero ready and NZEHs

Education and training

- Develop a strategy whereby customer and builder expectations can be managed in the short, and in the longer term

Consumer engagement

- Correlate the value of a NZEH to improved knowledge of the product, and quantify energy savings and appraisal benefits of NZEHs to drive demand

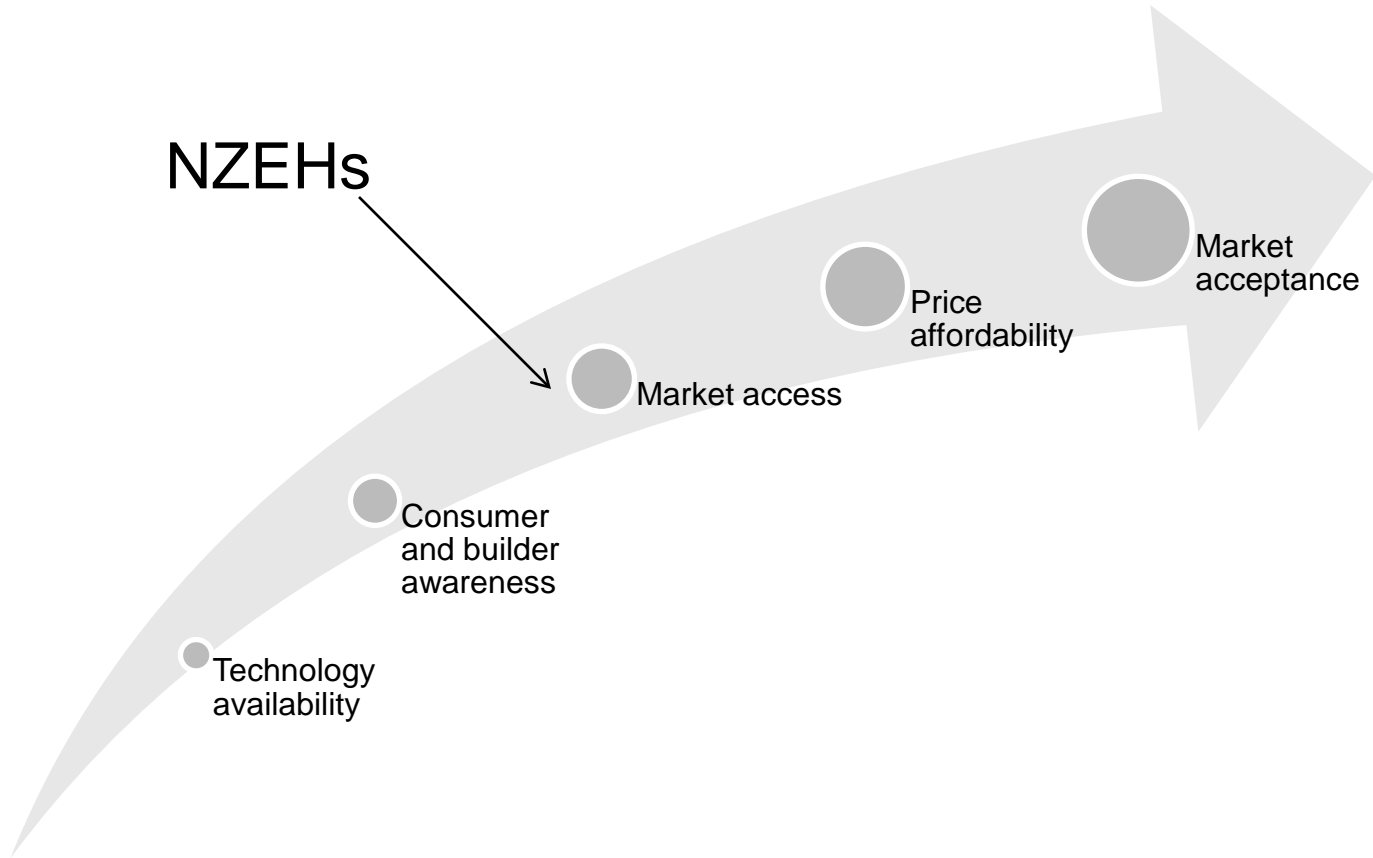
Financing and market stimulation

- Peak load shaving incentives; CDM program; green mortgage financing; early adopter incentives; tax shifting
- NZEH Impact Study

A new standard on the continuum of EE in Canada

- Integrate NZEH with current programs and help drive the energy efficiency continuum in Canada. Capitalize on current opportunity with turnover of new housing stock to implement NZEH on a wider scale.

Priming the market



Industry Recognition

**Honouring Excellence and Vision in Canada's
Residential Construction Industry**

June 8th, Montreal

THANK YOU

www.netzeroenergyhome.ca

Gordon Shields, Executive Director