

Zero Energy Commercial Buildings Consortium (CBC) Building Envelope Working Group Scope and Outline

Working Group Guidance

1. Visionary – Look 30-40 years into future
 - What would NZECB look like in the future?
 - Backfill with milestones toward achieving that vision over that period
2. Includes both existing and new buildings
3. Envelope Scope includes:
 - Floors
 - Roofs
 - Walls
 - Windows
 - Building systems integrated with floors, roofs, walls, or windows
 - i. Energy production (e.g., PV, solar thermal, thermoelectric, etc.)
 - ii. Lighting (e.g., daylighting)
 - iii. Space heating or cooling (e.g., wall or floor integrated radiant systems, thermal mass, active or passive elements to manage solar heat gain, etc.)
 - iv. Ventilation (e.g., double-skin façade, solar air pre-heating, ventilation)
4. Final Report Contribution: 8-10 pages long

Preliminary Report Outline

- a. Technology Vision in 2040 to 2050
 - i. Envelope components and systems
 - ii. Design
 - iii. Delivery
 - iv. All the above for both existing and new commercial buildings
- b. Key barriers to overcome to achieve vision
 - i. Technology / Performance
 - ii. Policy
 1. Building Codes & Standards
 - a. Energy
 - b. Structural
 - c. Fire
 - d. Electrical
 - e. Etc.
 2. Test procedures
 3. Etc.

- iii. Market acceptance
 - 1. Durability / reliability
 - 2. Cost
 - 3. Design
 - 4. Delivery

- c. Key developments required to overcome barriers and to achieve the vision
 - i. Technology
 - ii. Policy
 - iii. Market Acceptance