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(Original Signature of Member)

118TH CONGRESS  
1ST SESSION

**H. R.** \_\_\_\_\_

To provide for Department of Energy and National Science Foundation  
research and development coordination, and for other purposes.

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IN THE HOUSE OF REPRESENTATIVES

M\_\_\_\_. \_\_\_\_\_ introduced the following bill; which was referred to the  
Committee on \_\_\_\_\_

\_\_\_\_\_  
**A BILL**

To provide for Department of Energy and National Science  
Foundation research and development coordination, 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 “DOE and NSF Inter-  
5       agency Research Act”.

1 **SEC. 2. DEPARTMENT OF ENERGY AND NATIONAL SCIENCE**  
2 **FOUNDATION RESEARCH AND DEVELOPMENT**  
3 **COORDINATION.**

4 (a) IN GENERAL.—The Secretary of Energy (in this  
5 section referred to as the “Secretary”) and the Director  
6 of the National Science Foundation (in this section re-  
7 ferred to as the “Director”) shall carry out cross-cutting  
8 and collaborative research and development activities fo-  
9 cused on the joint advancement of Department of Energy  
10 and National Science Foundation mission requirements  
11 and priorities.

12 (b) MEMORANDUM OF UNDERSTANDING.—The Sec-  
13 retary and the Director shall coordinate the activities  
14 under subsection (a) through the establishment of a  
15 memorandum of understanding, or other appropriate  
16 interagency agreement. Such memorandum or agreement,  
17 as the case may be, shall require the use of a competitive,  
18 merit-reviewed process, which considers applications from  
19 Federal agencies, National Laboratories, institutions of  
20 higher education, non-profit institutions, and other appro-  
21 priate entities.

22 (c) COORDINATION.—In carrying out the activities  
23 under subsection (a), the Secretary and the Director  
24 may—

25 (1) conduct collaborative research in a variety  
26 of focus areas, such as—

1 (A) basic plasma science and engineering,  
2 including applications in astrophysics, materials  
3 science, fusion science, and accelerator science;

4 (B) fundamental biological and computa-  
5 tional science and engineering, including com-  
6 putational neuroscience and neuromorphic com-  
7 puting, including in collaboration with the pro-  
8 gram authorized under section 306 of the De-  
9 partment of Energy Research and Innovation  
10 Act (42 U.S.C. 18644);

11 (C) modeling and simulation, machine  
12 learning, artificial intelligence, data assimila-  
13 tion, large-scale data analytics, and predictive  
14 analysis in order to optimize algorithms for  
15 purposes related to energy and climate;

16 (D) quantum information sciences, includ-  
17 ing quantum computing and quantum network  
18 infrastructure, including in collaboration with  
19 the programs authorized under sections 403  
20 and 404 of the National Quantum Initiative Act  
21 (15 U.S.C. 8853 and 8854);

22 (E) energy and materials science and engi-  
23 neering, including artificial photosynthesis,  
24 plasma, solar fuels, and fusion, including in col-  
25 laboration with the programs authorized under

1 sections 303 and 307 of the Department of En-  
2 ergy Research and Innovation Act (42 U.S.C.  
3 18641 and 18645), and section 973 of the En-  
4 ergy Policy Act of 2005 (42 U.S.C. 16313);

5 (F) advanced manufacturing technologies,  
6 including efficient storage systems and alter-  
7 natives to high-temperature processing, for the  
8 purposes of optimizing energy consumption, in-  
9 cluding in collaboration with the program au-  
10 thorized under section 975 of the Department  
11 of Energy Research and Innovation Act (42  
12 U.S.C. 16315);

13 (G) microelectronics, including novel chip  
14 architectures, memory systems, and intercon-  
15 nects; and

16 (H) advanced physics, including high en-  
17 ergy and particle physics, accelerator research  
18 and development, and high performance com-  
19 putational tools, including in collaboration with  
20 the programs authorized under section 303 of  
21 the Department of Energy Research and Inno-  
22 vation Act (42 U.S.C. 18641);

23 (2) promote collaboration, open community-  
24 based development, and data and information shar-  
25 ing between Federal agencies, National Labora-

1       tories, institutions of higher education, nonprofit in-  
2       stitutions, and other appropriate entities by pro-  
3       viding the necessary access and secure data and in-  
4       formation transfer capabilities;

5           (3) support research infrastructure, including  
6       new facilities and equipment, as the Secretary and  
7       Director determine necessary; and

8           (4) organize education, training, and research  
9       initiatives relating to STEM education and work-  
10      force development.

11      (d) AGREEMENTS.—In carrying out the activities  
12     under subsection (a), the Secretary and the Director are  
13     authorized to—

14           (1) carry out reimbursable agreements between  
15      the Department of Energy, the National Science  
16      Foundation, and other entities in order to maximize  
17      the effectiveness of research and development; and

18           (2) collaborate with other Federal agencies, as  
19      appropriate.

20      (e) REPORT.—Not later than two years after the date  
21     of the enactment of this section, the Secretary and the  
22     Director shall submit to the Committee on Science, Space,  
23     and Technology of the House of Representatives and the  
24     Committee on Energy and Natural Resources and the

1 Committee on Commerce, Science, and Transportation of  
2 the Senate a report detailing the following:

3 (1) Interagency coordination between each Fed-  
4 eral agency involved in the research and development  
5 activities carried out under this section.

6 (2) Potential opportunities to expand the tech-  
7 nical capabilities of the Department of Energy and  
8 the National Science Foundation.

9 (3) Collaborative research achievements.

10 (4) Areas of future mutually beneficial suc-  
11 cesses.

12 (5) Continuation of coordination activities be-  
13 tween the Department of Energy and the National  
14 Science Foundation.

15 (f) RESEARCH SECURITY.—The activities authorized  
16 under this section shall be applied in a manner consistent  
17 with subtitle D of title VI of the Research and Develop-  
18 ment, Competition, and Innovation Act (enacted as divi-  
19 sion B of the CHIPS Act of 2022 (Public Law 117–167;  
20 42 U.S.C. 19231 et seq.)).