

Flagship BATF 09-53 Net-Zero Energy Homes



EcoTerra built by Alouette Homes

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Overview

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BATF 09-53 Project Description

- Chair: Canadian public and private sector
- Co-chair: US public and private sector
- Establish a collaborative international partnership focused on net zero housing that will:
 - accelerate the identification of optimal solutions
 - improve conditions for innovation; and
 - transform the market.
- Project Deliverables
 - Establishment of an industry driven International Coalition or Dialogue
 - NZE Workshops/Technology transfer
 - Design Charettes for new promising projects
 - Roadmap Report
- Platform for bi-lateral and multilateral demonstration projects
- Scale will be important – solicit projects that involve clusters of housing (and buildings)
- Vehicle to link with other BATF projects and REDG Task Force

Achievements to Date

- Spring 2008 - Canadian Industry Consultation
- September 2008 - Net Zero energy workshop at BATF6 hosted in Melbourne on margins of SB08
- November 2008 – Industry presentation US/Canada at PIC
- February 2009 – Australia hosts Canadian industry Coalition (follow-up workshop September 2009)
- April 2009 TF endorsement, May 2009 PIC endorsement + Flagship status
- June 2009 – US delegates participate at Canada's 1st NZEH Awards event
- September 2009 – Canada – US NZEH Workshop

Canada-USA NZEH Workshop

- September 22-23, 2009 in Washington
- 36 key stakeholders selected to participate
- Agree on a pragmatic approach for reaching internationally applicable definitions of NZE and net zero ready homes
- Identification of key issues, barriers and opportunities related to NZEH
- Begin to develop an international industry community committed to raise awareness and accelerate the widespread adoption of NZEH
- Development of action items for continued collaboration

Canada-USA NZEH Workshop

- Working definition:

Net zero-energy homes are highly efficient structures where the annual energy use is equal to or less than the energy production resulting from onsite renewable energy sources.

- 6 Action Items:
 - Education of financial institutions
 - NZE Community scale design charrettes
 - Development of a NZEH standard that could inform building codes
 - Development of regional success stories
 - Development of a certification mechanism for NZEH
 - Formalization of a structure for collaboration among stakeholders

Next Step: Roadmap

- Coordination by: Jeff Culp, Energy Efficiency Exporters Alliance
- Develop an international snapshot to show context of the residential sector and the path to accelerate the adoption of NZEH
- Presentation of best practices, exemplar projects and lessons learned
- Next steps:
 - Identify case studies, policies, programs, incentives from APP partner countries
 - Identify nodal contact in APP partner countries
 - Roadmap structure will be presented for consultation by end of October
 - Ongoing consultation during the development of the roadmap
 - Draft roadmap will be presented at 9th BATF meeting in Vancouver in March
 - Roadmap will be used as a tool for workshops held in APP partner countries

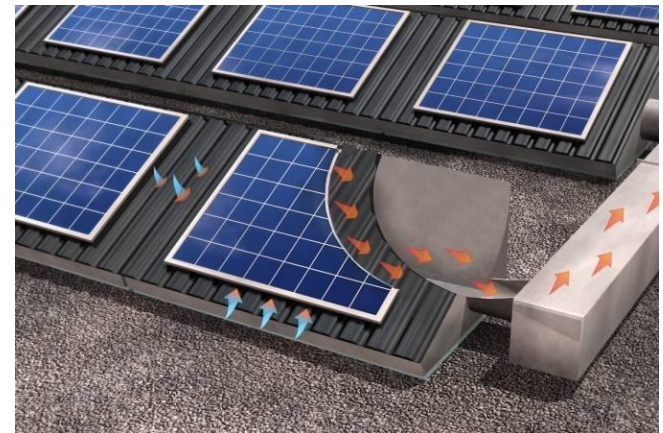


Next Step: Lenders Workshop

- Coordination by: Anthony Watanabe, The Innovolve Group Inc.
- Educate lenders on the opportunities associated with NZEH housing
 - Financing to accommodate renewable energy technologies recognizing lower monthly bills
 - Requires appraisals that recognize the value of NZEH and can offer consistency in appraisals
 - Lenders may need a financial metric or certification to value NZEH
 - Local financing may be an option
 - Ensure policies in place to help lenders understand the issue
- A consultation workshop will be delivered in Toronto in late 2009 with possible additional dates/locations TBD
- Next steps:
 - Anthony Watanabe is drafting a structure for the event
 - Draft structure will be circulated to participants for comment

Next Step: REEEP Webinars

- Coordinated by: Summerhill Group
- <http://webinars.reeep.org/>
- Part of Canada's contribution to the Renewable Energy and Energy Efficiency Partnership (REEEP)
- Online webinars to discuss NZEH issues
- October 29, 2009 - Onsite integration of renewable energy and energy efficiency for NZEH
- December 10, 2009 - Engaging stakeholders to create value for NZEH.



Next Step: Design Charrette

- Coordinated by: Amanda Kramer, Environment Canada
- Vancouver March 22-26, 2010 on margins of GLOBE 2010 www.globe2010.com
- Community scale design charrettes
- Design charrettes represent an opportunity to optimize the design and performance of a project by testing various technologies and combinations of technologies.
- A design charrette will be held in Vancouver as part of the BATF meeting and will include representatives from the REDGTF.
- Minto Group will present a Canadian community scale project and the US will present project from Artistic Homes. Additional projects may be considered.

Next Step:

Workshops/Charrettes

- April 2010 – March 2011
- NZEH Dialogue workshops in Japan, China and Korea. Additional locations tbc
- Roadmap will be used as the tool to guide the dialogue with the objective of adapting the roadmap to the country specific conditions
- In addition to the Dialogue, Canada will organize design charrettes as part of the event for real projects. Projects are being coordinated by the Energy Efficiency Exporters Alliance.
 - Canada will increase contribution to the BATF 09-53 by \$495,000 CDN for demonstrations
 - Total Canada contribution to BATF 09-53 is \$970,000 CDN
 - Demonstration: Canada-China Net Zero Energy Demonstration Home – EXPO 2010
- Next steps:
 - Finalize project design charrettes
 - Engage APP partners in design charrette process
 - Identify time/location for design charrette / workshop

Achieving a Sustainable Future



- Simply increasing energy supply will not solve the current energy supply and security situation and associated environmental problems.
- Radical improvements in the energy performance and use of renewables in buildings are required.
- Net zero energy is a critical component of “green” or sustainability goals
- Net zero energy resonates with end-users
- Provides an inspirational yet achievable goal – more understandable than sustainability

A Path Forward

- To achieve market adoption, what is needed is:
 - a clear definition and agreement among a large community on measures of building performance that would inform “net zero” policies, programs and industry building practices
 - sufficient volume/engagement of multi-nationals to drive down key component costs quickly
 - A step-wise path forward to our ultimate goal that engages a larger community of stakeholders i.e net zero ready, near net zero
- International collaboration will be essential to:
 - create the confidence for local policy and programs to consider net zero energy concepts
 - create the environment that supports a critical mass and volume of projects to attract the requisite R&D industry investment
 - help to drive down cost and increase adoption throughout the net zero energy supply chain more effectively than each country by itself

Closing Remarks

- Canada is committed to NZE as our contribution to BATF
- Provides opportunities to integrate many BATF activities
- Provides concrete linkage with REDGTF
- Opportunity for high profile multi-lateral projects to tell compelling APP BATF stories

