

Federal Efforts to Reduce the Impacts of Windstorms

Witnesses:

Dr. Ernst Kiesling

Research Faculty, National Wind Institute, Texas Tech University

Ms. Debra Ballen

General Counsel and Senior Vice President, Public Policy, Insurance Institute for Business & Home Safety

Dr. David Prevatt

Assistant Professor, Department of Civil and Coastal Engineering, University of Florida

Committee Members Present:

Larry Buschon (R-IN), Chairman, Subcommittee on Research

Randy Neugebauer (R-TX)

Frederica Wilson (D-FL), Ranking Member, Subcommittee on Technology

Eddie Bernice Johnson (D-TX), Ranking Member, Committee on Science, Space and Technology

Dan Lipinski (D-IL), Ranking Member, Subcommittee on Research

Elizabeth Esty (D-CT)

David Schweikert (R-AZ)

On June 5, 2013, the House Science, Space and Technology Subcommittees on Research and Technology held a joint hearing on federal efforts to reduce the impacts of windstorms. The hearing reviewed the National Windstorm Impact Reduction Act Reauthorization of 2013 (H.R. 1786), highlighted the role of science and engineering research in mitigating windstorm impacts, and explored ways of implementing research results to create more resilient communities.

The act, introduced by Randy Neugebauer (R-TX), would reauthorize the National Windstorm Impact Reduction Program (NWIRP), a multi-agency effort that includes the National Institutes of Standards and Technology (NIST), the Federal Emergency Management Agency (FEMA), the National Oceanic and Atmospheric Administration (NOAA), and the National Science Foundation (NSF). It would additionally provide new Congressional direction to the coordinating agencies, create a National Advisory Committee on windstorm impact reduction, and transfer leadership of NWIRP from the Office of Science and Technology Policy to NIST.

In his opening remarks, Neugebauer emphasized the need to shift the national focus from disaster response to disaster preparedness, stating “[The National Windstorm Impact Reduction Act Reauthorization of 2013] would help ensure that the federal government is adequately addressing disaster resilience and mitigation, which is critical to reducing the costs of disasters to taxpayers.” However, Frederica Wilson (D-FL) and Eddie Bernice Johnson (D-TX) expressed concerns with Neugebauer’s bill. Wilson critiqued the bill for decreasing funding for NWIRP by 14%, and Johnson favored alternative legislation that would “take a multi-hazards approach to disaster mitigation.” For these reasons, Wilson and Johnson have introduced the Natural Hazards Risk Reduction Act of 2013 (H.R. 2132), which would provide a higher level of funding for NWIRP and would reauthorize the National Earthquake Hazards Reduction Program (NEHRP).

Witness testimony emphasized the need for science and engineering research on windstorm impacts and mitigation. Dr. David Prevatt, Assistant Professor in the University of Florida’s Department of Civil and Coastal Engineering, asserted, “The lack of coordinated and sustained support for wind engineering over four decades has severely hurt the discipline. The lack of funding has meant that research is done in piecemeal fashion on shoestring budgets.” Dr. Ernst Kiesling, a member of the research faculty at Texas Tech University’s National Wind Institute, highlighted key wind research needs, including windstorm simulation facilities, a repository for data on windstorm damage, and improved computational engineering models of wind-structure interactions. Witnesses also emphasized the need for improved implementation of research results. Debra Ballen, Senior Vice President of Public Policy for the Insurance Institute for Business & Home Safety (IBHS), explained, “Ultimately, if we are to reduce wind

losses across the nation, it is not sufficient to limit our efforts to better forecasting – although that has certainly been and continues to be tremendously effective in reducing deaths and injuries. Rather, we must reduce the vulnerability of homes and businesses to wind-related hazards.” Kiesling concurred, highlighting the importance of education and outreach, as well as the need for social science research on how individuals and communities make the choice to implement protective measures.

Several members of Congress raised questions about ways to encourage building fortification. Larry Buschon (R-IN) and Dan Lipinski (D-IL) asked how implementation of structural engineering research could be improved. Ballen recommended better communication to encourage homeowners to value fortification, as well as additional social science research to determine how to incentivize fortification. Kiesling highlighted the need to better enforce existing building codes, and Prevatt emphasized that additional research was needed to improve the design of tornado-resistant structures.

Neugebauer and Elizabeth Esty (D-CT) asked how the insurance industry incentivizes homeowners to fortify their homes. Ballen responded that IBHS’s FORTIFIED programs set voluntary standards for home fortification and that many insurance companies provide discounts for fortified homes. Johnson asked how states and communities can be encouraged to put building codes in place, and Ballen responded that IBHS recently scored all 50 states on their building codes. She stated that, by making building codes understandable to the public, the ranking has sparked dialogue and led to improved legislation, such as a new Maryland law that prohibits local jurisdictions from weakening wind provisions in Maryland building codes.

Wilson asked the witnesses, “What opportunities are we missing due to lack of funding?” Both Prevatt and Kiesling noted that it is difficult to attract new wind engineering faculty due to funding uncertainties, and Prevatt pointed to the better-funded earthquake research community as an example of what wind research could become. Ballen further noted the importance of increasing funding over time, which would enable researchers to continue with current research and to pursue new lines of research as they arise.

Opening statements and witness testimony, as well as a video archive of the entire hearing, is available from the committee website.

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