

## PROTECTING ENERGY EFFICIENCY AGAINST ON-SITE POWER TRADE-OFFS IN BUILDING ENERGY CODES

**Energy efficiency and renewable energy generation are complementary but not interchangeable.** While rooftop solar photovoltaic (PV) installations can be beneficial, building energy codes must first ensure that the building itself always achieves an acceptable level of energy efficiency to prevent many decades of underperformance, higher energy bills, and lost energy savings. Attempts to substitute renewable energy (e.g., solar PV) generation for energy efficiency may be grounded in good intentions, but such efforts equate to a significant trade-off and shortcut that would negatively affect homeowners and tenants over the entire useful life of a home and undermine efforts to attain cost-effective net-zero energy construction.

**Historically, building energy codes have focused exclusively on energy conservation and delivered enormous cost savings and environmental benefits.** The Alliance to Save Energy has consistently opposed building energy code proposals that would undermine cost-effective and energy-saving measures in building energy codes by allowing trade-offs that displace energy efficiency and conservation in favor of renewable energy. The Alliance supported efforts that resulted in a first-ever thermal energy backstop for homes using on-site renewable energy generation to meet the Energy Rating Index (ERI) compliance path of the 2018 International Energy Conservation Code (IECC). This backstop was set at 2015 IECC prescriptive path levels to ensure homeowners continue to realize the energy cost savings expected of new construction, while also providing homebuilders added flexibility to build compliant houses without sacrificing energy efficiency.

**Addressing the energy efficiency of buildings is critical to decarbonization efforts and global emissions-reductions targets.** Buildings account for about 40 percent of U.S. energy consumption including more than 70 percent of its electricity. Building energy codes that require high-efficiency building envelope technologies coupled with high-performance heating and cooling equipment and lighting are a near-term and effective policy tool for state and local governments working toward meeting ambitious sustainability goals.

**Energy efficiency measures implemented at the time of construction will deliver financial and emissions-reductions benefits to owners and tenants for decades.** Ownership and occupancy of a building will change many times over its 70-or-more-year lifetime. Building energy codes also mitigate the “split incentive” barrier that often disadvantages and discourages later investments in energy efficiency when the costs accrue to someone who is not the beneficiary of lower energy bills.

**The Alliance’s positions on proposed changes in the model energy code, including those that would allow renewable energy ERI compliance options, have consistently observed the following principles articulated by the Energy-Efficient Codes Coalition (EECC):**

- Pursue continuous improvement in the model energy code based on cost-effective, practical measures that are neutral with respect to technologies, building products, and fuel source.
- Oppose code change proposals that would weaken code efficiency.
- Optimize cost-effective energy savings by first reducing thermal and electrical loads (e.g., lighting), followed by measures to efficiently meet these loads with energy-saving equipment and systems.
- Achieve energy performance over the life of the building by valuing permanent and long-lasting measures more than those with shorter lifetimes.
- After maximizing cost-effective energy savings, look beyond the building boundary to effective integration with the utility grid and local micro-grids, on-site renewable energy, and community-scale district energy where feasible.
- Recognize the need for both efficiency and renewable energy to achieve our ultimate goal of net-zero energy buildings.
- Because new buildings will last many decades, look for low-cost opportunities to “future-proof” buildings by preparing them for emerging technologies that are not yet proven or cost-effective.

\*\*\*

*The **Alliance to Save Energy** works to advance energy efficiency in building energy codes in partnership with the **Energy-Efficient Codes Coalition**, **Building Codes Assistance Project**, and **Responsible Energy Codes Alliance**. Each group offers additional resources and more information about how building energy codes deliver real and verifiable economic and environmental benefits.*