

## Union Calendar No. 54

118TH CONGRESS  
1ST SESSION

# H. R. 1713

**[Report No. 118–74, Parts I and II]**

To provide for Department of Energy and Department of Agriculture joint research and development activities, and for other purposes.

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### IN THE HOUSE OF REPRESENTATIVES

MARCH 22, 2023

Mr. LUCAS (for himself and Ms. LOFGREN) introduced the following bill; which was referred to the Committee on Science, Space, and Technology, and in addition to the Committee on Agriculture, 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

MAY 22, 2023

Additional sponsors: Mr. MILLER of Ohio, Ms. LEE of Pennsylvania, Ms. TENNEY, Mr. WILLIAMS of New York, Ms. CARAVEO, Mrs. FOUSHEE, Ms. STEVENS, Mr. JACKSON of North Carolina, and Ms. PEREZ

MAY 22, 2023

Reported from the Committee on Science, Space, and Technology with amendments

[Omit the part struck through and insert the part printed in italic]

MAY 22, 2023

Reported from the Committee on Agriculture with an amendment; committed to the Committee of the Whole House on the State of the Union and ordered to be printed

[Strike out all after the enacting clause and insert the part printed in italic]

[For text of introduced bill, see copy of bill as introduced on March 22, 2023]

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## **A BILL**

To provide for Department of Energy and Department of Agriculture joint research and development activities, 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 USDA Inter-  
5 agency Research Act”.

6 **SEC. 2. DEPARTMENT OF ENERGY AND DEPARTMENT OF**  
7 **AGRICULTURE JOINT RESEARCH AND DEVEL-**  
8 **OPMENT ACTIVITIES.**

9 (a) IN GENERAL.—The Secretary of Energy and the  
10 Secretary of Agriculture (in this section referred to as the  
11 “Secretaries”) shall carry out cross-cutting and collabo-  
12 rative research and development activities focused on the  
13 joint advancement of Department of Energy and Depart-  
14 ment of Agriculture mission requirements and priorities.

15 (b) MEMORANDUM OF UNDERSTANDING.—The Sec-  
16 retaries shall carry out and coordinate the activities under  
17 subsection (a) through the establishment of a memo-  
18 randum of understanding, or other appropriate inter-  
19 agency agreement. Such memorandum or agreement shall  
20 require the use of a competitive, merit-reviewed process,  
21 which considers applications from Federal agencies, Na-  
22 tional Laboratories, institutions of higher education, non-  
23 profit institutions, and other appropriate entities.

24 (c) COORDINATION.—In carrying out the activities  
25 under subsection (a), the Secretaries may—

1           (1) conduct collaborative research over a variety  
2 of focus areas, such as—

3           (A) modeling and simulation, machine  
4 learning, artificial intelligence, data assimila-  
5 tion, large scale data analytics, and predictive  
6 analysis in order to optimize algorithms for  
7 purposes related to agriculture and energy,  
8 such as life cycle analysis of agricultural or en-  
9 ergy systems;

10          (B) fundamental agricultural, biological,  
11 computational, and environmental science and  
12 engineering, including advanced crop science,  
13 crop protection, and breeding, *including biologi-*  
14 *cal pest control*, including in collaboration with  
15 the program authorized under section 306 of  
16 the Department of Energy Research and Inno-  
17 vation Act (42 U.S.C. 18644);

18          (C) integrated natural resources and the  
19 energy-water nexus, including in collaboration  
20 with the program authorized under section  
21 1010 of the Energy Act of 2020 (enacted as di-  
22 vision Z of the Consolidated Appropriations  
23 Act, 2021 (42 U.S.C. 16183));

24          (D) advanced biomass, biobased products,  
25 and biofuels, including in collaboration with the

1 activities authorized under section 9008(b) of  
2 the Farm Security and Rural Investment Act of  
3 2002 (7 U.S.C. 8108(b));

4 (E) diverse feedstocks for economically and  
5 environmentally sustainable fuels, including  
6 aviation and naval fuels;

7 (F) colocation of agricultural resources and  
8 activities and ecosystem services with diverse  
9 energy technologies and resources, such as geo-  
10 thermal energy, nuclear energy, solar energy,  
11 wind energy, natural gas, hydropower, and en-  
12 ergy storage;

13 (G) colocation of agricultural resources  
14 and activities with carbon storage and utiliza-  
15 tion technologies;

16 (H) invasive species management to fur-  
17 ther the work done by the Federal Interagency  
18 Committee for the Management of Noxious and  
19 Exotic Weeds;

20 (I) long-term and high-risk technological  
21 barriers in the development of transformative  
22 science and technology solutions in the agri-  
23 culture and energy sectors, including in collabo-  
24 ration with the program authorized under sec-

1           tion 5012 of the America COMPETES Act (42  
2           U.S.C. 16538);

3           (J) grid modernization and grid security;  
4           ~~and~~

5           (K) rural technology development, includ-  
6           ing manufacturing, precision agriculture tech-  
7           nologies, and mechanization and automation  
8           technologies; *and*

9           (L) *wildfire risks and prevention, including*  
10          *the power sector's role in fire prevention and*  
11          *mitigation and wildfire impacts on energy infra-*  
12          *structure;*

13          (2) develop methods to accommodate large vol-  
14          untary standardized and integrated data sets on ag-  
15          ricultural, environmental, supply chain, and eco-  
16          nomic information with variable accuracy and scale;

17          (3) promote collaboration, open community-  
18          based development, and data and information shar-  
19          ing between Federal agencies, National Labora-  
20          tories, institutions of higher education, nonprofit in-  
21          stitutions, industry partners, and other appropriate  
22          entities by providing reliable access to secure data  
23          and information that are in compliance with Federal  
24          rules and regulations;

1           (4) support research infrastructure and work-  
2           force development as the Secretaries determine nec-  
3           essary; and

4           (5) conduct collaborative research, development,  
5           and demonstration of methods and technologies to—

6                   (A) improve the efficiency of agriculture  
7                   operations and processing of agricultural prod-  
8                   ucts; and

9                   (B) reduce greenhouse gas emissions asso-  
10                  ciated with such operations and such proc-  
11                  essing.

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

14                  (1) carry out reimbursable agreements between  
15                  the Department of Energy, the Department of Agri-  
16                  culture, and other entities in order to maximize the  
17                  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 Act, the Secretaries shall submit  
22          to the Committee on Science, Space, and Technology and  
23          the Committee on Agriculture of the House of Representa-  
24          tives, and the Committee on Energy and Natural Re-

1 sources and the Committee on Agriculture, Nutrition, and  
2 Forestry of 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 Department of Agriculture.

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 Depart-  
14 ment of Agriculture.

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.)).

21 **SECTION 1. SHORT TITLE.**

22 *This Act may be cited as the “DOE and USDA Inter-*  
23 *agency Research Act”.*



1 **SEC. 2. DEPARTMENT OF ENERGY AND DEPARTMENT OF**  
2 **AGRICULTURE JOINT RESEARCH AND DEVEL-**  
3 **OPMENT ACTIVITIES.**

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5 *Secretary of Agriculture (in this section referred to as the*  
6 *“Secretaries”)* shall carry out cross-cutting and collabo-  
7 rative research and development activities focused on the  
8 joint advancement of Department of Energy and Depart-  
9 ment of Agriculture mission requirements and priorities.

10 (b) *MEMORANDUM OF UNDERSTANDING.*—*The Secre-*  
11 *taries shall carry out and coordinate the activities under*  
12 *subsection (a) through the establishment of a memorandum*  
13 *of understanding, or other appropriate interagency agree-*  
14 *ment. Such memorandum or agreement shall require the use*  
15 *of a competitive, merit-reviewed process, which considers*  
16 *applications from Federal agencies, National Laboratories,*  
17 *institutions of higher education, nonprofit institutions, and*  
18 *other appropriate entities.*

19 (c) *COORDINATION.*—*In carrying out the activities*  
20 *under subsection (a), the Secretaries may—*

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22 *of focus areas, such as—*

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24 *learning, artificial intelligence, data assimila-*  
25 *tion, large scale data analytics, and predictive*  
26 *analysis in order to optimize algorithms for pur-*

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2        *life cycle analysis of agricultural or energy sys-*  
3        *tems;*

4                *(B) fundamental agricultural, biological,*  
5        *computational, and environmental science and*  
6        *engineering, including advanced crop science,*  
7        *crop protection, breeding, and biological pest*  
8        *control, in collaboration with the program au-*  
9        *thorized under section 306 of the Department of*  
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11        *18644);*

12                *(C) integrated natural resources and the en-*  
13        *ergy-water nexus, including in collaboration*  
14        *with the program authorized under section 1010*  
15        *of the Energy Act of 2020 (enacted as division*  
16        *Z of the Consolidated Appropriations Act, 2021*  
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4 thermal energy, nuclear energy, solar energy,  
5 wind energy, natural gas, hydropower, and en-  
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23                 erations and processing of agricultural products;  
24                 and

1                   (B) *reduce greenhouse gas emissions associ-*  
2                   *ated with such operations and such processing.*

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8 *effectiveness of research and development; and*

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10 *propriate.*

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22 *nical capabilities of the Department of Energy and*  
23 *the Department of Agriculture.*

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2           *tween the Department of Energy and the Department*  
3           *of Agriculture.*

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7           *Competition, and Innovation Act (enacted as division B of*  
8           *the CHIPS Act of 2022 (Public Law 117–167; 42 U.S.C.*  
9           *19231 et seq.)).*



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118<sup>TH</sup> CONGRESS  
1<sup>ST</sup> SESSION

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