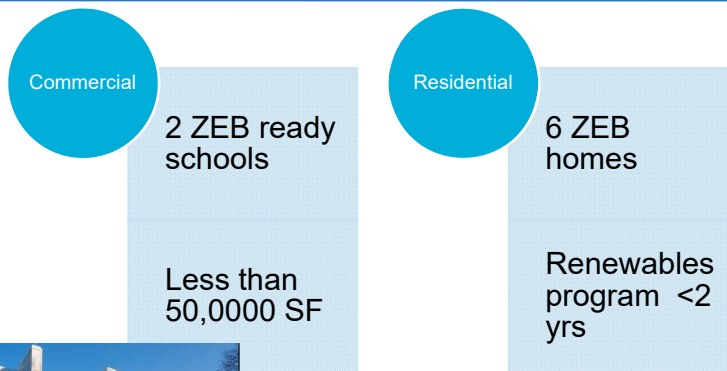


NBI Getting to Zero Forum 2016 Lessons from RI ZEB Task Force



Fran Boucher
October 14, 2016

ZEB Status in RI



East Bay Met School Newport RI
ZEB Ready

ZEB Status in RI

Drivers

- No commercial interest
- Virtually no office construction
- Residential financing is extremely difficult
- Still in hard economic times
- Image as too new too extreme

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ZEB Plan Background

- Began 2015
- Public / private / regulated utilities
- 20 year plan
- Not yet complete!!!!!!!!!!

Vital but still very early step!!!!!!!!!!

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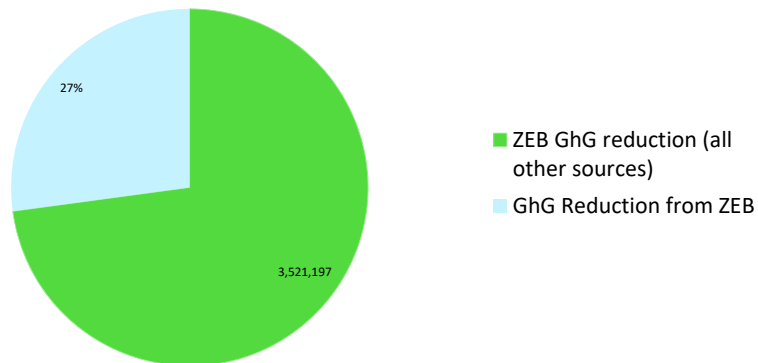
ZEB Plan Background

Essential to connect with existing State priority

- Tied to State greenhouse gas reduction plan
- ZEB not a specific part of GhG plan
- GhG plan lacks budgets and specific paths to achievement
- Goal for ZEB to be concrete element of the RI GhG response

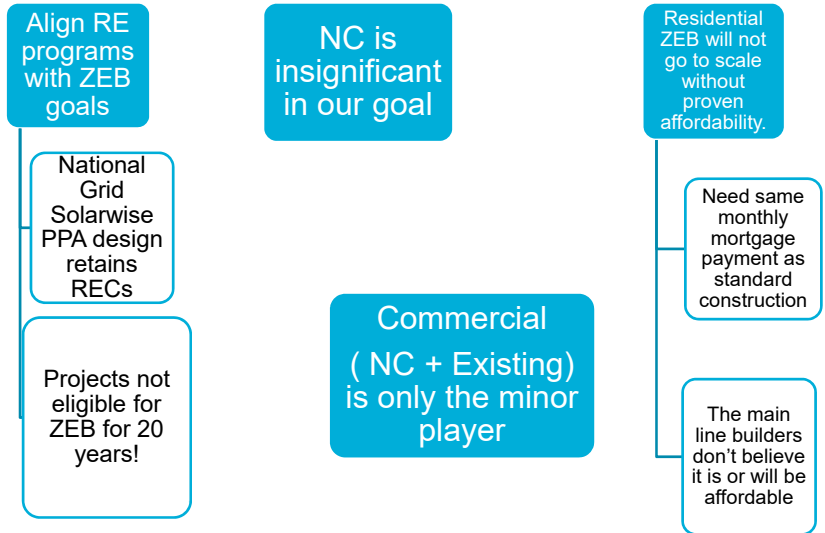
Draft RI ZEB Plan

Annual RI ZEB GhG Reduction Compared to RI 2035 Total GhG Reduction Metric Tons of CO2



10% of existing and 100% of new construction by2036

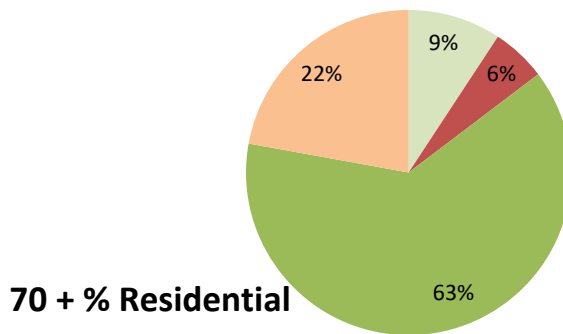
ZEB Lessons Learned



Draft RI ZEB plan

Distribution of ZEB Sq. Ft. by 2035

- Residential New Construction
- Commercial New Construction
- Residential Existing
- Commercial Existing



ZEB Lessons Learned

- 1. Campaigning to mandate ZEB (Codes) fails without certainty of affordability
- 2. Raising the cost of NC (and gut rehab) automatically:
 - raises cost of existing homes
 - drives people to rent
- 3. Small states can't act alone
 - People build or move out of state
- 4. Must resolve finance industry issues
 - Properly value EE and RE improvements in underwriting
 - Relax mortgage qual. income ratio to reflect energy savings
- 5. Incentives (Taxes / Grants/ loans)
 - Note: Plan suggests at least \$1 to \$3 billion in total costs

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ZEB Lessons Learned

- 6. Great uncertainty / disagreement on cost of ZEB NC and retrofit
- 7. Existing residential and commercial buildings create huge demand for off site RE
 - Less than 1/3 of the RE required for existing homes available from on site (RI)
 - Less than 20% of existing commercial RE comes from on site in our estimates (RI)
- 8. The electric utility needs to make grid modifications
 - No clear direction on what is needed where
 - Need to budget and secure funding
 - What are they budgeting for?
 - Need State support for a rate case.

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What was accomplished?

- Established critical needs
- First step at quantifying ZEB cost and impact
- Case to tie ZEB to major State initiative
 - Getting the State's attention
- Created a starting point for deeper efforts
 - Outlined needs and priorities
- Established need for an ongoing task force
- Identified disconnects that are undermining efforts

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ZEB Plan Scope

Commercial and Residential

New Construction and Retrofit

90% of discussion on New Construction

xx% of the benefit is from retrofit

Residential NC in RI is choked off by an affordability issue

Building a fraction of the required homes

Public housing and high income / high end construction

Target market

- Concluded that multifamily was not a market for retrofit
- Condo buy in
- Too invasive for occupied public housing

Residential Single Family

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The End
