

118TH CONGRESS
2D SESSION

H. R. 9771

To amend the Research and Development, Competition, and Innovation Act to support research into the effects of extreme weather on the subsurface natural and built environment, to support engineering standards and building codes for resilient designs against multihazards, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

SEPTEMBER 24, 2024

Ms. McCLELLAN introduced the following bill; which was referred to the Committee on Science, Space, and Technology

A BILL

To amend the Research and Development, Competition, and Innovation Act to support research into the effects of extreme weather on the subsurface natural and built environment, to support engineering standards and building codes for resilient designs against multihazards, 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 “Building and Upgrad-
5 ing Infrastructure for the Long Term Act” or the
6 “BUILT Act”.

1 **SEC. 2. SUBSURFACE ENVIRONMENT RESEARCH AND DE-**
2 **VELOPMENT.**

3 (a) IN GENERAL.—Subtitle B of title II of division
4 B of the Research and Development, Competition, and In-
5 novation Act (enacted as part of division B of Public Law
6 117–167; 42 U.S.C. 18931 et seq.) is amended by adding
7 at the end the following new sections:

8 **“SEC. 10236. SUBSURFACE ENVIRONMENT RESEARCH AND**
9 **DEVELOPMENT.**

10 “(a) IN GENERAL.—Subject to the availability of ap-
11 propriations, the Director shall support measurement re-
12 search and testing to inform the development of engineer-
13 ing standards, practices, and building codes on the sub-
14 surface environment as such relate to the built environ-
15 ment.

16 “(b) RESEARCH AREAS.—Research and testing under
17 subsection (a) may include the following:

18 “(1) Measuring, modeling, and predicting the
19 properties of subsurface materials of soil, rock, and
20 groundwater elevations, taking into consideration
21 changing climate conditions.

22 “(2) Sensing technology for monitoring sub-
23 surface infrastructure and phenomena, such as land
24 subsidence, that may affect subsurface infrastruc-
25 ture.

1 of the built environment, which may include measurement
2 research and development for the following:

3 “(1) Future climate conditions, loads, and ef-
4 fects on infrastructure.

5 “(2) Multihazard and cascading hazard risk
6 and resilience modeling and prediction.

7 “(3) Design standards and best practices for
8 climate-resilient infrastructure, including lifeline in-
9 frastructure.

10 “(4) Sensing technology for monitoring infra-
11 structure integrity.

12 “(5) Future climate effects on infrastructure
13 capacity over its life cycle.

14 “(b) WORKSHOP ON MULTHAZARD RESILIENT DE-
15 SIGN FRAMEWORK.—Not later than two years after the
16 date of the enactment of this section, the Director shall
17 convene, or enter into a cooperative agreement with an
18 appropriate nongovernmental organization to convene, a
19 workshop composed of subject matter experts, stake-
20 holders, and partners from Federal, State, Tribal, terri-
21 torial, and local entities, nongovernmental organizations,
22 private sector entities, disaster management professional
23 associations, engineering professional associations, profes-
24 sional construction and homebuilding industry associa-
25 tions, and building code setting organizations to discuss

1 a framework for designing multihazard resilient buildings
2 and infrastructure, including identifying research and
3 measurement needs for the following:

4 “(1) Risk and resilience assessments and mod-
5 eling, including cascading hazards and interactions
6 between multiple hazards.

7 “(2) Functional recovery design.

8 “(3) Climate resilient design.

9 “(4) Analysis and retrofit of existing building
10 and infrastructure stock.

11 “(5) Financial tools for decision-support.

12 “(6) Other areas determined appropriate by the
13 Director.

14 “(c) REPORT.—Not later than one year after the date
15 on which the workshop described in subsection (b) is com-
16 pleted, the Director shall submit to Congress and make
17 available to the public a report on the findings of the work-
18 shop, including any recommendations for legislative action
19 that could strengthen the multihazard resilience of the
20 United States.

21 “(d) CONSULTATION.—The Director shall carry out
22 this section in consultation with academia, the private sec-
23 tor, nonprofit organizations, professional associations, and
24 other appropriate Federal agencies.

25 “(e) DEFINITIONS.—In this section:

1 “(1) CLIMATE RESILIENCE.—The term ‘climate
2 resilience’ has the meaning given the term in section
3 101(a) of title 10, United States Code.

4 “(2) LIFELINE INFRASTRUCTURE.—The term
5 ‘lifeline infrastructure’ has the meaning given the
6 term in section 4 of the Earthquake Hazards Reduc-
7 tion Act of 1977 (42 U.S.C. 7703).”.

8 (b) RISK AND RESILIENCE RESEARCH.—Section
9 10351 of the Research and Development, Competition,
10 and Innovation Act (42 U.S.C. 19060) is amended—

11 (1) in paragraph (4), by striking “and” after
12 the semicolon;

13 (2) in paragraph (5), by striking the period and
14 inserting “; and”; and

15 (3) by adding at the end the following new
16 paragraph:

17 “(6) multidisciplinary research to understand,
18 model, and predict subsurface geological phenomena
19 related to climate variations and the impact of such
20 on infrastructure design and operations, to manage
21 risk and improve resiliency of the built environ-
22 ment.”.

23 (c) CLERICAL AMENDMENT.—The table of contents
24 in section 1 of Public Law 117–167 is amended by insert-

1 ing after the item relating to section 10235 the following

2 new items:

“Sec. 10236. Subsurface environment research and development.

“Sec. 10237. Climate resilience research and development.”.

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