Resilient Construction and Model Building Codes

There are many policy rationales and public benefits for promoting resilient construction techniques. Resilient construction makes buildings more adaptable to extreme weather events. In 2012 the federal government spent $8 billion in unfunded disaster relief. "Resilient" construction ensures that a structure will be more resistant to damage caused by hazards that destroy buildings in disasters, including fire, windstorms, earthquakes and flooding.

Resilient construction also promotes construction of energy efficient buildings and infrastructure by using durable, long-lasting materials. It is more efficient to build structures that withstand disruptive events, and are therefore not subject to reconstruction. Resilient construction is consistent with policy rationales underlying Rep. McKinley's Energy Savings and Industrial Competitiveness Act (H.R. 1616), which promotes more "adaptable" buildings.

The below draft provisions are based on text from H.R. 1616 and would amend the Energy Conservation and Protection Act. Among other things, the provision directs DOE to examine model building codes that promote resilient construction in a manner consistent with energy efficiency. The below concepts could be incorporated into legislation that may be cited as the "Resilient Construction Act of 2014."

TITLE I – BUILDING CODES

Subtitle A - Resilient and Energy Efficient Building Codes

Sec. 101 **DEVELOPMENT OF MODEL BUILDING CODES**

(a) DEFINITIONS – Section 303 of the Energy Conservation and Production Act (42 U.S.C. 6832) is amended to include the following:

(1) "**Resilient building design" refers to construction techniques that allow a property -**
(A) to resist hazards brought on by a major disaster; and
(B) to continue to provide the primary function of the property after a major disaster.
(2) And reduces the magnitude or duration of a disruptive event to a property; and has the absorptive capacity, adaptive capacity, and recoverability to withstand a potentially disruptive event.

(b) STATE BUILDING ENERGY EFFICIENCY CODES – Section 304 of the Energy Conservation and Production Act (42 U.S.C. 6833) is amended as follows:

(1) IN GENERAL - The Secretary shall provide technical and financial support for the development of model, voluntary codes and standards for residential and commercial buildings for use as -

(A) Guidelines for energy efficient and resilient building design.

Sec. 102 STUDIES

Sec. 304 of the Energy Conservation and Production Act (42 U.S.C. 6833) is amended to read as follows:

(a) The Secretary shall, in consultation with building science experts from the National Laboratories and institutions of higher education, designers and builders of energy-efficient residential and

commercial buildings, code offices and other stakeholders, undertake a study of the feasibility, impact, economics, and merit of

(1) Code improvements that would require that buildings be designed, sited and constructed in a manner that makes the buildings more adaptable and resilient in the future.

TITLE II - RESILIENCE STAR

Subtitle A – Pilot Projects

(a) Section X of the Department of Homeland Security statute, which authorizes FEMA mitigation" and "science and technology pilot authority," is amended as follows:

(1) Authorize demonstration projects highlighting resilient and adaptable characteristics of concrete structures.

*Definition taken from Blunt/Nelson Amendment to the Water Resources Development Act (WRDA), authorizing a study of "resilient construction techniques."