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To reduce the impacts of hurricanes, tornadoes, and related hazards through a program of research and development and technology transfer, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

MAY 7, 2003

Mr. MOORE (for himself, Mr. MARIO DIAZ-BALART of Florida, Ms. MCCARTHY of Missouri, Ms. HART, Mr. CARSON of Oklahoma, Mr. SNYDER, Mr. GRAVES, Mr. TANNER, Mr. RYUN of Kansas, Mr. SKELTON, Mr. LUCAS of Oklahoma, and Mr. MCINTYRE) 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

A BILL

To reduce the impacts of hurricanes, tornadoes, and related hazards through a program of research and development and technology transfer, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Hurricane, Tornado,
5 and Related Hazards Research Act”.

1 **SEC. 2. FINDINGS.**

2 The Congress finds the following:

3 (1) Natural disasters cause enormous loss of
4 life. Almost all States and territories are at risk
5 from the effects of 1 or more types of natural dis-
6 aster. Coastal States and many island States and
7 territories are vulnerable to the hazards of wind-
8 storms. All Midwest, Southern, and Mid-Atlantic
9 States are vulnerable to the hazards of tornadoes
10 and thunderstorms and increased building activity is
11 occurring in high-risk areas such as the seashore
12 and “tornado alley”.

13 (2) Hurricanes, which combine high winds and
14 flooding, and related natural disasters cause enor-
15 mous loss of life, injury, destruction of property, and
16 economic and social disruption, as evidenced by the
17 56 deaths and \$6,000,000,000 in property damage
18 in 1999 from Hurricane Floyd. From 1990 to 1999
19 hurricanes caused an average of 14 deaths and
20 \$4,970,000,000 in property losses annually while
21 tornadoes and other windstorms caused over 58
22 deaths and \$871,000,000 in property losses annu-
23 ally.

24 (3) Improved windstorm and related hazard re-
25 duction measures have the potential over the next 10
26 years to reduce these losses that will only increase

1 if steps are not taken to help communities reduce
2 their vulnerability. These measures include—

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

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

7 (C) informed land use decisions;

8 (D) impact prediction methodologies and
9 early warning systems;

10 (E) application of research results; and

11 (F) public education and outreach pro-
12 grams.

13 (4) Engineering research needs to address both
14 improving new structures and retrofitting existing
15 ones.

16 (5) There is an appropriate role for the Federal
17 Government in the collection, preparation, coordina-
18 tion, and dissemination of windstorm and related
19 hazards reduction information in order to protect
20 public health and safety and in increasing public
21 awareness of the dangers of these hazards and of af-
22 fordable steps homeowners can take to preserve life
23 and property. Improved outreach and implementa-
24 tion mechanisms are needed to translate existing in-
25 formation and research findings into usable, state-

1 of-the-art specifications, criteria, and cost-effective
2 practices for design and construction professionals,
3 State and local officials, manufacturers, and the
4 public.

5 (6) An effective Federal program in windstorm
6 and related hazard reduction will require interagency
7 coordination, input from individuals and institutions
8 outside the Federal Government who are expert in
9 the sciences of natural hazards reduction and in the
10 practical application of mitigation measures, and im-
11 proved mechanisms for the transfer of new knowl-
12 edge to State and local officials, to homeowners, and
13 to the design and construction industry. Tax credits
14 are an effective incentive for helping homeowners
15 apply mitigation measures.

16 (7) Windstorms and related hazards are a
17 worldwide problem, and international cooperation is
18 desirable for mutual learning and mitigation.

19 **SEC. 3. DEFINITIONS.**

20 In this Act:

21 (1) The term “Director” means the Director of
22 the Office of Science and Technology Policy.

23 (2) The term “related hazards” means any nat-
24 urally destructive environmental phenomena related
25 to windstorms such as flooding, wildfires, and hail,

1 and any major hazard of human origin potentially
2 resulting in similar destruction, including terrorist
3 acts.

4 (3) The term “State” means each of the States
5 of the United States, the District of Columbia, the
6 Commonwealth of Puerto Rico, the United States
7 Virgin Islands, Guam, American Samoa, the Com-
8 monwealth of the Northern Mariana Islands, and
9 any other territory or possession of the United
10 States.

11 (4) The term “windstorm” means any storm
12 with a damaging or destructive wind component,
13 such as a hurricane, tropical storm, tornado, or
14 thunderstorm.

15 **SEC. 4. NATIONAL WINDSTORM AND RELATED HAZARD IM-**
16 **PACT REDUCTION PROGRAM.**

17 (a) INTERAGENCY GROUP.—Not later than 90 days
18 after the date of the enactment of this Act, the Director
19 shall establish an Interagency Group consisting of rep-
20 resentatives of appropriate Federal agencies, including the
21 National Science Foundation, the National Oceanic and
22 Atmospheric Administration, the National Institute of
23 Standards and Technology, the Department of Energy,
24 and other agencies with jurisdiction over housing, con-
25 struction, and natural disaster mitigation and relief, to be

1 responsible for the development and implementation of a
2 coordinated Federal windstorm and related hazards reduc-
3 tion research, development, and technology transfer pro-
4 gram based on identified public needs. In establishing the
5 Interagency Group, the Director is encouraged, where ap-
6 propriate, to designate lead agencies and to preserve exist-
7 ing programs and functions of Federal agencies and orga-
8 nizations, and shall ensure regular agency coordination
9 and information sharing.

10 (b) OBJECTIVE.—The objective of the windstorm and
11 related hazard impact reduction program is the achieve-
12 ment, within 10 years after the date of the enactment of
13 this Act, of major measurable reductions in losses that
14 would otherwise have occurred to life and property from
15 windstorms and related hazards. The objective is to be
16 achieved through the creation of a program involving co-
17 operation among governments at all levels and the private
18 sector featuring—

19 (1) pertinent basic research and applied re-
20 search based on identified public needs, which takes
21 into account locality-specific weather, susceptibility
22 to natural hazards, design and construction prac-
23 tices, and performance of the built environment dur-
24 ing windstorms and related hazards;

1 (2) better understanding of costs and benefits
2 associated with natural hazard impact reduction;

3 (3) systematic collection of physical and per-
4 formance data for buildings and other structures for
5 use in developing and deploying mitigation meas-
6 ures;

7 (4) an ongoing program of information dissemi-
8 nation on cost-effective and affordable hazard reduc-
9 tion research results and hazard-resistant building
10 construction techniques to industry, State and local
11 governments, homeowners, and the general public;

12 (5) improved technology for loss estimation,
13 risk assessment, hazard identification, prediction,
14 warnings, advanced planning, and disaster response;

15 (6) increased public awareness of the dangers
16 of windstorms and related hazards, and the value of
17 taking preventative action to preserve affected prop-
18 erty and life; and

19 (7) priority attention to critical lifelines, includ-
20 ing infrastructure and utilities, that are especially
21 needed in time of disaster.

22 (c) RESEARCH AND DEVELOPMENT ELEMENTS.—
23 The research and development elements of the program
24 may include—

1 (1) peer-reviewed research and development on
2 and demonstration of disaster-resistant systems,
3 based on identified public needs, and materials for
4 new construction and retrofit of existing construc-
5 tion, including composite materials; building enve-
6 lope components, including windows, doors, and
7 roofs; structural design; and design and construction
8 techniques, through physical testing and postdisaster
9 assessments, and through computer simulation when
10 appropriate, taking into consideration life safety and
11 cost-effectiveness, affordability, and regional dif-
12 ferences including susceptibility to windstorm and
13 related hazards;

14 (2) development of quantitative assessment
15 techniques to evaluate the direct, indirect, and soci-
16 etal costs and benefits associated with natural haz-
17 ards, including exploration of mitigation measures
18 that could reduce windstorm vulnerability, and to ef-
19 fectively exploit existing and developing mitigation
20 techniques;

21 (3) development of mechanisms for collecting
22 and inventorying information on building systems
23 and materials performance in windstorms and re-
24 lated hazards, information on identified public miti-
25 gation priorities, and other pertinent information

1 from sources such as the construction industry, in-
2 surance companies, and building officials;

3 (4) development of cost-effective and affordable
4 planning, design, construction, rehabilitation, and
5 retrofit methods and procedures, including utiliza-
6 tion of mitigation measures, for critical lifelines and
7 facilities such as hospitals, schools, public utilities,
8 and other structures that are especially needed in
9 time of disaster;

10 (5) research and development on wind charac-
11 terization and micro-climates and on techniques,
12 methodologies, and new technologies for the map-
13 ping in finer detail of windstorms and related hazard
14 risks, to be coordinated with the mapping of other
15 natural and manmade hazards;

16 (6) development of improved loss estimation
17 and risk assessment systems for predicting and eval-
18 uating damaging windstorm impacts and for identi-
19 fying, evaluating, and reliably characterizing wind-
20 storm hazards; and

21 (7) development of improved approaches for
22 providing emergency services, reconstruction, and re-
23 development after a windstorm or related hazard
24 event.

1 (d) TECHNOLOGY TRANSFER.—The technology
2 transfer elements of the program shall include—

3 (1) the collection, classification, presentation,
4 and dissemination in a usable form to Federal,
5 State, and local officials, community leaders, the de-
6 sign and construction industry, contractors, home
7 owners, and the general public, of research results,
8 cost-effective construction techniques, loss estimation
9 and risk assessment methodologies, and other perti-
10 nent information regarding windstorm phenomena,
11 the identification of locations and features which are
12 especially susceptible to natural hazard damage,
13 ways to reduce the adverse consequences of natural
14 hazards, and related matters;

15 (2) in coordination with the private sector, aca-
16 demia, and the States, curriculum development and
17 related measures to facilitate the training of employ-
18 ees of the design and construction industry, the in-
19 surance industry, and State and local governments,
20 and other interested persons; and

21 (3) development of an outreach effort to in-
22 crease public and community awareness, including
23 information related to windstorm and related hazard
24 mitigation.

1 (e) IMPLEMENTATION PLAN.—The Interagency
2 Group established under subsection (a) shall refine, in
3 conjunction with appropriate representatives of State and
4 local units of government and private sector organizations,
5 the objective stated in subsection (b), develop measure-
6 ments related to the objective, including emphasis on safe-
7 ty, cost-effectiveness, and affordability, and develop a 10-
8 year implementation plan for achieving the objective with
9 a strategic review of goals and objectives every 3 years,
10 working in coordination with the private sector and State
11 and local government for implementation in all appro-
12 priate instances. Not later than 210 days after the date
13 of the enactment of this Act, the Interagency Group shall
14 submit to the Congress the implementation plan. The plan
15 shall include—

16 (1) a statement of strategic research and devel-
17 opment goals and priorities;

18 (2) plans for the development of improved fore-
19 casting techniques for windstorms, early warning
20 systems, and systems for comprehensive response;

21 (3) plans for the development of a systematic
22 method for collecting an inventory of buildings,
23 building components, and damage to buildings from
24 natural hazards;

1 (4) a strategy to implement the transfer of
2 technology and information to State, county, local,
3 and regional governmental units and the private sec-
4 tor for appropriate implementation of research and
5 development results;

6 (5) provisions for outreach and dissemination,
7 on a timely basis, of—

8 (A) information and technology in a form
9 that is of use to the design professions, the con-
10 struction industry, and other interested parties;
11 and

12 (B) other information and knowledge of in-
13 terest to the public to reduce vulnerability to
14 wind and related hazards;

15 (6) a description of how Federal disaster relief
16 and emergency assistance programs will incorporate
17 research and development results;

18 (7) establishment, consistent with this Act, of
19 goals, priorities, and target dates for implementation
20 of the program;

21 (8) assignment of responsibilities with respect
22 to each element of the program that does not al-
23 ready have a Federal lead agency;

24 (9) a description of plans for cooperation and
25 coordination in all phases of the program with inter-

1 ested governmental entities in all States, particularly
2 those containing areas of high or moderate wind and
3 related hazard risk; and

4 (10) staffing plans for the program and its
5 components.

6 (f) PARTICIPATION.—The implementation plan shall
7 complement existing Federal research programs and shall
8 avoid duplication of existing programs including earth-
9 quake programs whenever possible and assign responsibil-
10 ities to Federal agencies with existing expertise.

11 (g) BUDGET COORDINATION.—The Director shall
12 each year, after consulting with the Interagency Group es-
13 tablished under section 4(a), provide guidance to the other
14 program agencies concerning the preparation of requests
15 for appropriations for activities related to this Act, and
16 shall prepare, in conjunction with the other program agen-
17 cies, an annual program budget to be submitted to the
18 Office of Management and Budget. Each program agency
19 shall include with its annual request for appropriations
20 submitted to the Office of Management and Budget a re-
21 port that—

22 (1) identifies each element of the proposed pro-
23 gram activities of the agency;

24 (2) specifies how each of these activities con-
25 tributes to the program; and

1 (3) states the portion of its request for appro-
2 priations allocated to each element of the program.

3 (h) MANUFACTURED HOUSING STANDARDS.—Noth-
4 ing in this Act supersedes any provision of the National
5 Manufactured Housing Construction and Safety Stand-
6 ards Act of 1974. No design, construction method, prac-
7 tice, technology, material, mitigation methodology, or haz-
8 ard reduction measure of any kind developed under this
9 Act shall be required for a home certified under section
10 616 of the National Manufactured Housing Construction
11 and Safety Standards Act of 1974 (42 U.S.C. 5415), pur-
12 suant to standards issued under such Act, without being
13 subject to the consensus development process and rule-
14 making procedures of that Act.

15 **SEC. 5. NATIONAL ADVISORY COMMITTEE FOR WINDSTORM**
16 **AND RELATED HAZARDS IMPACT REDUC-**
17 **TION.**

18 (a) ESTABLISHMENT.—A National Advisory Com-
19 mittee shall be established to review progress made under
20 the program established under section 4, advise on any
21 improvements that should be made to that program, and
22 report to the Congress on actions that have been taken
23 to advance the Nation’s capability to reduce the impacts
24 of windstorm and related hazards.

1 (b) MEMBERSHIP.—The Advisory Committee shall be
2 composed of no more than 21 members to be appointed
3 by the President (one of whom shall be designated by the
4 President as chair). The members shall include represent-
5 atives of a broad cross-section of interests such as the re-
6 search, technology transfer, architectural, engineering,
7 and financial communities; materials and systems sup-
8 pliers; State, county, and local governments concerned
9 with the reduction of windstorm and related hazards; the
10 residential, multifamily, and commercial sectors of the
11 construction industry; and the insurance industry, and
12 other representatives (not including members of Federal
13 agencies) from areas impacted by windstorms and related
14 hazards.

15 (c) COORDINATION.—The Advisory Committee shall
16 coordinate with existing advisory committees of the Fed-
17 eral Government and of the National Academies of Science
18 and Engineering.

19 (d) ANNUAL REPORT.—The Advisory Committee
20 shall provide a summary report to Congress each year.

21 (e) EXEMPTION.—Section 14 of the Federal Advisory
22 Committee Act shall not apply to the Advisory Committee
23 established under this section.

1 **SEC. 6. ANNUAL REPORT.**

2 The Interagency Group established under section
3 4(a) shall, within 180 days after the end of each fiscal
4 year, submit a report to the Congress describing the status
5 of the windstorm and related hazards reduction program,
6 describing progress achieved during the preceding fiscal
7 year, by government at all levels and by the private sector,
8 toward achieving the objective stated in section 4(b) and
9 implementing the plan developed under section 4(e), and
10 including any amendments to the implementation plan.
11 Each such report shall include any recommendations for
12 legislative and other action the Interagency Group con-
13 sider necessary and appropriate.

14 **SEC. 7. AUTHORIZATION OF APPROPRIATIONS.**

15 There are authorized to be appropriated to carry out
16 activities under this Act \$25,000,000 for fiscal year 2004,
17 \$50,000,000 for fiscal year 2005, and \$100,000,000 for
18 fiscal year 2006.

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