

## **GUIDING PRINCIPLES FOR DEEP ENERGY REDUCTIONS (Draft)**

1. Reexamine assumptions regarding our thoughts on how to design, finance, operate, improve, and maintain our homes.
2. To achieve deep energy reductions, start by examining all needs, wants, resources, and the full array of options available.
3. The greatest opportunity for reductions exists when the occupants are willing to change/adapt, and there are few restrictions to impede changes to the building enclosure and its systems.
4. The house is an interactive system; changes to improve energy efficiency can have a neutral, positive, or negative impact on IAQ, durability, and comfort.
5. Increasing the adaptability and resilience of households and homes should be an integral part of a comprehensive plan to achieve deep energy reductions.
6. A primary difference between new and existing homes is the challenge of timing.
7. Occupants have a big impact.
8. Consider actions with the longest life expectancy first. Consider measure life when selecting system components.
9. Verification of performance is essential to make sure that a system or house is performing as intended.
10. Savings follow waste (and use).
11. The higher the energy intensity, the greater the potential for absolute reductions.
12. A focus on optimizing the performance of a system yields deeper and potentially less expensive results than an approach based on isolated components.
13. Price is not the same as cost.
14. Tunneling through the cost and performance barriers are critical to deep reductions.
15. Problems = Opportunity.
16. Tunnel through the cost and complexity barriers to overcome the law of diminishing returns.
17. Some actions increase the opportunity for further reductions, others may pose barriers.
18. Monitor household performance through actual results of energy use, costs, IAQ, and durability.
19. Provide a system for continual improvement and two-way communication.
20. A low energy home can be a status symbol.