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S. 5170

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

IN THE SENATE OF THE UNITED STATES

JULY 29, 2026

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

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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.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Carbon Dioxide Removal Leadership Act of 2026".

SEC. 2. FEDERAL REQUIREMENT TO REMOVE CARBON DIOXIDE.

(a) DEFINITIONS.—In this section:

(1) ELIGIBLE TECHNOLOGY.—

(A) IN GENERAL.—The term ''eligible technology'' means any equipment, technique, or technology, as determined by the Secretary, that—

(i) was placed into service after January 1, 2022; and

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

(B) EXCLUSION.—The term ''eligible technology'' does not include any equipment, technique, or technology that—

(i) removes carbon dioxide that is deliberately released from naturally occurring subsurface springs;

(ii) removes carbon dioxide using natural photosynthesis, except as provided in subparagraph (C); or

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

(C) EXPANSION OF ELIGIBLE TECHNOLOGY.—Notwithstanding subparagraph (B)(ii), any equipment, technique, or technology that removes carbon dioxide using gasification, pyrolysis, or sequestration of solid, nonhazardous, and cellulosic waste materials may be included in the term ‘‘eligible technology’’ if the Secretary, by rule—

(i) determines that an entity that carries out a removal project under this section is able—

(I) to adequately measure, monitor, report, and verify the quantity of greenhouse gas emissions (including direct emissions and significant indirect emissions), removed using that equipment, technique, or technology; and

(II) to adequately mitigate the environmental impacts (including impacts on biodiversity, land use, and air and water quality) associated with that equipment, technique, or technology; and

(ii) requires that entity to carry out the activities described in clause (i).

(2) LIFECYCLE BASIS.—The term ‘‘lifecycle basis’’ means the net sum of all greenhouse gas emissions (using mass values for all greenhouse gases that are adjusted to account for their relative global warming potential, as determined by the Sec-

retary in consultation with the Administrator of the Environmental Protection Agency) associated with carbon dioxide removal activity from cradle to grave, including any emissions associated with—

(A) energy and feedstock inputs in the carbon dioxide removal activity, including inputs in the distribution and transportation of carbon dioxide;

(B) indirect effects, such as land-use change, as scientifically justified;

(C) the carbon dioxide removal process;

(D) carbon dioxide transport and storage, including any leakage, use, and disposal of any materials or products associated with that transport and storage; and

(E) embodied emissions of the equipment used in the carbon dioxide removal activity.

(3) REMOVE.—The term ‘‘remove’’, with respect to carbon dioxide, means to extract carbon dioxide from the atmosphere by—

(A) capturing carbon dioxide using eligible technology; and

(B) durably storing, on a timescale equivalent to geologic storage, that captured carbon dioxide—

(i) pursuant to a permit issued under part C of the Safe Drinking Water Act (42 U.S.C. 300h et seq.) for a Class V or Class VI injection well (as described in section 144.6 of title 40, Code of Federal Regulations (or successor regulations));

(ii) in building materials and mineralized carbon materials; or

(iii) using other durable storage methods, as determined by the Secretary.

(4) SECRETARY.—The term ''Secretary'' means the Secretary of Energy.

(5) SMALL REMOVAL PROJECT.—The term ''small removal project'' means a project for the removal of carbon dioxide that removes not more than 5 percent of the net metric tons of carbon dioxide required to be removed under subsection (b) for the applicable fiscal year.

(b) REQUIRED QUANTITIES.—The Secretary shall, to the extent economically feasible as determined under subsection (c), remove—

(1) 50,000 net metric tons of carbon dioxide, calculated on a lifecycle basis, for each of fiscal years 2026 and 2027;

(2) 500,000 net metric tons of carbon dioxide, calculated on a lifecycle basis, for each of fiscal years 2028 through 2030;

(3) 5,000,000 net metric tons of carbon dioxide, calculated on a lifecycle basis, for each of fiscal years 2031 through 2035; and

(4) 10,000,000 net metric tons of carbon dioxide, calculated on a lifecycle basis, for fiscal year 2036 and each fiscal year thereafter.

(c) ECONOMIC FEASIBILITY.—

(1) IN GENERAL.—The removal of carbon dioxide under subsection (b) shall be considered economically feasible if that removal can be accomplished or, in the case of a contract under subsection (i), purchased—

(A) for each of fiscal years 2026 and 2027, at a price per metric ton of carbon dioxide of not more than $750 (which the Secretary may adjust for inflation);

(B) for each of fiscal years 2028 through 2030, at a price per metric ton of carbon dioxide of not more than $500 (which the Secretary may adjust for inflation);

(C) for each of fiscal years 2031 through 2033, at a price per metric ton of carbon dioxide of not more than $300 (which the Secretary may adjust for inflation);

(D) for each of fiscal years 2034 through 2036, at a price per metric ton of carbon dioxide of not more than $200 (which the Secretary may adjust for inflation); and

(E) for fiscal year 2037 and each fiscal year thereafter, at a price per metric ton of carbon dioxide of not more than $150 (which the Secretary may adjust for inflation).

(2) INCLUSION OF MEASUREMENT, MONITORING, REPORTING, AND VERIFICATION COSTS.—In determining whether the removal of carbon dioxide is considered economically feasible under paragraph (1), the price for such removal shall include costs paid to an independent third party for the measurement, monitoring, reporting, and verification required under subsection (g)(1).

(3) MULTIYEAR CONTRACTS.—The removal of carbon dioxide carried out pursuant to a contract entered into under subsection (i) that is a multiyear contract shall be considered economically feasible if such removal can be accomplished at the applicable dollar amount for the first fiscal year of the con-

tract, as provided in paragraph (1), through the entire length of the contract.

(d) TIMING.—For each fiscal year, the Secretary shall remove the quantity of carbon dioxide required under subsection (b) for that fiscal year not later than 3 years after the beginning of that fiscal year.

(e) SMALL REMOVAL PROJECT SET-ASIDE.—To the extent practicable, at least 20 percent of the net metric tons of carbon dioxide required to be removed under subsection (b) for each of fiscal years 2026 through 2035 shall be removed through small removal projects.

(f) FEDERAL ASSISTANCE.—Funds received pursuant to a contract entered into under subsection (i) shall not be considered Federal assistance or otherwise affect eligibility for any Federal assistance, including a tax incentive.

(g) MEASUREMENT, MONITORING, REPORTING, AND VERIFICATION.—

(1) IN GENERAL.—The Secretary, or an entity with which the Secretary enters into a contract under subsection (i), shall enter into a contract with an independent third party to measure, monitor, report, and verify the net metric tons of carbon dioxide that the Secretary or the entity, as applicable, removes for purposes of this section.

(2) STANDARDS.—

(A) IN GENERAL.—Not later than 1 year after the date of enactment of this Act, the Secretary, in consultation with the Administrator of the National Oceanic and Atmospheric Administration, the Administrator of the Environmental Protection Agency, the Secretary of Agriculture, the Director of the National Institute of Standards and Technology, and other relevant Federal agencies, as determined by the Secretary, shall establish standards for methods of measuring, monitoring, reporting, and verifying the net metric tons of carbon dioxide removed pursuant to this section.

(B) CONTENTS.—The standards established under subparagraph (A) shall—

(i) require the use of best available practices used by similar carbon dioxide removal projects;

(ii) ensure safe, effective, and efficient removal of carbon dioxide;

(iii) ensure additionality, durability, and net-negativity of carbon dioxide removal;

(iv) include criteria to determine whether the storage of captured carbon dioxide is durable;

(v) ensure scientifically rigorous and transparent methods for measurement, monitoring, reporting, and verifying under paragraph (1); and

(vi) be regularly reviewed and, as necessary, updated to account for scientific and technological advancements.

(3) INDEPENDENT THIRD PARTIES.—An independent third party entering into a contract under paragraph (1) shall be—

(A) in compliance with the standards established under paragraph (2); and

(B) subject to oversight by the Secretary.

(4) PROHIBITION ON DOUBLE COUNTING.—Carbon dioxide that is removed for the purpose of complying with any other greenhouse gas emissions management program, including any foreign, Federal, State, local, or private greenhouse gas emissions management program, as determined by the Secretary, may not be considered removed under subsection (b) for purposes of meeting the requirements of that subsection.

(h) PRIORITIES.—In carrying out removal projects pursuant to subsection (b), the Secretary shall give priority to projects based on the degree to which the project—

(1) minimizes the quantity of greenhouse gas emissions released by carrying out the project;

(2) supports the commercialization of innovative removal technologies that demonstrate—

(A) near-term and long-term cost competitiveness relative to similar technologies; and

(B) a potential to achieve the economic feasibility requirements established under subsection (c);

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

(4) provides for domestic job creation, with a further preference for establishing partnerships with labor organizations, small businesses, minority-owned businesses, and women-owned businesses across value chains;

(5) sources supply chain materials domestically;

(6) results in economic development or economic diversification in regions or localities that have historically generated significant economic activity from the production, processing, transpor-

tation, or combustion of fossil fuels, including through the use of coal mines, fossil fuel-fired electricity generating units, and petroleum refining facilities;

(7) quantifies and mitigates risks from carbon dioxide removal activities on, and provides measurable co-benefits to, nearby communities and residents, the environment, agriculture, and public health, including by—

(A) improving local air quality, water quality, and soil quality;

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

(C) using zero-emission energy, to the maximum extent practicable; and

(8) includes robust public engagement and community benefits, including the use of enforceable community benefits agreements.

(i) CONTRACTS.—

(1) IN GENERAL.—The Secretary may, using a transparent and competitive process, enter into 1 or more contracts to meet the requirements of subsection (b).

(2) DURATION.—The duration of a contract entered into under paragraph (1) shall not exceed 15 years.

(3) LIMITATION.—To the extent that there is a sufficient number of entities capable of removing carbon dioxide in accordance with this section under a contract entered into paragraph (1), the Secretary shall ensure that no singular entity is responsible for removing more than 25 percent of the net metric tons of carbon dioxide required to be removed under subsection (b) in any fiscal year.

(j) REPORT.—Not later than January 1, 2029, and every 2 years thereafter, the Secretary shall submit to Congress, and make publicly available, a report that describes the progress made in carrying out the requirements of this section, including, with respect to the period covered by the report—

(1) the quantities of removed carbon dioxide verified under subsection (g)(1) and the name of each independent third party that provided that verified quantity;

(2) the total price, and price per metric ton, of removing carbon dioxide for each applicable fiscal year as required under subsection (b);

(3) each technology category, the amount of energy, and each storage mechanism used to remove carbon dioxide for the applicable fiscal year as required under subsection (b);

(4) each location where carbon dioxide was removed for the applicable fiscal year as required under subsection (b);

(5) the standards established under subsection (g)(2);

(6) an assessment of how the quantities of carbon dioxide removed under this section have affected nearby communities and residents, the environment, agriculture, and public health;

(7) information on any potential labor impacts and job creation resulting from carrying out the requirements of subsection (b); and

(8) an explanation of how the Secretary prioritized projects under subsection (h).

(k) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated such sums as are necessary to carry out this section.

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

(a) IN GENERAL.—Not later than 1 year after the date of enactment of this Act, the Secretary of Energy, in consultation with the Administrator of the National Oceanic and Atmospheric Administration, the Administrator of the Environmental Protection Agency, the Secretary of Agriculture, and other relevant Federal agencies, as determined by the Secretary of Energy, shall submit to the Committee on Energy and Natural Resources of the Senate and the Committee on Energy and Commerce of the House of Representatives a report that evaluates and makes recommendations for potential program design elements and financing options for a Federal carbon dioxide removal offtake program that can be scaled to achieve carbon dioxide removal from the atmosphere and the oceans at a gigaton scale annually by 2050.

(b) CONTENTS.—The report under subsection (a) shall include consideration of potential management and organizational structures for the program described in that subsection, including—

(1) a government-sponsored enterprise;

(2) a government corporation;

(3) a program office within the Department of Energy or another Federal agency; and

(4) a contracted service provider.

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