

The Case for Statewide Building Codes With Energy Efficiency Standards

The Problem

Alaska's structure of building codes and energy efficiency standards is confusing. Multiple state agencies adopt parts of various building codes and energy standards but there are overlaps, and gaps, and no single place where one can find a comprehensive overview. At the present time the Department of Labor (DoL) adopts commercial and residential electrical and plumbing codes. The Department of Public Safety (DPS) adopts fire, life-safety, and mechanical codes for commercial structures, and establishes residential fire alarm and carbon monoxide regulations. The Department of Education and Early Development (DEED), the Alaska Housing Finance Corporation (AHFC), and the Department of Transportation and Public Facilities (DOTPF) are all tasked (redundantly) with adopting and applying energy efficiency standards for either commercial or residential buildings, or both. Many municipalities adopt comprehensive sets of codes (some including energy efficiency standards) that apply to both residential and commercial buildings. However, there is no formal mechanism for coordination between these entities to ensure that codes are not duplicative, leave gaps, or conflict. As a result, government agencies must spend more time, effort, and expense developing their own codes, while businesses are similarly burdened navigating the resulting tangle of regulations. There are also significant gaps that threaten our health, safety, and economic development: (1) no statewide residential building code, (2) no energy efficiency standards that apply statewide for residential and commercial buildings, and (3) a very uneven playing field in the level of financing, plan review, inspection, and enforcement across building types and regions of the state. Our disjointed building code system consumes too many resources from all interested parties without consistently providing health, safety, and savings for Alaskans.

The Solution

The State should adopt a comprehensive, integrated package of statewide commercial and residential building codes that include energy efficiency standards. Implementation and enforcement of such a statewide package of codes and standards could be modeled after AHFC's present use of the International Residential Code (IRC) and the Building Energy Efficiency Standard (BEES), a system with a proven track record of versatility, affordable costs, minimal bureaucracy, and legal enforcement in both urban and rural Alaska. Capitalizing on AHFC's experience in tailoring codes and standards to the unique challenges facing Alaska would have two major benefits. First, using the AHFC model would not require the invention of new codes and standards. Both the IRC and BEES are already applied on a statewide basis, *but only when* homeowners seek AHFC financing. Nor would requiring that the AHFC model apply to all new construction statewide require the creation of new bureaucracy employing state inspectors. The AHFC model already provides for private sector compliance checks, going so far as to allow video inspections for remote locations. Second, the AHFC approach already acknowledges that one size does not fit all in Alaska. BEES recognizes four distinct climatic zones for thermal standards, and the IRC recognizes different seismic regions, as well as differences in wind and snow loading, assuring that efficiency and safety needs are met without unnecessary requirements being leveled on builders and consumers.

The Benefits

A comprehensive and integrated statewide package of building codes with energy efficiency standards would provide increased simplicity, safety and savings that spur economic development and job creation.

Simplicity

As noted above, the state's current structure is complicated and confusing for everyone.

For builders, the existence of local codes and standards in some places, none in others, and no statewide code or energy efficiency standards makes it unclear which regulatory body needs to be consulted before ground is broken.

When several entities have jurisdiction, consulting each one adds to the cost and effort required for development. A comprehensive and integrated package of building codes and energy efficiency standards would provide a one stop shop that would remove confusion and streamline the regulatory process for developers who would only need to understand and comply with one source of codes and standards in the state.

A comprehensive and integrated statewide package of codes and standards would also provide municipalities with a coherent, regionally relevant set of regulations to adopt, rather than the present system where they must review, adopt, and enforce piecemeal building codes and energy efficiency standards from many different sources. A comprehensive package would result in more efficiency and consistency, and reduce costs to municipalities. However, such a package would not usurp the right of home rule communities to adopt their own codes and standards, as long as they were at least as stringent as the statewide package.

Safety

When there is no building code in a jurisdiction, homeowners are left to fend for themselves in a buyer-beware market. Some builders have the incentive to cut corners and produce low-cost alternatives. Consumers do not often understand the benefits of even marginally more expensive measures (such as proper ventilation and sealing in humid climates) despite the tremendous long-term benefits such measures have. Alaska is a state of many extremes: wind, temperature, rain, snow, permafrost, and seismic activity all pose real risks to the structural integrity of buildings in different parts of the state. There are also significant health hazards associated with compromised indoor air quality caused by mold or improperly installed heating systems. Without a statewide package of building codes and energy efficiency standards, Alaskans will continue to be vulnerable to health and safety risks associated with below-code construction. Fires caused by unsafe wiring and poorly installed heating systems take the lives of several Alaskans each year, too many of them children.

Savings and Economic Development

The savings associated with more efficient code governance and improved building safety are substantial. However, the greatest monetary savings would come from applying the BEES energy efficiency standards to all new construction in the state. The Cold Climate Housing Research Center (CCHRC) performed a cost-benefit analysis for a proposed energy standard that would apply to residential buildings statewide and found that the additional cost of constructing new homes to an updated 2012 energy efficiency standard (from the 2009 standard) would range from \$215 to \$4,228, with lifecycle savings ranging from \$2,622 to \$26,252, depending on the climate zone and the local cost of energy.

In spite of these significant potential savings, the market often does not recognize the value of energy efficiency improvements, and they are not captured in the appraisal process. Builders are not rewarded for making these improvements up front, and homebuyers and renters are then saddled with homes with unnecessarily high energy costs over the long-term. Reasonable energy efficiency standards and incentive programs can assure that all homeowners and renters benefit from lower energy costs every month for the life of the building.

AHFC's Weatherization and Rebate programs have both been very successful, have created over 4,000 jobs, and should continue to reduce long-term energy expenses for residential buildings that have already been constructed. So far, Alaskans who have participated in the two programs have saved an average of at least 30% on their energy bills. However, the logical complement to retrofitting Alaska's *existing* building stock is to require that all *future* construction meet energy efficiency standards. A comprehensive and integrated package of statewide building codes that includes energy efficiency standards would be that logical complement, keeping hundreds of millions of dollars in the state's economy every year and spurring job creation.