

118TH CONGRESS
1ST SESSION

S. _____

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

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

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 (referred to in this section as the

1 “Secretaries”) shall carry out cross-cutting and collabo-
2 rative research and development activities focused on the
3 joint advancement of Department of Energy and Depart-
4 ment of Agriculture mission requirements and priorities.

5 (b) MEMORANDUM OF UNDERSTANDING.—

6 (1) IN GENERAL.—The Secretaries shall carry
7 out and coordinate the activities under subsection
8 (a) through the establishment of a memorandum of
9 understanding or other appropriate interagency
10 agreement.

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

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

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

21 (A) modeling and simulation, machine
22 learning, artificial intelligence, data assimila-
23 tion, large-scale data analytics, and predictive
24 analysis in order to optimize algorithms for
25 purposes relating to agriculture and energy,

1 such as life-cycle analyses of agricultural or en-
2 ergy systems;

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

11 (C) integrated natural resources and the
12 energy-water nexus, including in collaboration
13 with the program authorized under section
14 1010 of the Energy Act of 2020 (42 U.S.C.
15 16183);

16 (D) advanced biomass, biobased products,
17 and biofuels, including in collaboration with the
18 activities authorized under section 9008(b) of
19 the Farm Security and Rural Investment Act of
20 2002 (7 U.S.C. 8108(b));

21 (E) diverse feedstocks for economically and
22 environmentally sustainable fuels, including
23 aviation and naval fuels;

24 (F) colocation of agricultural resources and
25 activities and ecosystem services with diverse

1 energy technologies and resources, such as geo-
2 thermal energy, nuclear energy, solar energy,
3 wind energy, natural gas, hydropower, and en-
4 ergy storage;

5 (G) colocation of agricultural resources
6 and activities with carbon storage and utiliza-
7 tion technologies;

8 (H) invasive species management to fur-
9 ther the work done by the Federal Interagency
10 Committee for the Management of Noxious and
11 Exotic Weeds;

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

19 (J) grid modernization and grid security;

20 (K) rural technology development, includ-
21 ing manufacturing, precision agriculture tech-
22 nologies, and mechanization and automation
23 technologies; and

24 (L) wildfire risks and prevention, including
25 the role of the power sector in fire prevention

1 and mitigation and wildfire impacts on energy
2 infrastructure;

3 (2) develop methods to accommodate large vol-
4 untary standardized and integrated data sets on ag-
5 ricultural, environmental, supply chain, and eco-
6 nomic information with variable accuracy and scale;

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

15 (4) support research infrastructure and work-
16 force development as the Secretaries determine to be
17 necessary; and

18 (5) conduct collaborative research, development,
19 and demonstration of methods and technologies—

20 (A) to improve the efficiency of agriculture
21 operations and processing of agricultural prod-
22 ucts; and

23 (B) to reduce greenhouse gas emissions as-
24 sociated with the operations and processing de-
25 scribed in subparagraph (A).

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

3 (1) carry out reimbursable agreements between
4 the Department of Energy, the Department of Agri-
5 culture, and other entities in order to maximize the
6 effectiveness of research and development; and

7 (2) collaborate with other Federal agencies as
8 appropriate.

9 (e) REPORT.—Not later than 2 years after the date
10 of enactment of this Act, the Secretaries shall submit to
11 the Committee on Energy and Natural Resources and the
12 Committee on Agriculture, Nutrition, and Forestry of the
13 Senate and the Committee on Science, Space, and Tech-
14 nology and the Committee on Agriculture of the House
15 of Representatives a report describing the following:

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

19 (2) Potential opportunities to expand the tech-
20 nical capabilities of the Department of Energy and
21 the Department of Agriculture.

22 (3) Collaborative research achievements.

23 (4) Areas of future mutually beneficial suc-
24 cesses.

1 (5) Continuation of coordination activities be-
2 tween the Department of Energy and the Depart-
3 ment of Agriculture.

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