Commercial New Construction

Conservation Resources Advisory Committee

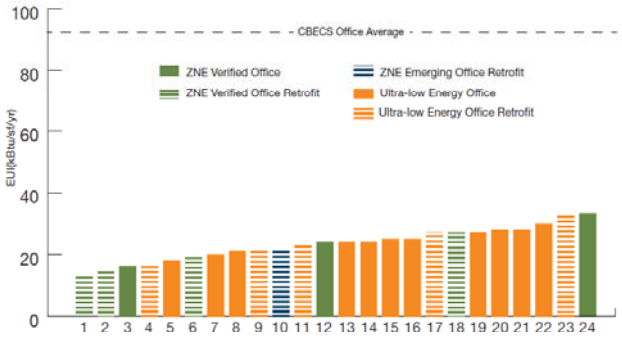
January 28, 2015

Approach

- Updated state codes capture much
- Some available at measure level
  - Lighting with new LED and controls
  - Variable refrigerant flow systems
- Revise 'Integrated Building Design' to 'Ultra Low Energy' buildings
  - Deep savings based on performance of Offices and Schools from New Buildings Institute ZNE data
  - From 70 kBtu/sf down to 30-40 kBtu/sf
  - Very slow ramp rate (2 Slow)

Example from NBI

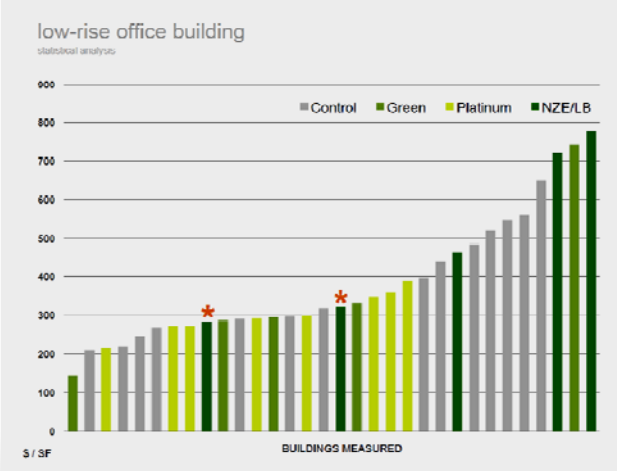
Figure 8: Measured EUI of ZNE and Ultra-low Energy Office Buildings



From CBSA: Post 2004 Office EUI is 68 kBtu/sf

Cost Examples Comparables

Source: The Power of Zero: Optimizing Value for Next Generation Green
20 November 2013
Peter Morris, MRICS Lisa Matthiessen, FAIA Laura Lesniewski, AIA



Cost?

- Ultra low energy buildings can cost the same as standard buildings
  - It's better design, construction, and operation
  - Many ways to achieve savings
- Net cost appear to be +/- 10%
  - Synergies and offsets can keep costs low
- Mostly program costs