



Insurance Underwriting and Updated Building Energy Codes

Introduction

Energy codes play an important role in a building's resiliency, and they are just as significant as other life safety codes. A more resilient building can be defined as a building that is prepared for, can recover from, and can more successfully adapt to future adverse events. Each year, insurance companies are responsible for paying billions of dollars in the United States for repair/reconstruction of buildings as a result of various natural disasters, and these costs are inflated by out-of-date codes. Older versions of model energy codes allow too many homes and buildings to be built below the level of quality that can withstand predictable levels of storms. Although not a perfect solution for all conditions, updated building codes, including energy codes, provide a level of protection from wind, extreme heat and cold, fire, and other hazards.

Insurance underwriting is the process by which insurance companies evaluate the risks of providing coverage to businesses or homeowners and whether or not the companies should take on those risks. Underwriting is a complex process that involves numerous calculations, data sources, and statistical analyses. This process helps insurance companies predict the likelihood of risks, such as severe weather events and structural issues, impacting specific buildings. These calculations inform insurance companies of their potential responsibility for compensation to building owners if coverage was provided. For example, if buildings are determined to have numerous risks that result in costly and frequent insurance claims, insurance companies will either charge owners a high premium or deny coverage. As the impacts of climate change are increasingly felt across the United States, insurance premiums will continue to increase or coverage will continue to be denied. One way states can ensure that most buildings will qualify for insurance is by updating their building energy codes.

Increasing Natural Disasters

As extreme weather events continue to increase nationwide, insurance companies are struggling to provide comprehensive coverage for commercial businesses and residences because more buildings are determined to be too risky through the underwriting process. In 2019, [The National Oceanic and Atmospheric Administration](#) estimated that there were 14 weather and climate disaster events with losses exceeding \$1 billion dollars across the country. Often, building owners must pay for at least a fraction of these costs themselves, and if they have no insurance, they are financially responsible for all repair costs. However, buildings built using updated building energy codes, like the 2021 International Energy Conservation Codes (IECC), can be determined as less risky through insurance underwriting because these buildings are more resilient.



How Updated Energy Codes Make Homes Safer

The most well-known benefit for constructing buildings with updated energy codes is that these buildings use less energy, leading to significant energy and monetary savings for owners. Energy codes, which make homes operate more efficiently, also increase building resiliency because more efficient buildings require a more durable building envelope and better ventilation. According to the [Institute for Market Transformation](#), buildings with updated energy codes are more resilient than older homes because they require:

- A more durable building thermal envelop;
- Increased air leakage prevention;
- Increased air sealing requirements; and
- Increased use of insulation.

These updates allow buildings to better adapt to extreme cold and hot weather and keep harmful outside air out of the home due to the reduction of unwanted air transfer. Since more efficient and resilient buildings can withstand severe weather, businesses and homes that meet updated codes are more likely to benefit from lower insurance costs and better coverage in areas that are determined high-risk. Insurance companies, therefore, strongly support state adoption of updated building codes, including energy codes. These updated buildings are less likely to be impacted by unexpected risks which, in turn, allows insurance companies to offer more coverage and save money on future claims.

Next Steps

As the number and severity of storms increase across the country, owners of buildings built using older energy codes will see their insurance rates go up through the underwriting process and may even lose their coverage as insurance companies deem coverage too risky. [According to the Washington Post](#), states like West Virginia are already seeing home insurance rates increase. Updated building energy codes not only decrease energy usage in new buildings, but they also boost resiliency. For these multiple benefits, energy codes should be considered as important as other building codes. States must prioritize updating their building energy code in order to make the built environment more resilient and to ensure more buildings can be covered by insurance. Insurance companies must also encourage states to adopt updated building energy codes.

On-site Renewable Electric Generation

While constructing new homes and buildings using updated energy codes makes them more resilient, they are still often dependent on getting electricity from the electrical grid, which is often impacted by the same severe weather events as buildings. According to the [U.S. Department of Energy](#), however, integrating onsite renewable energy into new construction, such as requiring wind turbines and solar photovoltaics will ensure that a building's power supply remains uninterrupted due to unforeseen circumstances. The 2021 IECC has an amendment that states can adopt requiring onsite renewable generation, and it is expected that future code cycles, such as the 2024 IECC, will require onsite generation to increase the built environment's resiliency.