

118TH CONGRESS
1ST SESSION

S. 3301

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

IN THE SENATE OF THE UNITED STATES

NOVEMBER 14 (legislative day, NOVEMBER 13), 2023

Mr. LUJÁN (for himself and Mr. HOEVEN) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

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”.

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

4 (a) IN GENERAL.—The Secretary of Energy and the
5 Secretary of Agriculture (referred to in this section 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.—

11 (1) IN GENERAL.—The Secretaries shall carry
12 out and coordinate the activities under subsection
13 (a) through the establishment of a memorandum of
14 understanding or other appropriate interagency
15 agreement.

16 (2) REQUIREMENTS.—The memorandum or
17 agreement described in paragraph (1) shall require
18 the use of a competitive, merit-reviewed process that
19 considers applications from Federal agencies, Na-
20 tional Laboratories, institutions of higher education,
21 nonprofit institutions, and other appropriate entities.

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

24 (1) conduct collaborative research relating to a
25 variety of focus areas, such as—

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

8 (B) fundamental agricultural, biological,
9 computational, and environmental science and
10 engineering, including advanced crop science,
11 crop protection, breeding, and biological pest
12 control, in collaboration with the program au-
13 thorized under section 306 of the Department
14 of Energy Research and Innovation Act (42
15 U.S.C. 18644);

16 (C) integrated natural resources and the
17 energy-water nexus, including in collaboration
18 with the program authorized under section
19 1010 of the Energy Act of 2020 (42 U.S.C.
20 16183);

21 (D) advanced biomass, biobased products,
22 and biofuels, including in collaboration with the
23 activities authorized under section 9008(b) of
24 the Farm Security and Rural Investment Act of
25 2002 (7 U.S.C. 8108(b));

1 (E) diverse feedstocks for economically and
2 environmentally sustainable fuels, including
3 aviation and naval fuels;

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

10 (G) colocation of agricultural resources
11 and activities with carbon storage and utiliza-
12 tion technologies;

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

17 (I) long-term and high-risk technological
18 barriers in the development of transformative
19 science and technology solutions in the agri-
20 culture and energy sectors, including in collabo-
21 ration with the program authorized under sec-
22 tion 5012 of the America COMPETES Act (42
23 U.S.C. 16538);

24 (J) grid modernization and grid security;

1 (K) rural technology development, includ-
2 ing manufacturing, precision agriculture tech-
3 nologies, and mechanization and automation
4 technologies; and

5 (L) wildfire risks and prevention, including
6 the role of the power sector in fire prevention
7 and mitigation and wildfire impacts on energy
8 infrastructure;

9 (2) develop methods to accommodate large vol-
10 untary standardized and integrated data sets on ag-
11 ricultural, environmental, supply chain, and eco-
12 nomic information with variable accuracy and scale;

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

21 (4) support research infrastructure and work-
22 force development as the Secretaries determine to be
23 necessary; and

24 (5) conduct collaborative research, development,
25 and demonstration of methods and technologies—

1 (A) to improve the efficiency of agriculture
2 operations and processing of agricultural prod-
3 ucts; and

4 (B) to reduce greenhouse gas emissions as-
5 sociated with the operations and processing de-
6 scribed in subparagraph (A).

7 (d) AGREEMENTS.—In carrying out the activities
8 under subsection (a), the Secretaries may—

9 (1) carry out reimbursable agreements between
10 the Department of Energy, the Department of Agri-
11 culture, and other entities in order to maximize the
12 effectiveness of research and development; and

13 (2) collaborate with other Federal agencies as
14 appropriate.

15 (e) REPORT.—Not later than 2 years after the date
16 of enactment of this Act, the Secretaries shall submit to
17 the Committee on Energy and Natural Resources and the
18 Committee on Agriculture, Nutrition, and Forestry of the
19 Senate and the Committee on Science, Space, and Tech-
20 nology and the Committee on Agriculture of the House
21 of Representatives a report describing the following:

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

1 (2) Potential opportunities to expand the tech-
2 nical capabilities of the Department of Energy and
3 the Department of Agriculture.

4 (3) Collaborative research achievements.

5 (4) Areas of future mutually beneficial suc-
6 cesses.

7 (5) Continuation of coordination activities be-
8 tween the Department of Energy and the Depart-
9 ment of Agriculture.

10 (f) RESEARCH SECURITY.—The activities authorized
11 under this section shall be applied in a manner consistent
12 with subtitle D of title VI of the Research and Develop-
13 ment, Competition, and Innovation Act (42 U.S.C. 19231
14 et seq.).

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