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Part 1

NATIONAL WINDSTORM IMPACT REDUCTION ACT OF 2004

JUNE 28, 2004.—Ordered to be printed

Mr. BOEHLERT, from the Committee on Science, submitted the following

R E P O R T

[To accompany H.R. 3980]

[Including cost estimate of the Congressional Budget Office]

The Committee on Science, to whom was referred the bill (H.R. 3980) to establish a National Windstorm Impact Reduction Program, having considered the same, report favorably thereon with an amendment and recommend that the bill as amended do pass.

CONTENTS

I. AMENDMENT

The amendment is as follows:

Strike all after the enacting clause and insert the following:

SECTION 1. SHORT TITLE.

This Act may be cited as the "National Windstorm Impact Reduction Act of 2004".

SEC. 2. FINDINGS.

The Congress finds the following:

(1) Hurricanes, tropical storms, tornadoes, and thunderstorms can cause significant loss of life, injury, destruction of property, and economic and social disruption. All States and regions are vulnerable to these hazards.

(2) The United States currently sustains several billion dollars in economic damages each year due to these windstorms. In recent decades, rapid development and population growth in high-risk areas has greatly increased overall vulnerability to windstorms.

(3) Improved windstorm impact reduction measures have the potential to reduce these losses through—

(A) cost-effective and affordable design and construction methods and practices;

(B) effective mitigation programs at the local, State, and national level;

(C) improved data collection and analysis and impact prediction methodologies;

(D) engineering research on improving new structures and retrofitting existing ones to better withstand windstorms, atmospheric-related research to better understand the behavior and impact of windstorms on the built environment, and subsequent application of those research results; and

(E) public education and outreach.

(4) There is an appropriate role for the Federal Government in supporting windstorm impact reduction. An effective Federal program in windstorm impact reduction will require interagency coordination, and input from individuals, academia, the private sector, and other interested non-Federal entities.

SEC. 3. DEFINITIONS.

In this Act:

(1) The term "Director" means the Director of the Office of Science and Technology Policy.

(2) The term "State" means each of the States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the United States Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, and any other territory or possession of the United States.

(3) The term "windstorm" means any storm with a damaging or destructive wind component, such as a hurricane, tropical storm, tornado, or thunderstorm.

SEC. 4. NATIONAL WINDSTORM IMPACT REDUCTION PROGRAM.

(a) ESTABLISHMENT.—There is established the National Windstorm Impact Reduction Program (in this Act referred to as the "Program").

(b) OBJECTIVE.—The objective of the Program is the achievement of major measurable reductions in losses of life and property from windstorms. The objective is to be achieved through a coordinated Federal effort, in cooperation with other levels of government, academia, and the private sector, aimed at improving the understanding of windstorms and their impacts and developing and encouraging implementation of mitigation measures to reduce those impacts.

(c) INTERAGENCY WORKING GROUP.—Not later than 90 days after the date of enactment of this Act, the Director shall establish an Interagency Working Group consisting of representatives of the National Science Foundation, the National Oceanic and Atmospheric Administration, the National Institute of Standards and Technology, the Federal Emergency Management Agency, and other Federal agencies as appropriate. The Director shall designate an agency to serve as Chair of the Working Group and be responsible for the planning, management, and coordination of the Program, including budget coordination. Specific agency roles and responsibilities under the Program shall be defined in the implementation plan required under subsection (e). General agency responsibilities shall include the following:

(1) The National Institute of Standards and Technology shall support research and development to improve building codes and standards and practices for buildings, structures, and lifelines.

(2) The National Science Foundation shall support research in engineering and the atmospheric sciences to improve the understanding of the behavior of windstorms and their impact on buildings, structures, and lifelines.

(3) The National Oceanic and Atmospheric Administration shall support atmospheric sciences research to improve the understanding of the behavior of windstorms and their impact on buildings, structures, and lifelines.

(4) The Federal Emergency Management Agency shall support the development of risk assessment tools and effective mitigation techniques, windstorm-related data collection and analysis, public outreach, and information dissemination.

(d) PROGRAM COMPONENTS.—

(1) IN GENERAL.—The Program shall consist of three primary mitigation components: improved understanding of windstorms, windstorm impact assessment, and windstorm impact reduction. The components shall be implemented through activities such as data collection and analysis, risk assessment, outreach, technology transfer, and research and development. To the extent practicable, research activities authorized under this Act shall be peer-reviewed, and the components shall be designed to be complementary to, and avoid duplication of, other public and private hazard reduction efforts.

(2) UNDERSTANDING OF WINDSTORMS.—Activities to enhance the understanding of windstorms shall include research to improve knowledge of and data collection on the impact of severe wind on buildings, structures, and infrastructure.

(3) WINDSTORM IMPACT ASSESSMENT.—Activities to improve windstorm impact assessment shall include—

(A) development of mechanisms for collecting and inventorying information on the performance of buildings, structures, and infrastructure in windstorms and improved collection of pertinent information from sources, including the design and construction industry, insurance companies, and building officials;

(B) research, development, and technology transfer to improve loss estimation and risk assessment systems; and

(C) research, development, and technology transfer to improve simulation and computational modeling of windstorm impacts.

(4) WINDSTORM IMPACT REDUCTION.—Activities to reduce windstorm impacts shall include—

(A) development of improved outreach and implementation mechanisms to translate existing information and research findings into cost-effective and affordable practices for design and construction professionals, and State and local officials;

(B) development of cost-effective and affordable windstorm-resistant systems, structures, and materials for use in new construction and retrofit of existing construction; and

(C) outreach and information dissemination related to cost-effective and affordable construction techniques, loss estimation and risk assessment methodologies, and other pertinent information regarding windstorm phenomena to Federal, State, and local officials, the construction industry, and the general public.

(e) IMPLEMENTATION PLAN.—Not later than 1 year after date of enactment of this Act, the Interagency Working Group shall develop and transmit to the Congress an implementation plan for achieving the objectives of the Program. The plan shall include—

(1) an assessment of past and current public and private efforts to reduce windstorm impacts, including a comprehensive review and analysis of windstorm mitigation activities supported by the Federal Government;

(2) a statement of strategic goals and priorities for each Program component area;

(3) a description of how the Program will achieve such goals, including detailed responsibilities for each agency; and

(4) a description of plans for cooperation and coordination with interested public and private sector entities in each program component area.

(f) BIENNIAL REPORT.—The Interagency Working Group shall, on a biennial basis, and not later than 180 days after the end of the preceding 2 fiscal years, transmit a report to the Congress describing the status of the windstorm impact reduction program, including progress achieved during the preceding two fiscal years. Each such report shall include any recommendations for legislative and other action the Interagency Working Group considers necessary and appropriate. In developing the biennial report, the Interagency Working Group shall consider the recommendations of the Advisory Committee established under section 5.

SEC. 5. NATIONAL ADVISORY COMMITTEE ON WINDSTORM IMPACT REDUCTION.

(a) ESTABLISHMENT.—The Director shall establish a National Advisory Committee on Windstorm Impact Reduction, consisting of not less than 11 and not more than 15 non-Federal members representing a broad cross section of interests such as the research, technology transfer, design and construction, and financial communities;

materials and systems suppliers; State, county, and local governments; the insurance industry; and other representatives as designated by the Director.

(b) ASSESSMENT.—The Advisory Committee shall assess—

(1) trends and developments in the science and engineering of windstorm impact reduction;

(2) the effectiveness of the Program in carrying out the activities under section 4(d);

(3) the need to revise the Program; and

(4) the management, coordination, implementation, and activities of the Program.

(c) BIENNIAL REPORT.—At least once every two years, the Advisory Committee shall report to Congress and the Interagency Working Group on the assessment carried out under subsection (b).

(d) SUNSET EXEMPTION.—Section 14 of the Federal Advisory Committee Act shall not apply to the Advisory Committee established under this section.

SEC. 6. SAVINGS CLAUSE.

Nothing in this Act supersedes any provision of the National Manufactured Housing Construction and Safety Standards Act of 1974. No design, construction method, practice, technology, material, mitigation methodology, or hazard reduction measure of any kind developed under this Act shall be required for a home certified under section 616 of the National Manufactured Housing Construction and Safety Standards Act of 1974 (42 U.S.C. 5415), pursuant to standards issued under such Act, without being subject to the consensus development process and rulemaking procedures of that Act.

SEC. 7. AUTHORIZATION OF APPROPRIATIONS.

(a) FEDERAL EMERGENCY MANAGEMENT AGENCY.—From sums otherwise authorized to be appropriated, there are authorized to be appropriated to the Federal Emergency Management Agency for carrying out this Act—

(1) $8,000,000 for fiscal year 2005;

(2) $8,700,000 for fiscal year 2006; and

(3) $9,400,000 for fiscal year 2007.

(b) NATIONAL SCIENCE FOUNDATION.—From sums otherwise authorized to be appropriated, there are authorized to be appropriated to the National Science Foundation for carrying out this Act—

(1) $8,000,000 for fiscal year 2005;

(2) $8,700,000 for fiscal year 2006; and

(3) $9,400,000 for fiscal year 2007.

(c) NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY.—From sums otherwise authorized to be appropriated, there are authorized to be appropriated to the National Institute of Standards and Technology for carrying out this Act—

(1) $2,000,000 for fiscal year 2005;

(2) $3,000,000 for fiscal year 2006; and

(3) $4,000,000 for fiscal year 2007.

(d) NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION.—From sums otherwise authorized to be appropriated, there are authorized to be appropriated to the National Oceanic and Atmospheric Administration for carrying out this Act—

(1) $2,000,000 for fiscal year 2005;

(2) $2,100,000 for fiscal year 2006; and

(3) $2,200,000 for fiscal year 2007.

SEC. 8. BIENNIAL REPORT.

Section 37(a) of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885d(a)) is amended by striking ''By January 30, 1982, and biennially thereafter'' and inserting ''By January 30 of each odd-numbered year''.

II. PURPOSE OF THE BILL

The purpose of the bill is to establish an interagency National Windstorm Impact Reduction Program to improve understanding of windstorm impacts, improve windstorm impact assessment, and develop and encourage implementation of mitigation measures to reduce those impacts.

III. BACKGROUND AND NEED FOR THE LEGISLATION

High winds can easily destroy commercial and residential structures. Hurricanes can reach constant wind speeds greater than 155 miles per hour and extend outward as far as 400 miles. While the National Weather Service is able to detect hurricanes days before they make landfall, predicting when, where, and with what force a hurricane will hit remains an inexact science.

Tornadoes generally occur near the trailing edge of a thunderstorm, though they are also often produced by hurricanes. Tornado winds can reach up to 300 miles per hour and can be powerful enough to lift homes off foundations. Tornadoes are much more difficult to detect than hurricanes with an average lead-time for warnings of only 12 minutes. This makes evacuation nearly impossible, a factor that led to the development and implementation of in-residence tornado shelters.

For both hurricanes and tornadoes, proper construction of buildings is essential to saving lives and reducing property damage. Therefore, it is essential to promote research into how windstorms impact buildings and how to produce the materials and components needed to survive impact. Technology transfer efforts should also be strengthened to make sure architects, building code professionals, builders, remodelers, home buyers, and all others involved in home construction and retrofit have the knowledge to make their decisions in a way that reflects best practice regarding wind hazards.

With more people than ever before living near coastlines, vulnerability to wind hazards in the U.S. is steadily increasing. Already, more than one in six Americans lives in a county that lies on the Atlantic or Gulf of Mexico coast. In addition, the coastal population is growing rapidly, particularly from Texas through the Carolinas. In popular resort areas that are common along the coastline, numbers often swell even further when holiday, weekend, and vacation visitors arrive. These large and growing populations have resulted in substantial increases in buildings and infrastructure in high-risk coastal areas that are also vulnerable to windstorms.

The bulk of current windstorm hazard funding is directed toward fundamental research and development into the atmospheric and meteorological aspects of windstorms, contributing to a greater understanding of weather-related phenomena, but generally without specific mitigation applications in mind. A smaller portion of the windstorm hazard research and development effort is directed toward structural and engineering aspects of buildings and infrastructure affected by windstorms. In a 2003 report, the RAND Corporation, in a study conducted for the Office of Science and Technology Policy, recommended that research and development (R&D) efforts should be reoriented toward longer-term loss reduction efforts: ''This is especially relevant for weather-related hazards, for which R&D is primarily limited to procurements for short-term forecasting efforts . . . . the present emphasis on short time scales is clearly circumventing more-lasting solutions . . . A shift to longer-term and less prediction-oriented efforts, with a focus on investigations and technologies to make the built environment and infrastructures more resilient, holds great promise. Such R&D

promises to save lives, protect property, and dramatically reduce the costs of rebuilding after a disaster.''

The size and scope of federal investments in R&D to reduce structural vulnerability to windstorm impacts is generally agreed to be in the range of a few million dollars, although precise data are not readily available, in part because of the fragmented and uncoordinated nature of these efforts. A 1999 National Academy of Sciences report, Review of the Need for a Large-Scale Test Facility for Research on the Effects of Extreme Winds on Structures, recommended, ''The federal government should coordinate existing federal activities and develop, in conjunction with state and local governments, private industry, the research community, and other interested stakeholder groups, a national wind-hazard reduction program. Congress should consider designating sufficient funds to establish and support a national program of this nature.''

Unfortunately, simply developing technical solutions will not reduce vulnerability to wind hazards. The Federal Emergency Management Agency (FEMA) and the insurance industry have both emphasized that improving the wind resistance of buildings will only be achieved when there is a demand for wind-resistant construction by homeowners. Solving the windstorm vulnerability problem will require not only a robust scientific research and technology development program focused on buildings, but related education, educational and public policy activities, behavioral science research, and technology transfer as well.

Many homeowners are simply unaware of the dangers presented by windstorms, and even more are unaware of the techniques that exist for reducing structural vulnerability related to these dangers. Perhaps the best explanation for this is psychological—most people just assume that they won't be affected by natural hazards and aren't willing to invest even minimal time and resources into reducing the vulnerability of their own homes. Among the barriers to effective mitigation are:

- Lack of useful loss data: Windstorm loss data collection is not sufficiently detailed or comprehensive. The Federal Government has no uniform procedure for compiling loss data, including data on the economic effects of windstorms. The insurance industry does have mechanisms in place for more detailed data collection but the value of this data is unclear, largely because it is proprietary. In addition, the data only covers insured losses, a small portion of overall windstorm losses. Without access to accurate, meaningful data, it is difficult to measure the effectiveness of mitigation techniques or establish public policy priorities.
- Lack of understanding: Many homeowners are simply unaware of the dangers presented by windstorms, and even more are unaware that techniques exist for reducing structural vulnerability to these dangers. This is also a problem in the building and construction industry and among policy makers, although to a lesser degree.
- High cost of implementation: Existing mitigation techniques are effective, but often cost-prohibitive. For example, in Lubbock, Texas, a city housing program builds houses for low-income residents that are designed to withstand winds up to 150 miles per hour and have a safe room to provide additional protection. Of the $78,000 that it costs to build one of these houses, $8,500 goes to-

wards windstorm mitigation. The City of Lubbock no longer offers residents the option of choosing conventionally built homes, but in the private sector where market forces dictate choices, most are still unwilling to pay.

- Limited financial incentives: Exacerbating the problem of high cost is the lack of financial incentives for homeowners who are willing to make the extra investment. In general, neither the insurance industry nor local, state, or federal governments have been willing to provide financial inducements in the form of rate or tax breaks for homeowners who take steps to reduce vulnerability.
- Building codes: For the most part, building codes and local enforcement practices do not address the problem of windstorm vulnerability. Local and state officials are generally either unaware of the dangers and potential mitigation solutions, or are unwilling to enact and enforce strict codes that might be expensive for their constituents.

Through establishment of a coordinated interagency program, H.R. 3980 seeks to improve federal efforts to address growing windstorm hazard vulnerabilities and concerns.

IV. SUMMARY OF HEARINGS

The Committee on Science held a field hearing in Lubbock, Texas on February 9, 2004, to receive testimony on the status of windstorm hazard mitigation in the United States, and to consider the role of federal R&D in windstorm hazard reduction. Presenting testimony were: Dr. Ernst Kiesling, Professor of Civil Engineering at Texas Tech University; Dr. Bogusz Bienkiewicz, Professor of Civil Engineering and Director of the Wind Engineering and Fluids Laboratory at Colorado State University (on behalf of the American Association of Wind Engineering); Dr. Charles Meade, Senior Scientist at RAND and author of a report entitled Assessing Federal Research Developments for Hazard Loss Reduction, prepared for the Office of Science and Technology Policy (OSTP) in 2003; and Brian Shofner, President of Shofner & Associates Insurance Agency.

On March 24, 2004, the Subcommittee on Research and the Subcommittee on Environment, Technology, and Standards of the House Science Committee held a joint hearing to receive testimony on H.R. 3980, National Windstorm Impact Reduction Act of 2004 and to consider the role of federal research and development in windstorm hazard reduction. The Subcommittees received testimony from Dr. John Brighton, Assistant Director for Engineering at the National Science Foundation (NSF); Mr. Anthony Lowe, Administrator of the Federal Insurance Mitigation Administration (a division of FEMA within the Department of Homeland Security); Dr. Steven L. McCabe, Professor of Civil, Environmental and Architectural Engineering at the University of Kansas, who testified on behalf of the American Society of Civil Engineers (ASCE); and Mr. Jeffrey Sciaudone, Director of Engineering and Technical Services for the Institute for Business & Home Safety (IBHS). Mr. Edward Laatsch, Chief of the FEMA Building Science and Technology Branch, accompanied Mr. Lowe. Also, written testimony was submitted by Dr. Stephen P. Leatherman, Director of the International Hurricane Research Center & Laboratory for Coastal Research at Florida International University; and Mr. Randall G. Pence, Presi-

dent of Capitol Hill Advocates, Inc., on behalf of the National Concrete Masonry Association.

At the hearing, Dr. Brighton and Mr. Lowe both highlighted their agencies' support for windstorm hazard reduction measures, although Dr. Brighton expressed moderate concerns about the bill. NSF testimony outlined current agency support for research related to the atmospheric, engineering, and social aspects of windstorm hazard reduction, but also noted its concern with the ''unintended consequences of codifying research programs into law.'' FEMA testified that the resource and cost burden of supporting an external advisory committee for a relatively small program (H.R. 3980 authorizes $67.5 million over three years for the National Windstorm Impact Reduction Program) would be excessive. Dr. McCabe, who endorsed H.R. 3980, emphasized the problem of increasing vulnerability to windstorms, discussed how a coordinated interagency program would help to reduce this problem, and presented a specific plan to the Subcommittees on how such a program might be structured. Dr. McCabe and ASCE maintained that more resources should be focused on reducing vulnerability and that additional spending in this area would actually be a ''moneymaker'' because of the eventual post-hazard savings that would result. Mr. Sciaudone, who also endorsed H.R. 3980, emphasized that no significant progress will be made in reducing vulnerability unless mitigation measures either become mandatory or cost-competitive. He also noted that in forming an advisory committee, it would be important to include groups such as homebuilders who have firsthand knowledge on how to best strengthen buildings.

V. COMMITTEE ACTIONS

On March 17, 2004, Representatives Randy Neugebauer and Dennis Moore introduced H.R. 3980, National Windstorm Impact Reduction Act of 2004.

The Committee met on March 31, 2004 to consider the bill. Chairman Boehlert offered a manager's amendment clarifying FEMA's role in the program and amending NSF reporting requirements to stagger the release of two statutorily required biennial reports unrelated to the program established by H.R. 3980. The amendment was adopted by voice vote.

Mr. Gordon moved that the Committee report the bill, H.R. 3980, as amended, with the recommendation that the bill as amended do pass, that the staff be instructed to make technical and conforming changes to the bill as amended and prepare the legislative report, and that the Chairman take all necessary steps to bring the bill before the House for consideration. With a quorum present, the motion was agreed to by voice vote.

The Committee, through its jurisdiction both over NOAA and most of the agencies that fund research on buildings, has an extensive record for many years of being active on wind research issues. Hearings on tornadoes and on other wind hazards have been held each of the past three Congresses on predecessor bills to H.R. 3980: H.R. 5499 in the 106th Congress: Windstorm Hazard Reduction Research and Technology Transfer Act (Moore/Jones); H.R. 3592 in the 107th Congress: Hurricane, Tornado, and Related Natural Hazards Research Act (Moore/Hart); and H.R. 2020 in the 108th Con-

gress: Hurricane, Tornado and Related Hazards Research Act (Moore/Mario Diaz-Balart).

VI. SUMMARY OF MAJOR PROVISIONS OF THE BILL

- Establishes the National Windstorm Impact Reduction Program, with the objective of achieving major measurable reductions in losses of life and property from windstorms. Requires the Director of OSTP to establish an Interagency Working Group on windstorms consisting of representatives of NSF, FEMA, the National Oceanic and Atmospheric Administration (NOAA), and the National Institute of Standards and Technology (NIST). Requires the Director of OSTP to designate an agency to serve as Chair of the working group, which will be responsible for planning, management, and coordination of the program.
- Establishes three primary components for the Program: improved understanding of windstorms, windstorm impact assessment, and windstorm impact reduction. Requires the components to include activities such as data collection and analysis, outreach, technology transfer, and R&D.
- Establishes a National Advisory Committee on Windstorm Impact Reduction to assess the effectiveness of the Program and make recommendations on the need for revisions to the Program. Directs the Advisory Committee to report the results of such assessments to Congress and the Interagency Working Group on a biennial basis.
- From sums otherwise authorized to be appropriated, authorizes a total of $20 million, $22.5 million, and $25 million for the Program for each of fiscal years 2005 through 2007, respectively.

VII. SECTION-BY-SECTION ANALYSIS (BY TITLE AND SECTION)

Sec. 1. Short title

''National Windstorm Impact Reduction Act of 2004''

Sec. 2. Findings

The Congress finds that:

(1) All states and regions are vulnerable to windstorms.

(2) The United States sustains several billion dollars in economic damages each year due to windstorms, and these vulnerabilities are increasing.

(3) Improved windstorm impact reduction measures have the potential to reduce these losses.

(4) There is an appropriate role for the Federal Government in mitigating windstorm impacts, and significant coordination and cooperation is required for any program to be effective.

Sec. 3. Definitions

Defines terms used in the text.

Sec. 4. National Windstorm Impact Reduction Program

(a) Establishment—Establishes the National Windstorm Impact Reduction Program.

(b) Objective—Achievement of major measurable reductions in losses of life and property from windstorms through a coordinated federal effort, in cooperation with other public and private entities,

to improve understanding of windstorm impacts and develop and encourage implementation of cost effective mitigation measures to reduce those impacts.

(c) Interagency Working Group—Directs the Director of the Office of Science and Technology Policy to establish an Interagency Working Group on Windstorm Impact Reduction, consisting of representatives from NSF, NOAA, NIST, FEMA, and other federal agencies as appropriate. Also directs the Director to designate an agency to chair the Working Group and to be responsible for managing the program. Specific agency roles and responsibilities shall be defined in the implementation plan in subsection (e). General responsibilities—

(1) NIST—support R&D to improve building codes, standards and practices for design and construction of buildings, structures, and lifelines;

(2) NSF—support research in engineering and the atmospheric sciences to improve the understanding of the behavior of windstorms and their impact on buildings, structures, and lifelines;

(3) NOAA—support atmospheric sciences research to improve the understanding of the behavior of windstorms and their impact on buildings, structures, and lifelines;

(4) FEMA—support windstorm-related data collection and analysis, public outreach, and information dissemination; support development of risk assessment tools and effective mitigation techniques, windstorm-related data collection and analysis, public outreach, information dissemination, and implementation of mitigation measures consistent with the Agency's all-hazards approach.

(d) Program Components—

(1) Establishes three primary components—improved understanding of windstorms, windstorm impact assessment, and windstorm impact reduction. Requires the components to include activities such as data collection and analysis, outreach, technology transfer, and R&D. Requires that, to the extent practicable, research shall be peer-reviewed and the components shall be designed to avoid duplication of other hazard reduction efforts.

(2) Understanding of windstorms—research to improve knowledge of, and data collection on the impact of severe winds on buildings, structures, and infrastructure.

(3) Windstorm impact assessment—(A) development of mechanisms for collecting and inventorying information on structural performance in windstorms and collection of information from sources including the design and construction industry, insurance companies, and building officials; (B) research, development, and technology transfer to improve loss estimation and risk assessment systems; and (C) research, development, and technology transfer to improve simulation and computational modeling of windstorm impacts.

(4) Windstorm impact reduction—(A) development of cost-effective windstorm-resistant systems, structures, and materials for use in new construction and retrofitting; (B) development of improved outreach and implementation mechanisms to translate existing information and research findings into cost-effective practices for design and construction professionals, and state and local officials; (C) outreach to increase public awareness about windstorm hazard vulnerability.

(e) Implementation Plan—Requires the Interagency Working Group to develop a plan for achieving the objectives of the Program not later than 12 months after the date of enactment. The Implementation Plan shall include—

(1) an assessment of past and current public and private efforts to reduce windstorm impacts;

(2) a description of plans for technology transfer and coordination with natural hazard mitigation activities supported by the Federal Government;

(3) a statement of strategic goals for each component area;

(4) a description of how the program will achieve its goals, including detailed responsibilities for each agency; and

(5) a description of plans for public and private cooperation and coordination.

(f) Biennial Report—The Interagency Working Group shall submit a biennial report to Congress providing an assessment of the status of the Program, including recommendations for changes.

Sec. 5. National Advisory Committee on Windstorm Impact Reduction

(a) Establishment—Establishes a National Advisory Committee to review progress made under the Program, advise on improvements, and report to Congress on actions taken to limit vulnerability to windstorms. Requires that the Advisory Committee include between 11 and 15 members to be appointed by the Director, one of whom shall be designated as chair. Requires that members include representatives of a broad cross-section of interests. Federal agency representatives may not be members of the Advisory Committee.

(b) Assessment—Requires the Advisory Committee to assess the effectiveness of the Program.

(c) Biennial Report—Requires the Advisory Committee to provide, on a biennial basis, a summary report of the assessment to Congress and the Interagency Working Group.

(d) Sunset Exemption—Exempts the Advisory Committee from Section 14 of the Federal Advisory Committee Act.

Sec. 6. Savings clause

States that nothing in the Act supersedes any provision of the National Manufactured Housing Construction and Safety Standards Act of 1974.

Sec. 7. Authorization of appropriations

(a) FEMA: Authorizes to be appropriated $8 million, $8.7 million, and $9.4 million for FY 2005–2007, respectively.

(b) NSF: From sums otherwise authorized to be appropriated, authorizes $8 million, $8.7 million, and $9.4 million for FY 2005–2007, respectively.

(c) NIST: From sums otherwise authorized to be appropriated, authorizes $2 million, $3 million, and $4 million for FY 2005–2007, respectively.

(d) NOAA: From sums otherwise authorized to be appropriated, authorizes $2 million, $2.1 million, and $2.2 million for FY 2005–2007, respectively.

VIII. COMMITTEE VIEWS

The Committee recognizes that damage from windstorms is a significant economic and social problem that costs billions of dollars annually. Recent population shifts toward coastal areas combined with a sharp increase in the number of people living in manufactured homes have left the United States more vulnerable than ever to windstorms. The Committee believes that these vulnerabilities will only continue to increase unless action is taken to research, develop, and implement windstorm hazard mitigation measures, and that a coordinated federal program in these areas are warranted.

The Committee expects the agencies to do a better job of coordinating their efforts in windstorm mitigation so that the Federal Government has a comprehensive effort in this area to improve overall safety in a cost affordable manner while drawing on the unique strengths and expertise of each agency.

The program authorized by this Act is designed to improve understanding of how wind affects structures, enhance windstorm damage data collection and analysis, and develop and encourage implementation of mitigation techniques. The working group created under this Act consists of agencies that already support these efforts in one form or another. Based largely on recommendations from the Wind Hazard Reduction Coalition, a collection of academic, design and construction, insurance, and code making organizations, H.R. 3980 identifies broad program component areas and specific program activities within each component area, facilitates interagency coordination, and limits duplication of work.

The Committee believes that improving our understanding of how wind affects buildings, enhancing the scope and detail of damage data collection, and measuring the degree to which various mitigation techniques can lessen that impact will make it possible to quantify the value of mitigation. This information will give policymakers, private industry, and individual homeowners the tools to make decisions that take windstorm vulnerability into consideration.

The Committee recognizes that private industry has an important role to play in this effort. For that reason, the Act specifically directs the Interagency Working Group to include assessment of past and current public and private efforts to reduce windstorm impacts, and a description of plans for public and private cooperation and coordination in developing the implementation plan under section 4. In developing the implementation plan and beyond, the Committee also encourages the working group to seek ways to maximize the contributions of non-federal entities in reducing windstorm impacts. Examples of this include improved sharing and coordination of windstorm loss and vulnerability data with state and local governments and businesses such as insurance companies, as well as coordination with privately supported windstorm impact reduction-related research and development.

The Committee believes that the inclusion of a non-federal National Advisory Committee will be useful in monitoring the progress of the program and reporting to Congress on findings and recommendations resulting from such monitoring. However, the Committee emphasizes that the working group should, to the extent practicable and without limiting its effectiveness, work to min-

imize the cost of the advisory committee so that it does not unnecessarily drain limited funding away from programmatic activities. Also, in describing representatives that may serve on the advisory committee, the Committee intends that representatives of the ''design and construction'' communities include representatives of authorities having jurisdiction over design and construction.

Finally, the Committee expects the National Windstorm Impact Reduction Program's research agenda and policy decisions to be firmly grounded in science. In this regard, the Committee recognizes the unique contribution that university-based scientific research can provide in helping to build a solid foundation for policymaking and for guiding national windstorm mitigation research efforts. Therefore, the Director is urged to ensure that the higher education community is represented on the national advisory committee.

IX. EXCHANGE OF COMMITTEE CORRESPONDENCE

U.S. HOUSE OF REPRESENTATIVES,
COMMITTEE ON SCIENCE,
Washington, DC, June 25, 2004.

Hon. DON YOUNG,
Chairman, Committee on Transportation and Infrastructure,
House of Representatives, Washington, DC.

DEAR CHAIRMAN YOUNG: I write with regard to H.R. 3980, the National Windstorm Impact Reduction Act of 2004. Over the last few weeks Science Committee staff has worked closely with Transportation and Infrastructure staff to make some specific changes to the bill. It is my understanding that by the Committee on Science incorporating these changes in our Manager's Amendment on the floor, your Committee will discharge the bill.

Thank you for allowing this needed legislation to move forward in an expeditious manner. I recognize that by discharging in this instance, your Committee does not waive any rights involving those provisions in your jurisdiction dealing with the Federal Emergency Management Agency.

Further, I will support your request to be conferees on any provision over which you have jurisdiction during any House-Senate conference. I will also include copies of this exchange of letters in the legislative report for H.R. 3980.

Thank you for your consideration regarding this matter.

Sincerely,

SHERWOOD L. BOEHLERT,
Chairman.

U.S. HOUSE OF REPRESENTATIVES,
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE,
Washington, DC, June 25, 2004.

Hon. SHERWOOD BOEHLERT,
Chairman, Committee on Science,
House of Representatives, Washington, DC.

DEAR CHAIRMAN BOEHLERT: Thank you for your letter concerning H.R. 3980, the National Windstorm Impact Reduction Act of 2004. I recognize your desire to bring this important bill before the House

in an expeditious manner. Accordingly, I agree to have the Transportation Committee discharged from further consideration of the bill. This is conditional on including in H.R. 3980 the modifications as we have agreed to in a manager's amendment on the House Floor. By agreeing to be discharged, however, the Committee on Transportation and Infrastructure does not waive its jurisdiction over H.R. 3980.

I appreciate your commitment to support any request by the Transportation and Infrastructure Committee for conferees on H.R. 3980.

Thank you for your willingness to work together to address the Transportation Committee's concerns.

Sincerely,

DON YOUNG,
Chairman.

X. COST ESTIMATE

A cost estimate and comparison prepared by the Director of the Congressional Budget Office under section 402 of the Congressional Budget Act of 1974 has been submitted to the Committee on Science prior to the filing of this report and is included in Section X of this report pursuant to House rule XIII, clause 3(c)(3).

H.R. 3980 does not contain new budget authority, credit authority, or changes in revenues or tax expenditures. Assuming that the sums authorized under the bill are appropriated, H.R. 3980 authorizes $68 million in additional discretionary spending, as described in the Congressional Budget Office report on the bill, which is contained in Section X of this report.

XI. CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

U.S. CONGRESS,
CONGRESSIONAL BUDGET OFFICE,
Washington, DC, April 16, 2004.

Hon. SHERWOOD L. BOEHLERT,
Chairman, Committee on Science,
House of Representatives, Washington, DC.

DEAR MR. CHAIRMAN: The Congressional Budget Office has prepared the enclosed cost estimate for H.R. 3980, the National Windstorm Reduction Act of 2004.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contact is Julie Middleton.

Sincerely,

DOUGLAS HOLTZ-EAKIN.

Enclosure.

H.R. 3980—National Windstorm Reduction Act of 2004

Summary: CBO estimates that H.R. 3980 would authorize the appropriation of nearly $68 million over the 2005–2009 period for a new program to develop methods for reducing the damages caused by windstorms. Assuming appropriation of the authorized funds, CBO estimates that implementing the bill would cost $67 million over the 2005–2009 period. Enacting H.R. 3980 would not affect direct spending or revenues.

Over the 2005–2007 period, H.R. 3890 would authorize the appropriation of $26.1 million for the Federal Emergency Management Agency (FEMA) and the same amount for the National Science Foundation (NSF), $9 million for the National Institute of Standards and Technology (NIST), and $6.3 million to the National Oceanic and Atmospheric Administration (NOAA) to carry out provisions of this bill.

H.R. 3980 contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA) and would impose no costs on state, local, or tribal governments.

Estimated cost to the Federal Government: The estimated budgetary impact of H.R. 3980 is shown in the following table. The costs of this legislation fall within budget functions 250 (general science, space, and technology), 300 (natural resources and environment), 370 (commerce and housing credit), and 450 (community and regional development).

For this estimate, CBO assumes that the authorized amounts will be appropriated for each fiscal year. Outlay estimates are based on historical spending patterns for similar programs.

	By fiscal year in millions of dollars—				
	2005	2006	2007	2008	2009
CHANGES IN SPENDING SUBJECT TO APPROPRIATION					
FEMA:					
Authorization Level	8	9	9	0	0
Estimated Outlays	4	6	8	5	3
NSF:					
Authorization Level	8	9	9	0	0
Estimated Outlays	2	6	8	6	3
NIST:					
Authorization Level	2	3	4	0	0
Estimated Outlays	2	3	4	1	0
NOAA:					
Authorization Level	2	2	2	0	0
Estimated Outlays	1	2	2	1	0
Total Changes:					
Authorization Level	20	23	25	0	0
Estimated Outlays	9	17	22	13	6

Intergovernmental and Private-Sector Impact: H.R. 3980 contains no intergovernmental or private-sector mandates as defined in UMRA and would impose no costs on state, local, or tribal governments.

Estimate prepared by: Federal Costs: Julie Middleton; Impact on State, Local and Tribal Governments: Gregory Waring; and Impact on the Private Sector: Jean Talarico.

Estimate approved by: Peter H. Fontaine, Deputy Assistant Director for Budget Analysis.

XII. COMPLIANCE WITH PUBLIC LAW 104–4

H.R. 3980 contains no unfunded mandates.

XIII. COMMITTEE OVERSIGHT FINDINGS AND RECOMMENDATIONS

The Committee on Science's oversight findings and recommendations are reflected in the body of this report.

XIV. STATEMENT ON GENERAL PERFORMANCE GOALS AND OBJECTIVES

Pursuant to clause (3)(c) of House rule XIII, the goals of H.R. 3980 are to establish an interagency National Windstorm Impact Reduction Program to achieve major measurable reductions in losses of life and property from windstorms through a coordinated federal effort, in cooperation with other public and private entities, to improve understanding of windstorm impacts and develop and encourage implementation of mitigation measures to reduce those impacts.

XV. CONSTITUTIONAL AUTHORITY STATEMENT

Article I, Section 8 of the Constitution of the United States grants Congress the authority to enact H.R. 2801.

XVI. FEDERAL ADVISORY COMMITTEE STATEMENT

The functions of the advisory committee established by H.R. 3980 are not currently being nor could they be performed by one or more agencies or by enlarging the mandate of another existing advisory committee.

XVII. CONGRESSIONAL ACCOUNTABILITY ACT

The Committee finds that H.R. 3980 does not relate to the terms and conditions of employment or access to public services or accommodations within the meaning of section 102(b)(3) of the Congressional Accountability Act (Public Law 104–1).

XVIII. STATEMENT ON PREEMPTION OF STATE, LOCAL, OR TRIBAL LAW

This bill is not intended to preempt any state, local, or tribal law.

XIX. CHANGES IN EXISTING LAW MADE BY THE BILL, AS REPORTED

In compliance with clause 3(e) of rule XIII of the Rules of the House of Representatives, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in italics, existing law in which no change is proposed is shown in roman):

SECTION 37 OF THE SCIENCE AND ENGINEERING EQUAL OPPORTUNITIES ACT

BIENNIAL REPORT

SEC. 37. (a) ¿By January 30, 1982, and biennially thereafter *By January 30 of each odd-numbered year*, the Director shall simultaneously transmit a report to the Congress, the Attorney General, the Director of the Office of Science and Technology Policy, the Chairman of the Equal Employment Opportunity Commission, the Director of the Office of Personnel Management, the Secretary of Labor, the Secretary of Education, and the Secretary of Health and Human Services.

* * * * * * *

XX. COMMITTEE RECOMMENDATIONS

On March 31, 2004, a quorum being present, the Committee on Science reported H.R. 3980, *National Windstorm Impact Reduction Act of 2004*, as amended, by a voice vote and recommended its enactment.

XXI. PROCEEDINGS OF THE FULL COMMITTEE MARKUP ON H.R. 3980, NATIONAL WINDSTORM IMPACT REDUCTION ACT OF 2004

WEDNESDAY, MARCH 31, 2004

HOUSE OF REPRESENTATIVES,
COMMITTEE ON SCIENCE,
Washington, DC.

The Committee met, pursuant to call, at 10:08 a.m., in Room 2318 of the Rayburn House Office Building, Hon. Sherwood L. Boehlert [Chairman of the Committee] presiding.

Chairman BOEHLERT. I want to welcome everyone here this morning. As usual, we are moving forward with bills that are bipartisan. All right. Before I get to my more official statement, as those of you know, the Committee on Science meets today to consider the following measures. H.R. 3980, the *National Windstorm Impact Reduction Act of 2004*, H.R. 4030, *Congressional Medal for Outstanding Contributions in Math and Science Education of 2004*, and H.R. 3970, the *Green Chemistry Research and Development Act of 2004*, and in consultation with Mr. Gordon, we agree that is the order we are going to proceed. The first two should go relatively easily. We will have a little more discussion on the Green Chemistry Bill, and we hope by then to have more Members in attendance.

I ask unanimous consent for the authority to recess the Committee at any point, and without objection, so ordered.

We will now proceed with the opening statements, and as I said before I so rudely interrupted myself, welcome. As usual, we are moving forward with bills that are bipartisan and moderate. Bills that will help make a difference in people's lives in very real ways. I am especially pleased that two of the bills were introduced by freshmen Members, Dr. Gingrey and Mr. Neugebauer. We hope that all of these bills will be able to move through the House before the May recess, although the Wind Bill, because it has a referral to another committee, may be a little bit longer. As is our practice, I am going to talk about the bills now and let the sponsors describe them in greater detail when we get to the markup of each bill.

I want to congratulate Mr. Neugebauer and Mr. Moore for coming up with an affordable, targeted version of this Wind Bill. Windstorms cause much loss of life and property. We need a program for wind like the one we have for earthquakes that targets federal R&D resources toward developing better ways for buildings to better withstand windstorms. That is exactly what this bill will create.

I want to congratulate Chairman Smith and Ms. Johnson on their bill to create an award for businesses that help our nation's schools. This is clearly an activity we want to see increase, and this

award will provide an additional incentive. The bill was inspired in part by the very successful Baldrige Award Program, which as we all know, emanated from this committee.

I want to take most of my time this morning to talk about Dr. Gingrey's Green Chemistry Bill because that is what this morning's debate will focus on. First let me say that this bill is exactly the kind of thing this committee should be doing; making sure that federal R&D programs give enough attention to important research that could advance national needs. The Federal Government has long had a smattering of Green Chemistry Programs, and even the Presidential Award, but we have lacked a sustained focused priority effort in this important area. This bill is designed to change that. The bill has attracted a surprisingly large number of amendments. I take that as a sign that we have hit on an important issue, one that has been previously neglected. So the amendments in that sense are a good sign.

Unfortunately, we are going to have to oppose these amendments in their current form. Let me emphasize that. In their current form, even though I always try to be open to other ideas and to look for grounds for compromise. We may reach some compromises this morning, and we will be offering substitutes for some amendments so that we can get at least some of the ideas behind them into the bill.

So what is wrong with the amendments? Well, the amendments fall into three categories. Several aim to increase spending in this bill. While I am sympathetic to the need to spend more in this program, we have a fiscal crisis, and both sound policy and sound politics dictate that we not make the program more expensive, particularly here and now. Hopefully, we will be able to spend more on green chemistry in later years.

The second category of amendment aims to elaborate on activities already explicitly or implicitly permitted in the bill. We don't want to weigh down the bill with very prescriptive program language, but we are willing to go somewhat farther than the introduced bill does in describing what kinds of activities might be funded through the Green Chemistry Program. I hope we can reach some agreement on these amendments.

The third category of amendment is the most problematic. These amendments would change the nature of this bill from one focused on R&D, and that is where I think we need the focus, to one that is more regulatory in nature. This bill's purpose is straightforward and non-controversial. We are trying to create an R&D program that will generate new ideas. If we add regulatory or procurement provisions, this bill will become controversial and will be referred to other committees, and we will have nothing to show for our efforts. I am sympathetic to some of these ideas, but this bill is not the proper vehicle to carry them forward.

If prompted by this bill, Members are now interested in taking other actions related to green chemistry, and I hope they will be, then they should introduce their own bills and we can decide how to proceed on them. But we shouldn't be turning an R&D bill into a complex and controversial procurement and regulatory measure. That is contrary to our original basic purpose, to focus on research and development. So I hope we can have a collegial and productive

markup today. I don't think there is any controversy on the underlying bills. I am pleased that the Members want to expand these bills further, but we can't expand so much that they won't fit into the House schedule. And when all is said and done, we have got to be more than just a debating society for ideas. We have got to be a Committee that generates good ideas that earn the support of our colleagues that get passed by the House, get passed by the Senate, and get signed into law by the President.

I now recognize Mr. Gordon for his opening statement.

[The prepared statement of Chairman Boehlert follows:]

PREPARED STATEMENT OF CHAIRMAN SHERWOOD BOEHLERT

MARCH 31, 2004

I want to welcome everyone here for our markup this morning. As usual, we are moving forward with bills that are bipartisan and moderate—bills that will help make a difference in people's lives in very real ways. I'm especially pleased that two of the bills were introduced by freshman Members—Dr. Gingrey and Mr. Neugebauer. We hope that all of these bills will be able to move through the House before the May recess, although the wind bill must go to another committee.

As is our practice, I'm going to talk about the bills now and let the sponsors describe them in greater detail when we get to the markup of each bill.

I want to congratulate Mr. Neugebauer and Mr. Moore for coming up with an affordable, targeted version of this wind bill. Windstorms cause much avoidable loss of life and property. We need a program for wind, like the one we have for earthquakes, that targets federal R&D resources toward developing ways for buildings to better withstand windstorms. That's exactly what this bill will create.

I want to congratulate Chairman Smith and Ms. Johnson on their bill to create an award for businesses that help our nation's schools. This is clearly an activity we want to see increase, and this award will provide an additional incentive. The bill is inspired in part by the very successful Baldrige Award program that this committee created.

I want to take most of my time this morning to talk about Dr. Gingrey's green chemistry bill because that's what this morning's debates will center on.

First let me say that this bill is exactly the kind of thing this Committee should be doing—making sure that federal R&D programs give enough attention to important research that could advance national needs. The Federal Government has long had a smattering of green chemistry programs and even a Presidential award, but we've lacked a sustained, focused and priority effort in this important area. This bill is designed to change that.

The bill has attracted a surprisingly large number of amendments. I take that as a sign that we have hit on an important issue—one that has been previously neglected. So the amendments, in that sense, are a good sign.

Unfortunately, we are going to have to oppose these amendments in their current form, even though I always try to be open to others' ideas and to look for grounds for compromise. We may yet reach some compromises this morning, and we will be offering substitutes for some amendments so that we can get at least some of the ideas behind them into the bill.

So what's wrong with the amendments? Well, the amendments fall into three categories. Several aim to increase the spending in this bill. While I'm sympathetic to the need to spend more on this program, we have a fiscal crisis, and both sound policy and sound politics dictate that we not make the program more expensive. Hopefully, we will be able to spend more on green chemistry in later years.

The second category of amendment aims to elaborate on activities already explicitly or implicitly permitted in the bill.

We don't want to weigh the bill down with very prescriptive program language, but we are willing to go somewhat farther than the introduced bill does in describing what kinds of activities might be funded through the green chemistry program. I hope we can reach agreement on these amendments.

The third category of amendment is the most problematic; these amendments would change the nature of this bill from one focused on R&D to one that is more regulatory in nature. This bill's purpose is straight-forward and non-controversial; we're trying to create an R&D program that will generate new ideas.

If we add regulatory or procurement provisions, this bill will become controversial and will be referred to other committees, and we will have nothing to show for our

efforts. I'm sympathetic to some of these ideas, but this bill is not the proper vehicle for them.

If, prompted by this bill, Members are now interested in taking other actions related to green chemistry, then they should introduce their own bills and we can decide how to proceed on them. But we shouldn't be turning an R&D bill into a complex and controversial procurement and regulatory measure. If this bill doesn't pass, there will be fewer green chemistry ideas to get companies and the government to implement.

So I hope we can have a collegial and productive markup today. I don't think there is any controversy on the underlying bills. I'm pleased that Members want to expand these bills further, but we can't expand so much that they won't fit into the House schedule.

Mr. Gordon.

Mr. GORDON. Thank you, Mr. Chairman. We on the Democratic side are pleased that you have moved forward with these three bills for consideration today. The *National Windstorm Impact Reduction Act of 2004* is patterned after legislation written by Congressman Dennis Moore, the bill's chief sponsor. We all owe a debt of gratitude to Congressman Moore for identifying the need for a multi-agency Wind Hazard Reduction Program five and a half years ago. He worked to reach consensus among the agencies on the scope of such legislation. He founded the Wind Caucus to promote the program, and he worked with the private sector and the university community to make sure that the needs of those will carry out the work reflected in the bill's context or text.

Time is of the essence on this bill. Many of our districts have been impacted by major windstorms since Mr. Moore began this effort, and we are pleased that all of the major elements of the Moore—the log bill can be found in the new Neugebauer-Moore bill. Congressman Moore will go into greater detail on this point later in the markup. It is regrettable though that the proposed funding for the program had to be reduced so dramatically to perhaps a quarter of what we are spending on the problem of earthquake research. But the bill is still a positive start.

In contrast, the Green Chemistry Research and Development Act of 2004 has not had such a lengthy period of maturation. It was introduced just 15 years ago—I mean 15 days ago, excuse me, and was the subject of a single hearing the following day. Our issue today is more than with what is not—is more what is not in the bill than what is in the bill. In other words, the bill is okay as a start, but it is not—does not go far enough to promote the adoption of green chemistry. Several Democratic members on the Committee will offer amendments today in an effort to expand the impact and importance of the underlying legislation. Nearly all of these amendments are based on testimony given at our hearing by witnesses earlier this month. We hope the Chairman will be able to support many of these amendments, which we will offer in a constructive spirit.

The final bill today, H.R. 4030, is non-controversial. Congressman Smith has worked closely with Congresswoman Johnson in perfecting the bill. We all agree with the purpose of honoring private-sector organizations that make outstanding contributions to strengthening science, mathematics, technology engineering education in our schools.

Chairman BOEHLERT. Without objection, all Members may place opening statements in the record at this point.

[The prepared statement of Mr. Davis follows:]

PREPARED STATEMENT OF REPRESENTATIVE LINCOLN DAVIS

I would like to start by thanking the Chair and Ranking Member for the opportunity to speak at today's markup.

There is bipartisan support among Members of the Science Committee for efforts to encourage green chemistry, or the development of materials and processes that are not harmful to people or the environment. Research and building construction at the Oak Ridge National Laboratory (ORNL) are shining examples of the good things that happen when green chemistry approaches are put into practice.

ORNL continues to contribute to a range of scientific and technological needs in green chemistry. New chemical approaches that use benign carbon dioxide (CO_2) instead of noxious industrial solvents have been deployed commercially in new, safer dry cleaning technologies. Researchers have also worked to develop methods that result in decreased use of materials that are harmful to the environment.

Even Oak Ridge buildings are getting "green." The environmentally friendly design off a new 370,000 square foot complex has netted ORNL a 2003 Excellence in Construction award from a major contractors association. Developing methods and products that are good for the environment is important. In the long run, it will save us untold sums in energy saved and damage deterred. I am proud that Oak Ridge is leading the way in green chemistry efforts and would encourage others to follow its example.

I thank our distinguished Chair and Ranking Member for the opportunity to speak this morning and yield back to the Chair.

[The prepared statement of Ms. Jackson Lee follows:]

PREPARED STATEMENT OF REPRESENTATIVE SHEILA JACKSON LEE

Mr. Chairman,

I rise in support of H.R. 3980, the *National Windstorm Impact Reduction Act*. I commend my colleague from Texas and Congressman Moore from Kansas for their leadership on this pressing issue. This bill could mean so much to the American people, especially to my constituents in Texas where hurricanes and tropical storms are such a constant threat. Houston is still recovering from Tropical Storm Allison that hit on June 5, 2001. All told, Allison cost Harris County 22 lives, 95,000 cars and trucks, 73,000 homes, and $5 billion in property damage. That is an almost devastating blow to any community.

It is truly a testament to the awesome power of nature. Of course, we cannot fully harness that power. However, if we can use good science and planning to reduce the impact of such storms by even ten percent, it would be a tremendous service. Much of the damage of Allison and other hurricanes comes from windstorm damage, tearing off roofs, blowing out windows, and causing debris-related injuries and destruction. Across the Midwest, similar windstorm damage wreaks havoc during tornadoes.

This bill is in the excellent tradition of this committee encouraging the use of good scientific research, coordinating the various resources available in the Federal Government to have a meaningful impact on the lives and well-being of the American people.

I feel that this bill can serve an important purpose. That is why I am concerned about a technical flaw in the bill. In the "Authorization of Appropriations" the bill states that projects will be funded by "sums otherwise authorized to be appropriated" to FEMA, NSF, NIST, and NOAA. The problem is that of those, only NSF has actually been authorized. So, this bill is calling for the appropriation of unauthorized funds.

Unless we plan to re-authorize FEMA, NIST, and NOAA by the end of this fiscal year, it seems prudent that we at least authorize the appropriation of funds for these windstorm damage reduction programs that I think all of us agree are of critical importance for the safety of the American people.

Thank you.

Mr. SMITH OF MICHIGAN. Mr. Chairman, may I make a short comment?

Chairman BOEHLERT. You certainly may, Chairman Smith.

Mr. SMITH OF MICHIGAN. All of us here, in this committee especially, have been looking at how we improve math and science edu-

cation, and maybe this is a small encouragement to have private sectors more involved—in the private sector in—by way of nonprofit organizations, by the way of business and industry to do something that is going to be in their long-term advantage, as well as the advantage of the United States to improve and increase the education in math and science and the number of students that are interested and can perform well.

This particular bill has no cost, but can be a stimulant to hopefully have more companies participate in working with schools and communities working with schools. And so I hope we can approve the amendment of the Chairman that allows us to do a technical change on alternating years for reports from the National Science Foundation.

Chairman BOEHLERT. Thank you very much for the intervention. Now here is what I would like to do, with the indulgence of all my colleagues. We have three bills before us, two of them I think there is almost unanimous agreement on. Let us dispense with them immediately, and then focus our time and attention on the Green Chemistry Bill, which has us all interested, and we are coming from different perspectives. Is that—do I see from a nod of the heads that that is a good plan? Let us go. All right.

We will now consider the Bill H.R. 3980, the *National Windstorm Impact Reduction Act of 2004*. I now yield five minutes to Mr. Neugebauer to introduce his bill.

[See Appendix for the amendment roster.]

Mr. NEUGEBAUER. Thank you, Mr. Chairman. The National Weather Service estimates that between 1995 and 2002, hurricanes, tornadoes and thunderstorm winds caused an average of $4.5 billion in damage every year. Texas alone averages 124 tornadoes a year, which is more than double the average of any other state. Even as we build on our other current weather prediction successes and create new resources to predict windstorms at a greater rate, the United States continues to sustain several billion dollars each year in property and economic losses due to windstorms, and the human costs are all too painful.

That is why Mr. Moore and I have introduced the *National Windstorm Impact Reduction Act of 2004*. This legislation directs the Office of Science and Technology Policy to establish an interagency working group to plan, manage and coordinate program activities to improve the understandings of windstorms and their impacts. The program establishes an interagency working group that will include representatives of NSF, FEMA, NIST, NOAA and all other—all charged with the task of improving the understanding of windstorms, windstorm impact assessment and windstorm impact reduction.

I would like to thank the Chairman for giving me the opportunity to introduce this important legislation and for bringing it before the Committee today, and I yield back the balance of my time, Mr. Chairman.

Chairman BOEHLERT. Thank you so much, Mr. Neugebauer, and thank you for your leadership in this instance. I now recognize Mr. Gordon.

Mr. GORDON. Mr. Chairman, I yield to Mr. Moore from Kansas.

Mr. MOORE. Thank you, Mr. Chairman, and thank you, Mr. Gordon.

I would like to thank you, Mr. Chairman, for following through on your promise to mark up legislation on windstorms in the 108th Congress, and I would also like to thank Congressman Neugebauer for his leadership on this important legislation and working closely with me on this. I also want to thank Jim Turner of the House Science Committee Staff and Brian Pallasch of the American Society of Civil Engineers for working on this issue over the course of the past five years. I know you are all probably tired of hearing this discussed, especially in the Subcommittee, but hopefully this will be the last time you will hear it before we are on the House Floor.

Almost six years ago, my hometown of Wichita was hit by an F–4 tornado, which plowed through the suburb of Haysville, killing six, injuring 150 people and causing over $140 million in damage. The devastation of this attack motivated me to try to do something. I put together a bill modeled after NEHRP, the successful earthquake research program, which began over 30 years ago. Our goal is to mitigate loss of life and property damage due to wind and related hazards.

I reviewed comments from the American Society of Civil Engineers, the American Association of Home Builders, the insurance industry, meteorologists, emergency managers, academia, industry, and the Manufactured Housing Association to try to fine-tune this legislation. On May 4 of last year, almost four years to the day after the deadly 1999 Kansas and Oklahoma tornados, tornadoes touched down in metropolitan Kansas City and the surrounding suburbs, as well as in many of my Science Committee colleagues' districts, destroying property, killing innocent persons and injuring our constituents.

When tornadoes hit, it is not a Republican or Democrat issue. It is a human issue and it is a human tragedy. These windstorms destroy lives. We have all seen it in our districts and I know many of my colleagues have seen this around their own districts, as well.

I want to again thank Mr. Neugebauer, Congressman Neugebauer, for introducing this important legislation with me, and thank you, Mr. Chairman, for marking it up. Last year when Congressman Mario Diaz-Balart and I introduced the Wind Hazard Reduction Bill, H.R. 2020, we had a total of 65 bipartisan co-sponsors. I hope that the Chair will allow time for Members to come on board, too, as co-sponsors of this bill before filing the Committee report. And finally, I would like to thank Jana Denning of my staff for her excellent work with all of you in getting this bill to where it is right now.

Thank you, Mr. Chairman. I yield back the balance of my time.

[The prepared statement of Mr. Moore follows:]

PREPARED STATEMENT OF REPRESENTATIVE DENNIS MOORE

I would like to thank Chairman Boehlert for following through on his promise to markup legislation on wind storms in the 108th Congress; I would also like to thank Congressman Neugebauer for working with me on this important legislation.

I would also like to thank Jim Turner of the House Science Committee staff and Brian Pallasch of the American Society of Civil Engineers for working on this issue tirelessly over the course of the past five years.

I know you are all probably tired of hearing me talk about this issue, but hopefully you will only have to hear it one more time, on the Floor of the House. Almost six years ago, my hometown of Wichita, Kansas, was hit by a F–4 tornado which plowed through the suburb of Haysville, killing six, injuring 150, and causing over 140 million dollars in damage. The devastation of this attack motivated me to try to do something.

I put together a bill modeled after NEHRP the successful earthquake research program begun over 30 years ago. My goal is to mitigate loss of life and property due to wind and related hazards.

I reviewed comments from the American Society of Civil Engineers, the American Association of Home Builders, the insurance industry, meteorologists, emergency managers, academia, industry, and the manufactured housing associations to fine-tune the legislation.

On May 4, 2003, almost four years to the day after the deadly 1999 Kansas and Oklahoma tornadoes, tornadoes touched down in metro Kansas City and the surrounding suburbs as well as in many of my Science Committee colleagues' districts, destroying property, killing and injuring our constituents.

These tornadoes did not check with Congress to see if they were hitting Republican or Democratic districts, they are truly an equal opportunity destroyer. This is not a Republican or a Democratic issue it is a human issue, it is a human tragedy. These windstorms destroy lives; I have seen it in my own district and know many of my colleagues have seen it in theirs.

Thank you again Congressman Neugebauer for introducing this important legislation and thank you Chairman for marking it up. Last year, when Congressman Mario Diaz-Balart and I introduced The Wind Hazard Reduction bill (H.R. 2020), we had a total of 65 bipartisan co-sponsors. I hope that the Chair will allow time for Members to come on board as co-sponsors to this bill before filing the Committee Report.

I yield the balance of my time.

Chairman BOEHLERT. Mr. Moore, thank you for your leadership also and thank you for your partnership with Mr. Neugebauer, and the two of you have produced, I think, a very good product, and shortly we hope to dispense with it and get it moving. Thank you so much.

I ask unanimous consent that this bill is considered as read and open to amendment at any point, and that the Members proceed with the amendments in the order of the roster. Without objection, so ordered.

[See Appendix for H.R. 3980.]

Chairman BOEHLERT. The first amendment on the roster is an en bloc amendment offered by the Chair. I have an amendment at the desk. The Clerk shall report the amendment.

The CLERK. Amendments to H.R. 3980, offered by Mr. Boehlert.

Chairman BOEHLERT. Okay. I ask unanimous consent to dispense with the reading. Without objection, so ordered.

I yield myself such time as is necessary to discuss the amendment.

This is a very short and simple en bloc amendment that makes three basic changes to the underlying bill. First, there are a few small technical corrections. That always happens. Second, there are a few minor changes to the specific program components to better reflect agency activities within the program, such as language clarifying that FEMA shall be responsible for supporting the development of the risk assessment tools and effective mitigation techniques. And third, language to address the aforementioned situation at NSF with regard to staggering reporting deadlines.

The provision is identical to that which was in the Green Chemistry Legislation and has, as with other changes, been worked out on both sides of the aisle. In other words, Mr. Moore, Mr.

Neugebauer, Mr. Gordon and I, we all agree. I urge all Members to support the amendment.

If there is no further discussion on the amendment, the vote occurs on the amendment. All in favor, say aye. Opposed, nay. The ayes have it, and the amendment is agreed to.

Are there any other amendments? Hearing none, the question is now on the bill H.R. 3980, the *National Windstorm Impact Reduction Act of 2004*, as amended. All in favor, say aye. All those opposed will say no. In the opinion of the Chair, the ayes have it.

I now recognize Mr. Gordon for a motion.

Mr. GORDON. Mr. Chairman, I move that the Committee favorably report H.R. 3980, as amended, to the House with the recommendation that the bill as amended do pass. Furthermore, I move that the staff be instructed to prepare the legislative report and make necessary technical and conforming changes, and that the Chairman take all necessary steps to bring the bill before the House for consideration.

Chairman BOEHLERT. The question is on the motion to report the bill favorably. Those in favor of the motion will signify by saying aye. Opposed, no. The ayes appear to have it, and the resolution is favorably reported. Without objection, the motion to reconsider is laid upon the table.

I move that Members have two subsequent calendar days in which to submit supplemental minority or additional views on the measure. I move pursuant to Clause 1 of Rule 22 of the Rules of the House of Representatives that the Committee authorize the Chairman to offer such motions as may be necessary in the House to adopt and pass H.R. 3980, as amended, and to go to conference with the Senate on H.R. 3980 or a similar bill. Without objection, so ordered.

Chairman BOEHLERT. The Committee is recessed until 10:00 tomorrow morning.

[Whereupon, at 12:00 p.m., the Committee recessed, to reconvene at 10:00 a.m. Thursday, April 1, 2004.]

Appendix:

AMENDMENT ROSTER, H.R. 3980, SECTION-BY-SECTION ANALYSIS

COMMITTEE ON SCIENCE
FULL COMMITTEE MARKUP

MARCH 31, 2004

AMENDMENT ROSTER

H.R. 3980, National Windstorm Impact Reduction Act of 2004
--Motion to adopt the bill, as amended: agreed to by a voice vote.
--Motion to report the bill, as amended: agreed to by a voice vote.

No.	Sponsor	Description	Results
1.	Mr. Boehlert	En Bloc Amendments to H.R. 3980.	--Adopted by a voice vote.

AMENDMENTS TO H.R. 3980

OFFERED BY MR. BOEHLERT

Page 5, line 13, strike "Oceanographic" and insert "Oceanic".

Page 5, line 19, insert "the development of risk assessment tools and effective mitigation techniques," after "shall support".

Page 6, line 3, insert "risk assessment," after "collection and analysis,".

Page 7, line 1, strike "research and development" and insert "research, development, and technology transfer".

Page 7, line 4, strike "research and development" and insert "research, development, and technology transfer".

Page 8, line 20, insert "and not later than 180 days after the end of the preceding 2 fiscal years," after "biennial basis,".

Page 9, line 21, strike "section 3(d)" and insert "section 4(d)".

Page 11, line 19, strike "OCEANOGRAPHIC" and insert "OCEANIC".

Page 12, after line 1, add the following section:

SEC. 8. BIENNIAL REPORT.

Section 37(a) of the Science and Engineering Equal Opportunities Act (42 U.S.C. 1885d(a)) is amended by striking "By January 30, 1982, and biennially thereafter" and inserting "By January 30 of each odd-numbered year".

I

108TH CONGRESS
2D SESSION

H. R. 3980

To establish a National Windstorm Impact Reduction Program.

IN THE HOUSE OF REPRESENTATIVES

MARCH 17, 2004

Mr. NEUGEBAUER (for himself and Mr. MOORE) introduced the following bill; which was referred to the Committee on Science, and in addition to the Committee on Transportation and Infrastructure, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

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A BILL

To establish a National Windstorm Impact Reduction Program.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "National Windstorm Impact Reduction Act of 2004".

SEC. 2. FINDINGS.

The Congress finds the following:

(1) Hurricanes, tropical storms, tornadoes, and thunderstorms can cause significant loss of life, in-

jury, destruction of property, and economic and social disruption. All States and regions are vulnerable to these hazards.

(2) The United States currently sustains several billion dollars in economic damages each year due to these windstorms. In recent decades, rapid development and population growth in high-risk areas has greatly increased overall vulnerability to windstorms.

(3) Improved windstorm impact reduction measures have the potential to reduce these losses through—

(A) cost-effective and affordable design and construction methods and practices;

(B) effective mitigation programs at the local, State, and national level;

(C) improved data collection and analysis and impact prediction methodologies;

(D) engineering research on improving new structures and retrofitting existing ones to better withstand windstorms, atmospheric-related research to better understand the behavior and impact of windstorms on the built environment, and subsequent application of those research results; and

(E) public education and outreach.

(4) There is an appropriate role for the Federal Government in supporting windstorm impact reduction. An effective Federal program in windstorm impact reduction will require interagency coordination, and input from individuals, academia, the private sector, and other interested non-Federal entities.

SEC. 3. DEFINITIONS.

In this Act:

(1) The term "Director" means the Director of the Office of Science and Technology Policy.

(2) The term "State" means each of the States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the United States Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, and any other territory or possession of the United States.

(3) The term "windstorm" means any storm with a damaging or destructive wind component, such as a hurricane, tropical storm, tornado, or thunderstorm.

SEC. 4. NATIONAL WINDSTORM IMPACT REDUCTION PROGRAM.

(a) ESTABLISHMENT.—There is established the National Windstorm Impact Reduction Program (in this Act referred to as the "Program").

(b) OBJECTIVE.—The objective of the Program is the achievement of major measurable reductions in losses of life and property from windstorms. The objective is to be achieved through a coordinated Federal effort, in cooperation with other levels of government, academia, and the private sector, aimed at improving the understanding of windstorms and their impacts and developing and encouraging implementation of mitigation measures to reduce those impacts.

(c) INTERAGENCY WORKING GROUP.—Not later than 90 days after the date of enactment of this Act, the Director shall establish an Interagency Working Group consisting of representatives of the National Science Foundation, the National Oceanic and Atmospheric Administration, the National Institute of Standards and Technology, the Federal Emergency Management Agency, and other Federal agencies as appropriate. The Director shall designate an agency to serve as Chair of the Working Group and be responsible for the planning, management, and coordination of the Program, including budget coordination. Specific agency roles and responsibilities under the Pro-

gram shall be defined in the implementation plan required under subsection (e). General agency responsibilities shall include the following:

(1) The National Institute of Standards and Technology shall support research and development to improve building codes and standards and practices for buildings, structures, and lifelines.

(2) The National Science Foundation shall support research in engineering and the atmospheric sciences to improve the understanding of the behavior of windstorms and their impact on buildings, structures, and lifelines.

(3) The National Oceanographic and Atmospheric Administration shall support atmospheric sciences research to improve the understanding of the behavior of windstorms and their impact on buildings, structures, and lifelines.

(4) The Federal Emergency Management Agency shall support windstorm-related data collection and analysis, public outreach, and information dissemination.

(d) PROGRAM COMPONENTS.—

(1) IN GENERAL.—The Program shall consist of three primary mitigation components: improved understanding of windstorms, windstorm impact as-

sessment, and windstorm impact reduction. The components shall be implemented through activities such as data collection and analysis, outreach, technology transfer, and research and development. To the extent practicable, research activities authorized under this Act shall be peer-reviewed, and the components shall be designed to be complementary to, and avoid duplication of, other public and private hazard reduction efforts.

(2) UNDERSTANDING OF WINDSTORMS.—Activities to enhance the understanding of windstorms shall include research to improve knowledge of and data collection on the impact of severe wind on buildings, structures, and infrastructure.

(3) WINDSTORM IMPACT ASSESSMENT.—Activities to improve windstorm impact assessment shall include—

(A) development of mechanisms for collecting and inventorying information on the performance of buildings, structures, and infrastructure in windstorms and improved collection of pertinent information from sources, including the design and construction industry, insurance companies, and building officials;

(B) research and development to improve loss estimation and risk assessment systems; and

(C) research and development to improve simulation and computational modeling of windstorm impacts.

(4) WINDSTORM IMPACT REDUCTION.—Activities to reduce windstorm impacts shall include—

(A) development of improved outreach and implementation mechanisms to translate existing information and research findings into cost-effective and affordable practices for design and construction professionals, and State and local officials;

(B) development of cost-effective and affordable windstorm-resistant systems, structures, and materials for use in new construction and retrofit of existing construction; and

(C) outreach and information dissemination related to cost-effective and affordable construction techniques, loss estimation and risk assessment methodologies, and other pertinent information regarding windstorm phenomena to Federal, State, and local officials, the construction industry, and the general public.

(e) IMPLEMENTATION PLAN.—Not later than 1 year after date of enactment of this Act, the Interagency Working Group shall develop and transmit to the Congress an implementation plan for achieving the objectives of the Program. The plan shall include—

(1) an assessment of past and current public and private efforts to reduce windstorm impacts, including a comprehensive review and analysis of windstorm mitigation activities supported by the Federal Government;

(2) a statement of strategic goals and priorities for each Program component area;

(3) a description of how the Program will achieve such goals, including detailed responsibilities for each agency; and

(4) a description of plans for cooperation and coordination with interested public and private sector entities in each program component area.

(f) BIENNIAL REPORT.—The Interagency Working Group shall, on a biennial basis, transmit a report to the Congress describing the status of the windstorm impact reduction program, including progress achieved during the preceding two fiscal years. Each such report shall include any recommendations for legislative and other action the Interagency Working Group considers necessary and ap-

propriate. In developing the biennial report, the Interagency Working Group shall consider the recommendations of the Advisory Committee established under section 5.

SEC. 5. NATIONAL ADVISORY COMMITTEE ON WINDSTORM IMPACT REDUCTION.

(a) ESTABLISHMENT.—The Director shall establish a National Advisory Committee on Windstorm Impact Reduction, consisting of not less than 11 and not more than 15 non-Federal members representing a broad cross section of interests such as the research, technology transfer, design and construction, and financial communities; materials and systems suppliers; State, county, and local governments; the insurance industry; and other representatives as designated by the Director.

(b) ASSESSMENT.—The Advisory Committee shall assess—

(1) trends and developments in the science and engineering of windstorm impact reduction;

(2) the effectiveness of the Program in carrying out the activities under section 3(d);

(3) the need to revise the Program; and

(4) the management, coordination, implementation, and activities of the Program.

(c) BIENNIAL REPORT.—At least once every two years, the Advisory Committee shall report to Congress and the Interagency Working Group on the assessment carried out under subsection (b).

(d) SUNSET EXEMPTION.—Section 14 of the Federal Advisory Committee Act shall not apply to the Advisory Committee established under this section.

SEC. 6. SAVINGS CLAUSE.

Nothing in this Act supersedes any provision of the National Manufactured Housing Construction and Safety Standards Act of 1974. No design, construction method, practice, technology, material, mitigation methodology, or hazard reduction measure of any kind developed under this Act shall be required for a home certified under section 616 of the National Manufactured Housing Construction and Safety Standards Act of 1974 (42 U.S.C. 5415), pursuant to standards issued under such Act, without being subject to the consensus development process and rulemaking procedures of that Act.

SEC. 7. AUTHORIZATION OF APPROPRIATIONS.

(a) FEDERAL EMERGENCY MANAGEMENT AGENCY.—From sums otherwise authorized to be appropriated, there are authorized to be appropriated to the Federal Emergency Management Agency for carrying out this Act—

(1) $8,000,000 for fiscal year 2005;

(2) $8,700,000 for fiscal year 2006; and

(3) $9,400,000 for fiscal year 2007.

(b) NATIONAL SCIENCE FOUNDATION.—From sums otherwise authorized to be appropriated, there are authorized to be appropriated to the National Science Foundation for carrying out this Act—

(1) $8,000,000 for fiscal year 2005;

(2) $8,700,000 for fiscal year 2006; and

(3) $9,400,000 for fiscal year 2007.

(c) NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY.—From sums otherwise authorized to be appropriated, there are authorized to be appropriated to the National Institute of Standards and Technology for carrying out this Act—

(1) $2,000,000 for fiscal year 2005;

(2) $3,000,000 for fiscal year 2006; and

(3) $4,000,000 for fiscal year 2007.

(d) NATIONAL OCEANOGRAPHIC AND ATMOSPHERIC ADMINISTRATION.—From sums otherwise authorized to be appropriated, there are authorized to be appropriated to the National Oceanic and Atmospheric Administration for carrying out this Act—

(1) $2,000,000 for fiscal year 2005;

(2) $2,100,000 for fiscal year 2006; and

(3) $2,200,000 for fiscal year 2007.

○

SECTION-BY-SECTION OF H.R. 3980,
NATIONAL WINDSTORM IMPACT REDUCTION PROGRAM (NWIRP) ACT OF 2004

Sec. 1. Short Title.

"National Windstorm Impact Reduction Act of 2004"

Sec. 2. Findings.

The Congress finds that: (1) All states and regions are vulnerable to windstorms. (2) The United States sustains several billion dollars in economic damages each year due to windstorms, and these vulnerabilities are increasing. (3) Improved windstorm impact reduction measures have the potential to reduce these losses. (4) There is an appropriate role for the Federal Government in mitigating windstorm impacts, and significant coordination and cooperation is required for any program to be effective.

Sec. 3. Definitions.

Defined terms used in the text.

Sec. 4. National Windstorm Impact Reduction Program.

(a) Establishment—Establishes the National Windstorm Impact Reduction Program.

(b) Objective—Achievement of major measurable reductions in losses of life and property from windstorms through a coordinated federal effort, in cooperation with other public and private entities, to improve understanding of windstorm impacts and develop and encourage implementation of mitigation measures to reduce those impacts.

(c) Interagency Working Group—Directs the Director of the Office of Science and Technology Policy to establish an Interagency Working Group on Windstorm Impact Reduction, consisting of representatives from NSF, NOAA, NIST, FEMA, and other federal agencies as appropriate. Also Directs the Director to designate an agency to chair the Working Group and to be responsible for managing the program. Specific agency roles and responsibilities shall be defined in the implementation plan in subsection (e).

General responsibilities—

(1) NIST—support R&D to improve building codes, standards and practices for buildings, structures, and lifelines;

(2) NSF—support research in engineering and the atmospheric sciences to improve the understanding of the behavior of windstorms and their impact on buildings, structures, and lifelines;

(3) NOAA—support atmospheric sciences research to improve the understanding of the behavior of windstorms and their impact on buildings, structures, and lifelines;

(4) FEMA—support windstorm-related data collection and analysis, public outreach, and information dissemination.

(d) Program Components—

(1) Establishes three primary components for the Program: improved understanding of windstorms, windstorm impact assessment, and windstorm impact reduction. Requires the components to include activities such as data collection and analysis, outreach, tech transfer, and R&D. Requires that, to the extent practicable, research shall be peer-reviewed and the components shall be designed avoid duplication of other hazard reduction efforts.

(2) Understanding of windstorms- research to improve understanding of and data collection on the impact of severe winds on buildings, structures, and infrastructure.

(3) Windstorm impact assessment—(A) development of mechanisms for collecting and inventorying information on structural performance in windstorms and collection of information from sources including the design and construction industry, insurance companies, and building officials; (B) R&D to improve loss estimation and risk assessment systems; and (C) R&D to be improve simulation and computational modeling of windstorm impacts.

(4) Windstorm impact reduction—(A) development of cost-effective windstorm-resistant systems, structures, and materials for use in new construction and retrofitting; (B) development of improved outreach and implementation mechanisms

to translate existing information and research findings into cost-effective practices for design and construction professionals, and state and local officials; (C) outreach to increase public awareness about windstorm hazard vulnerability.

(e) Implementation Plan—Requires the Interagency Working Group to develop a plan for achieving the objectives of the Program not later than 12 months after the date of enactment. The Implementation Plan shall include—

(1) an assessment of past and current public and private efforts to reduce windstorm impacts;

(2) a statement of strategic goals for each component area;

(3) a description of how the program will achieve its goals, including detailed responsibilities for each agency; and

(4) a description of plans for public and private cooperation and coordination.

(f) Biennial Report—The Interagency Working Group shall submit a biennial report to Congress providing an assessment of the status of the Program, including recommendations for changes.

Sec. 5. National Advisory Committee on Windstorm Impact Reduction.

(a) Establishment—Establishes a National Advisory Committee to review progress made under the Program, advise on improvements, and report to Congress on actions taken to limit vulnerability to windstorms. Requires that the Advisory Committee include between 11 and 15 members to be appointed by the Director, one of whom shall be designated as chair. Requires that members include representatives of a broad cross-section of interests. Federal agencies may not be members of the Advisory Committee.

(b) Assessment—Requires the Advisory Committee to assess the effectiveness of the Program.

(c) Biennial Report—Requires the Advisory Committee to provide, on a biennial basis, a summary report of the assessment to Congress and the Interagency Working Group.

(d) Sunset Exemption—Exempts the Advisory Committee from Section 14 of the Federal Advisory Committee Act (sunset requirement).

Sec. 6. Savings Clause.

States that nothing in the Act supersedes any provision of the National Manufactured Housing Construction and Safety Standards Act of 1974.

Sec. 7. Authorization of Appropriations.

(a) FEMA: From sums otherwise authorized to be appropriated, $8, 8.7, and 9.4 million from 2005–2007, respectively.

(b) NSF: From sums otherwise authorized to be appropriated, $8, 8.7, and 9.4 million from 2005–2007, respectively.

(c) NIST: From sums otherwise authorized to be appropriated, $2, 3, and 4 million from 2005–2007, respectively.

(d) NOAA: From sums otherwise authorized to be appropriated, $2, 2.1, and 2.2 million from 2005–2007, respectively.

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