



Policy Brief: Resilient Infrastructure and Energy Efficient Buildings

The building envelope offers protection to occupants when severe weather strikes. An energy efficient building envelope can extend that protection post-disaster or during prolonged events like heat waves or extreme cold. High-performance buildings aid human comfort and increase survivability in the event of lost electricity, and their mechanical and physical characteristics can maintain the integrity of the overall structure.

Today we have the means and knowledge to cost-effectively deliver this protection against tomorrow's threats and save energy while doing so. For example, designing buildings to the 2018 I-Codes delivers a national benefit of \$11 for every \$1 invested.¹ Additionally, implementing current best practices and technology will dramatically reduce building energy use – a sector that accounts for 40 percent of total energy use in the United States.

Losses of \$317 billion from 2017 natural disasters jump-started discussions on creating more resilient buildings and communities. Many of these actions were highlighted by the passage of the Disaster Recovery Reform Act of 2018 (DRRA). The law includes major changes to the programs and grant funding managed primarily by the Federal Emergency Management Agency (FEMA).²

The Federal response to preparing our buildings and communities against future threats must give primary consideration to guaranteeing a robust and efficient building envelope. This can be accomplished by pursuing the following priorities:

- **Oversight of DRRA Implementation.** FEMA will lead the implementation of reforms under DRRA. Congress should ensure that new rules for disaster preparedness and response properly recognize the value of investments in building energy efficiency.
- **Support Investments in Research.** The Federal government has tremendous research capabilities that have long been leveraged to further the study of building sciences. Congress should support continued funding for building research programs operated by FEMA, Department of Energy, National Institute of Standards and Technology, and National Institute of Building Sciences.
- **Recognize Buildings as Infrastructure.** Congress should recognize that buildings represent a significant portion of our Nation's infrastructure, including critical structures such as hospitals and schools.

Moreover, energy-efficient buildings can improve the operability of traditional elements of infrastructure like the electric grid.

¹ <https://www.nibs.org/news/432994/National-Institute-of-Building-Sciences-Issues-Interim-Report-on-the-Value-of-Mitigation-.htm>

² <https://www.bakerdonelson.com/the-disaster-recovery-reform-act-of-2018-key-provisions-affecting-fema-funding>