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

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ZEB Status in RI

Commercial
2 ZEB ready schools
Less than 50,000 SF

Residential
6 ZEB homes
Renewables program <2 yrs

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

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

Vital but still very early step!!!!!!!!!!
ZEB Plan Background

- 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

- ZEB GhG reduction (all other sources)
- GhG Reduction from ZEB

10% of existing and 100% of new construction by 2036
ZEB Lessons Learned

Align RE programs with ZEB goals

National Grid
Solarwise
PPA design retains RECs

Projects not eligible for ZEB for 20 years!

NC is insignificant in our goal

Commercial (NC + Existing) is only the minor player

Residential ZEB will not go to scale without proven affordability.

Need same monthly mortgage payment as standard construction

The main line builders don’t believe it is or will be affordable

Draft RI ZEB plan

Distribution of ZEB Sq. Ft. by 2035

Residential New Construction
Commercial New Construction
Residential Existing
Commercial Existing

70 + % Residential
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

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% or 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.
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

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
The End