

118TH CONGRESS  
2D SESSION

# H. R. 7054

To require the Secretary of Energy to remove carbon dioxide directly from ambient air or seawater, and for other purposes.

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## IN THE HOUSE OF REPRESENTATIVES

JANUARY 18, 2024

Mr. TONKO (for himself and Mr. PETERS) introduced the following bill; which was referred to the Committee on Energy and Commerce

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## A BILL

To require the Secretary of Energy to remove carbon dioxide directly from ambient air or seawater, 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 Dioxide Re-  
5 moval Leadership Act of 2024”.

6 **SEC. 2. FEDERAL REQUIREMENT TO REMOVE CARBON DI-**  
7 **OXIDE.**

8 (a) **REQUIRED AMOUNTS.**—The Secretary shall, to  
9 the extent economically feasible as provided in subsection  
10 (d), remove—

1           (1) 50,000 net metric tons of carbon dioxide,  
2           calculated on a lifecycle basis, for each of fiscal  
3           years 2024 through 2025;

4           (2) 500,000 net metric tons of carbon dioxide,  
5           calculated on a lifecycle basis, for each of fiscal  
6           years 2026 through 2028;

7           (3) 5,000,000 net metric tons of carbon dioxide,  
8           calculated on a lifecycle basis, for each of fiscal  
9           years 2029 through 2034; and

10          (4) 10,000,000 net metric tons of carbon diox-  
11          ide, calculated on a lifecycle basis, for fiscal year  
12          2035 and each fiscal year thereafter.

13          (b) TIMING.—The Secretary shall remove each  
14          amount of carbon dioxide required under subsection (a)  
15          by not later than 3 years after the beginning of the fiscal  
16          year for which such removal is required.

17          (c) SMALL REMOVAL PROJECT SET-ASIDE.—To the  
18          extent practicable, at least 20 percent of the net metric  
19          tons of carbon dioxide required to be removed for each  
20          of fiscal years 2024 through 2034 under subsection (a)  
21          shall be removed by small removal projects.

22          (d) ECONOMIC FEASIBILITY.—

23                 (1) IN GENERAL.—The removal of carbon diox-  
24                 ide under this section shall be considered economi-

1 cally feasible if such removal can be accomplished or,  
2 in the case of a contract, purchased—

3 (A) with respect to such removal carried  
4 out for any of fiscal years 2024 through 2025,  
5 at a price per metric ton of carbon dioxide of  
6 not more than \$750 (which the Secretary may  
7 adjust for inflation);

8 (B) with respect to such removal carried  
9 out for any of fiscal years 2026 through 2028,  
10 at a price per metric ton of carbon dioxide of  
11 not more than \$500 (which the Secretary may  
12 adjust for inflation);

13 (C) with respect to such removal carried  
14 out for any of fiscal years 2029 through 2031,  
15 at a price per metric ton of carbon dioxide of  
16 not more than \$300 (which the Secretary may  
17 adjust for inflation);

18 (D) with respect to such removal carried  
19 out for any of fiscal years 2032 through 2034,  
20 at a price per metric ton of carbon dioxide of  
21 not more than \$200 (which the Secretary may  
22 adjust for inflation); and

23 (E) with respect to such removal carried  
24 out for fiscal year 2035 and each fiscal year  
25 thereafter, at a price per metric ton of carbon

1           dioxide of not more than \$150 (which the Sec-  
2           retary may adjust for inflation).

3           (2) INCLUSION OF MONITORING, REPORTING,  
4           AND VERIFICATION COSTS.—In determining whether  
5           the removal of carbon dioxide is considered economi-  
6           cally feasible under paragraph (1), the price for such  
7           removal shall include any costs associated with the  
8           monitoring, reporting, and verification required  
9           under subsection (f)(1).

10          (3) MULTI-YEAR CONTRACTS.—Notwith-  
11          standing paragraph (1), the removal of carbon diox-  
12          ide carried out pursuant to a multi-year contract en-  
13          tered into under subsection (h) shall be considered  
14          economically feasible if such removal can be accom-  
15          plished at the applicable dollar amount for the first  
16          fiscal year of the contract, as provided in paragraph  
17          (1), through the entire length of such contract.

18          (e) FEDERAL ASSISTANCE.—Funds received pursu-  
19          ant to a contract entered into under subsection (h) shall  
20          not be considered Federal assistance or otherwise affect  
21          eligibility for any Federal assistance, including tax incen-  
22          tives.

23          (f) MONITORING, REPORTING, AND VERIFICATION.—

24                  (1) IN GENERAL.—The Secretary, or an entity  
25          the Secretary enters into a contract with under sub-

1 section (h), shall monitor, report, and verify the net  
2 metric tons of carbon dioxide the Secretary or such  
3 entity, as applicable, removed for purposes of this  
4 section.

5 (2) STANDARDS.—Not later than 1 year after  
6 the date of enactment of this section, the Secretary,  
7 in consultation with the Administrator of the Na-  
8 tional Oceanic and Atmospheric Administration, the  
9 Administrator of the Environmental Protection  
10 Agency, the Secretary of the Department of Agri-  
11 culture, and other relevant Federal agencies as de-  
12 termined appropriate by the Secretary, shall estab-  
13 lish standards for the monitoring, reporting, and  
14 verification of net metric tons of carbon dioxide re-  
15 moved pursuant to this section. Such standards  
16 shall—

17 (A) require the use of the best available  
18 practices used by similar carbon dioxide re-  
19 moval projects;

20 (B) ensure safe, effective, and efficient re-  
21 moval of carbon dioxide;

22 (C) require independent, third-party  
23 verification of carbon dioxide removal;

24 (D) ensure additionality, permanence, and  
25 net-negativity of carbon dioxide removal;

1 (E) include criteria to determine whether  
2 the storage of captured carbon dioxide is per-  
3 manent;

4 (F) ensure scientifically rigorous and  
5 transparent methods for monitoring, reporting,  
6 and verifying under paragraph (1); and

7 (G) be regularly reviewed and, as nec-  
8 essary, updated to account for scientific and  
9 technological advancements.

10 (3) PROHIBITION ON DOUBLE COUNTING.—Car-  
11 bon dioxide that is removed for the purposes of com-  
12 pliance with any other greenhouse gas emissions  
13 management program, including any foreign, Fed-  
14 eral, State, local, or private greenhouse gas emis-  
15 sions management program, as determined by the  
16 Secretary, may not be considered removed under  
17 subsection (a) for purposes of meeting the require-  
18 ments of such subsection.

19 (g) PRIORITIES.—In carrying out this section, the  
20 Secretary shall give priority to a project for the removal  
21 of carbon dioxide based on the degree to which the  
22 project—

23 (1) minimizes the amount of greenhouse gas  
24 emissions released by carrying out such project;

1           (2) supports the commercialization of innovative  
2 removal technologies;

3           (3) increases the diversity of commercially  
4 available eligible technologies;

5           (4) may provide for domestic job creation, with  
6 a further preference for partnerships with labor or-  
7 ganizations, small businesses, minority-owned busi-  
8 nesses, and women-owned businesses across value  
9 chains;

10          (5) results in economic development or eco-  
11 nomic diversification in regions or localities that  
12 have historically generated significant economic ac-  
13 tivity from the production, processing, transpor-  
14 tation, or combustion of fossil fuels, including  
15 through the use of coal mines, fossil fuel-fired elec-  
16 tricity generating units, and petroleum refining fa-  
17 cilities;

18          (6) quantifies and mitigates risks from carbon  
19 dioxide removal activities on, and provides measur-  
20 able co-benefits to, environmental justice commu-  
21 nities, the environment, agriculture, and public  
22 health, including by—

23               (A) improving local air quality, water qual-  
24 ity, and soil quality;

1 (B) minimizing land, water, and energy  
2 footprints; and

3 (C) using zero-emission energy; and

4 (7) includes robust public engagement and com-  
5 munity benefits.

6 (h) CONTRACTS.—

7 (1) IN GENERAL.—After a transparent and  
8 competitive process, the Secretary may enter into a  
9 contract to meet the requirements of subsection (a).

10 (2) LENGTH.—A contract entered into under  
11 this subsection may not be for a term of more than  
12 15 years.

13 (3) MAINTENANCE OF REMOVAL COMMIT-  
14 MENTS.—The Secretary shall include as a term or  
15 condition in each contract entered into under this  
16 subsection that the entity that enters into the con-  
17 tract shall permanently store an additional amount  
18 of carbon dioxide that is equal to any amount of car-  
19 bon dioxide that is released after permanent storage  
20 by such entity.

21 (4) LIMITATION.—To the extent that there is a  
22 sufficient number of entities capable of removing  
23 carbon dioxide in a manner that meets the standards  
24 and requirements of this section under a contract  
25 entered into pursuant to this subsection, the Sec-

1       retary shall ensure that no one entity is responsible  
2       for removing more than 25 percent of the net metric  
3       tons of carbon dioxide required under subsection (a)  
4       in any fiscal year.

5       (i) REPORT.—Not later than January 1, 2027, and  
6       every 2 years thereafter, the Secretary shall submit to  
7       Congress, and release to the public, a report on the  
8       progress of carrying out the requirements of this section,  
9       which such report shall include—

10           (1) the amounts verified under subsection (f)(1)  
11           and the corresponding names of each entity that  
12           provided such verified amount;

13           (2) the total price, and price per metric ton, to  
14           remove carbon dioxide for the applicable fiscal year  
15           as required under subsection (a);

16           (3) the methods associated with the monitoring,  
17           reporting, and verification required under subsection  
18           (f)(1);

19           (4) an estimate of how removing carbon dioxide  
20           under this section affects environmental justice com-  
21           munities, the environment, agriculture, and public  
22           health;

23           (5) information on potential labor impacts and  
24           job creation resulting from fulfilling the require-  
25           ments of subsection (a); and

1           (6) an explanation of how the Secretary  
2 prioritized projects under subsection (g).

3           (j) AUTHORIZATION OF APPROPRIATIONS.—There  
4 are authorized to be appropriated such sums as are nec-  
5 essary to carry out this section.

6           (k) DEFINITIONS.—In this section:

7           (1) ELIGIBLE TECHNOLOGY.—

8           (A) IN GENERAL.—The term “eligible  
9 technology” means, as determined by the Sec-  
10 retary, any equipment, technique, or technology  
11 that—

12                   (i) was placed into service after Janu-  
13 ary 1, 2022; and

14                   (ii) removes carbon dioxide directly  
15 from ambient air or seawater.

16           (B) EXCLUSION.—The term “eligible tech-  
17 nology” does not include any equipment, tech-  
18 nique, or technology that—

19                   (i) removes carbon dioxide which is  
20 deliberately released from naturally occur-  
21 ring subsurface springs;

22                   (ii) removes carbon dioxide using nat-  
23 ural photosynthesis, except as provided in  
24 subparagraph (C); or

1 (iii) uses captured carbon dioxide in  
2 enhanced oil recovery.

3 (C) EXPANSION OF ELIGIBLE TECH-  
4 NOLOGY.—Notwithstanding subparagraph  
5 (B)(ii), any equipment, technique, or technology  
6 that removes carbon dioxide using gasification,  
7 pyrolysis, or sequestration of solid, nonhaz-  
8 ardous, and cellulosic waste materials may be  
9 considered an eligible technology under this sec-  
10 tion if the Secretary, by rule—

11 (i) determines an entity that carries  
12 out a removal project under this section is  
13 able to adequately monitor, report, and  
14 verify the amount of greenhouse gas emis-  
15 sions, calculated on a lifecycle basis (in-  
16 cluding direct emissions and significant in-  
17 direct emissions), removed using such  
18 equipment, technique, or technology;

19 (ii) determines an entity that carries  
20 out a removal project under this section is  
21 able to adequately mitigate the environ-  
22 mental impacts (including impacts on bio-  
23 diversity, land use, and air and water qual-  
24 ity) associated with such equipment, tech-  
25 nique, or technology; and

1 (iii) requires an entity carrying out a  
2 removal project under this section to—

3 (I) adequately monitor, report,  
4 and verify the amount and storage  
5 permanence of greenhouse gas emis-  
6 sions, calculated on a lifecycle basis  
7 (including direct emissions and signifi-  
8 cant indirect emissions), associated  
9 with using such equipment, technique,  
10 or technology; and

11 (II) adequately mitigate the envi-  
12 ronmental impacts (including impacts  
13 on biodiversity, land use, and air, soil,  
14 and water quality) associated with  
15 using such equipment, technique, or  
16 technology.

17 (2) LIFECYCLE BASIS.—The term “lifecycle  
18 basis” means the net sum of all greenhouse gas  
19 emissions (using mass values for all greenhouse  
20 gases that are adjusted to account for their relative  
21 global warming potential, in consultation with the  
22 Administrator of the Environmental Protection  
23 Agency) and removals associated with carbon dioxide  
24 removal activity from cradle to grave, including any  
25 emissions associated with—

- 1 (A) energy and feedstock inputs;
- 2 (B) the carbon dioxide removal process;
- 3 (C) carbon dioxide storage, including use
- 4 and disposal of any materials or products asso-
- 5 ciated with carbon dioxide storage; and
- 6 (D) embodied emissions of the equipment.

7 (3) REMOVE.—The term “remove” means to—

- 8 (A) capture carbon dioxide using eligible
- 9 technology; and
- 10 (B) permanently store such captured car-
- 11 bon dioxide—
- 12 (i) in dedicated subsurface geologic
- 13 storage reported under sections 98.440
- 14 and 146.91(e) of title 40, Code of Federal
- 15 Regulations (or successor regulations);
- 16 (ii) in building materials and mineral-
- 17 ized carbon materials; or
- 18 (iii) using other permanent storage
- 19 methods, as determined by the Secretary.

20 (4) SECRETARY.—The term “Secretary” means

21 the Secretary of Energy.

22 (5) SMALL REMOVAL PROJECT.—The term

23 “small removal project” means a project for the re-

24 moval of carbon dioxide that does not remove more

25 than 5 percent of the net metric tons of carbon diox-

1       ide required to be removed for the applicable fiscal  
2       year under subsection (a).

3       **SEC. 3. STUDY ON THE LONG-TERM FUTURE OF FEDERAL**  
4                                   **CARBON DIOXIDE REMOVAL MANAGEMENT.**

5       Not later than 1 year after the date of enactment  
6 of this Act, the Secretary of Energy, in consultation with  
7 the Administrator of the National Oceanic and Atmos-  
8 pheric Administration, the Administrator of the Environ-  
9 mental Protection Agency, the Secretary of the Depart-  
10 ment of Agriculture, and other relevant Federal agencies,  
11 shall submit to the Committee on Energy and Commerce  
12 of the House of Representatives and the Committee on  
13 Energy and Natural Resources of the Senate a report that  
14 evaluates and makes recommendations for potential pro-  
15 gram design elements and financing options for a Federal  
16 carbon dioxide removal offtake program that can be scaled  
17 to achieve carbon dioxide removal from the atmosphere  
18 and the oceans at a gigaton scale annually by 2050. Such  
19 report shall include consideration of potential management  
20 and organizational structures for the program, includ-  
21 ing—

- 22                   (1) a government sponsored enterprise;
- 23                   (2) a government corporation;
- 24                   (3) a program office with the Department of  
25       Energy or other Federal agency; and

1 (4) a contracted service provider.

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