

118TH CONGRESS
1ST SESSION

H. R. 4824

To amend the Energy Policy Act of 2005 to require the Secretary of Energy to carry out terrestrial carbon sequestration research and development activities, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JULY 24, 2023

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

A BILL

To amend the Energy Policy Act of 2005 to require the Secretary of Energy to carry out terrestrial carbon sequestration 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 “Carbon Sequestration
5 Collaboration Act”.

6 **SEC. 2. CARBON SEQUESTRATION RESEARCH INITIATIVE.**

7 Section 963 of the Energy Policy Act of 2005 (42
8 U.S.C. 16293) is amended—

1 (1) in subsection (a)—

2 (A) by redesignating paragraphs (1) and
3 (2) as paragraphs (2) and (3), respectively;

4 (B) by inserting before paragraph (2), as
5 so redesignated, the following new paragraph:

6 “(1) CARBON SEQUESTRATION IN GEOLOGIC
7 FORMATIONS.—The term ‘carbon sequestration in
8 geologic formations’ means carbon sequestration
9 methods or technologies utilizing existing permeable
10 or porous formations in geologic settings, such as
11 basins or aquifers.”; and

12 (C) by adding at the end the following new
13 paragraph:

14 “(4) TERRESTRIAL CARBON SEQUESTRATION.—
15 The term ‘terrestrial carbon sequestration’ means
16 carbon sequestration methods or technologies engi-
17 neered by humans and targeted at rangelands, agri-
18 cultural lands, fallow lands, or forest stands to in-
19 crease soil organic carbon levels or sequester carbon
20 through transport processes via plant and root bio-
21 mass, including through soil additives, geochemical
22 approaches, and other engineered solutions that can
23 increase the storage of produced carbon in inorganic
24 or mineral forms, such as biochar and carbon min-
25 eralization utilizing mine tailings.”; and

1 (2) in subsection (b)—

2 (A) in paragraph (1)—

3 (i) by striking “shall establish” and
4 inserting “, in coordination with the heads
5 of relevant Federal agencies, carry out”;
6 and

7 (ii) by inserting “, including through
8 terrestrial carbon sequestration and carbon
9 sequestration in geologic formations” be-
10 fore the period;

11 (B) in paragraph (2)—

12 (i) in subparagraph (A)—

13 (I) by striking “in coordination
14 with relevant Federal agencies,”; and

15 (II) by striking “assess the ca-
16 pacity of geologic storage formation”
17 and inserting “evaluate terrestrial
18 carbon sequestration and carbon se-
19 questration in geologic formations”;

20 (ii) in subparagraph (B)—

21 (I) in the matter preceding clause
22 (i), by inserting “and terrestrial car-
23 bon storage sites” after “geologic for-
24 mations”; and

1 (II) in clause (ii), by striking
2 “geologic storage” and inserting
3 “across a variety of ecosystems”;

4 (iii) in subparagraph (D)—

5 (I) by striking “formation”; and

6 (II) by inserting “, and deter-
7 mining the fate of carbon dioxide con-
8 current with and after injection into
9 geologic formations” before the semi-
10 colon;

11 (iv) in subparagraph (E), by striking
12 “geologic sequestration of carbon dioxide”
13 and inserting “terrestrial carbon sequestra-
14 tion and carbon sequestration in geologic
15 formations”;

16 (v) by striking subparagraphs (F) and
17 (G);

18 (vi) by redesignating subparagraphs
19 (H) and (I) as subparagraphs (F) and (G),
20 respectively;

21 (vii) in subparagraph (F), as so
22 redesignated, by striking “and” after the
23 semicolon;

24 (viii) in subparagraph (G), as so re-
25 designated, by striking the period; and

1 (ix) by adding at the end the following
2 new subparagraphs:

3 “(H) enhancing the scientific under-
4 standing of, and reducing uncertainties associ-
5 ated with, the cycling of carbon in agriculture
6 lands, forests, and geologic formations, includ-
7 ing long- and short-term behavior and potential
8 environmental effects of sequestered carbon;

9 “(I) identifying scientific barriers and pur-
10 suing research solutions to challenges pre-
11 venting terrestrial carbon sequestration and
12 carbon sequestration in geologic formations, in-
13 cluding supporting cost and business model as-
14 sessments to examine the economic viability of
15 technologies and systems developed under the
16 program;

17 “(J) collecting, identifying, standardizing,
18 and utilizing data and data sharing practices
19 needed to—

20 “(i) increase the understanding of ter-
21 restrial carbon sequestration, in particular
22 carbon sequestered through agricultural
23 practices and conservation agriculture,
24 such as rangeland and grazing manage-
25 ment, soil cover, and crop rotations; and

1 “(ii) support the development and
2 demonstration of new carbon sequestration
3 tools and technologies; and

4 “(K) coordinating across Federal agencies
5 research efforts regarding terrestrial carbon se-
6 questration and carbon sequestration in geo-
7 logic formations.”;

8 (C) by redesignating paragraph (3) as
9 paragraph (5);

10 (D) by inserting after paragraph (2) the
11 following new paragraphs:

12 “(3) LEVERAGING.—In carrying out activities
13 under the program, the Secretary shall leverage for
14 the advancement of monitoring, reporting, and
15 verification, including tools, modeling, and analysis,
16 the collective body of knowledge and data, including
17 experience and resources from existing carbon utili-
18 zation and sequestration research, entities, and dem-
19 onstrations, from the following:

20 “(A) The United States Geological Survey,
21 the Agricultural Research Service, and the na-
22 tional Carbon Utilization Research Center.

23 “(B) The Department of Energy, including
24 the Office of Science, the Office of Fossil En-

1 ergy and Carbon Management, and the Office
2 of Clean Energy Demonstrations.

3 “(C) Interagency research and develop-
4 ment initiatives and data collection activities.

5 “(D) Other Federal agencies, research
6 communities, and users of the data referred to
7 in subparagraph (J) of paragraph (2), including
8 the Farm Service Agency, the National Insti-
9 tute of Food and Agriculture, the Forest Serv-
10 ice, and the Natural Resources Conservation
11 Service.

12 “(4) COORDINATION.—The Secretary of Energy
13 shall carry out the program in coordination with,
14 and avoid unnecessary duplication of, the following:

15 “(A) Other research entities of the Depart-
16 ment of Energy, including the National Labora-
17 tories and the Advanced Research Projects
18 Agency–Energy.

19 “(B) Research entities, services, and part-
20 nerships of the Department of Agriculture, in-
21 cluding the Agricultural Research Service, the
22 Natural Resources Conservation Service, the
23 Farm Service Agency, and the Forest Service.

24 “(C) Research entities of the Department
25 of the Interior.

1 “(D) Other entities within Federal agen-
2 cies that conduct research, development, or
3 demonstration on terrestrial carbon sequestra-
4 tion and carbon sequestration in geologic for-
5 mations.”; and

6 (E) by adding at the end the following new
7 paragraph:

8 “(6) RESEARCH PLAN.—Not later than two
9 years after the date of the enactment of this para-
10 graph and annually thereafter, the Secretary shall
11 submit to the Committee on Science, Space, and
12 Technology, the Committee on Natural Resources,
13 and the Committee on Agriculture of the House of
14 Representatives and the Committee on Energy and
15 Natural Resources and the Committee on Agri-
16 culture, Nutrition, and Forestry of the Senate the
17 long-term strategic and prioritized research agenda
18 to identify and address scientific challenges for wide-
19 spread adoption of terrestrial carbon sequestration
20 and carbon sequestration in geological formations,
21 including in shallow formations and sites not used
22 for enhanced oil recovery.”.

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