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

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

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 Representa-

tives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the “Federal Carbon Diox-

ide Removal Leadership Act of 2022”.

SEC. 2. FEDERAL REQUIREMENT TO REMOVE CARBON DI-

OXIDE.

(a) DEFINITIONS.—In this section:

(1) ELIGIBLE TECHNOLOGY.—
(A) In General.—The term “eligible technology” means any equipment, technique, or technology, as determined appropriate by the Secretary, placed into service after January 1, 2022, that 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; or

(ii) removes carbon dioxide through natural photosynthesis, subject to subparagraph (C).

(C) Other Eligible Technology.—

(i) In General.—Notwithstanding subparagraph (B)(ii), the term “eligible technology”, with respect to a project for the removal of carbon dioxide carried out by an entity with which the Secretary enters into a contract under subsection (c), includes any equipment, technique, or technology used in the project that removes carbon dioxide using gasification or pyrol-
ysis of solid, nonhazardous, and cellulosic waste materials if the Secretary, by rule, determines that the equipment, technique, or technology, as applicable, is capable of—

(I) adequately monitoring, reporting, and verifying the amount of greenhouse gas emissions (calculated on a lifecycle basis) that are associated with the equipment, technique, or technology; and

(II) adequately mitigating the environmental impacts (including impacts on biodiversity, land use, and air and water quality) associated with the equipment, technique, or technology.

(ii) RULE.—The Secretary shall review any rule promulgated pursuant to clause (i) not less frequently than once every 6 years after the date on which the rule is promulgated.

(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, in consultation with the
Administrator of the Environmental Protection
Agency) and removals associated with carbon dioxide
removal activity, including any emissions associated
with—

(A) energy and feedstock inputs;

(B) the carbon dioxide removal process;

and

(C) carbon dioxide storage, including use
and disposal of any materials or products asso-
ciated with carbon dioxide storage.

(3) REMOVE.—The term “remove”, with re-
spect to carbon dioxide, means—

(A) to capture carbon dioxide using an eli-
gible technology; and

(B) to permanently store that captured
carbon dioxide—

(i) in dedicated subsurface geologic
storage reported under sections 98.440
and 146.91(e) of title 40, Code of Federal
Regulations (or successor regulations);

(ii) in materials, including building
materials and mineralized carbon mate-
rials; or
(iii) through another permanent storage method, 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)(1) for the fiscal year in which the project begins.

(b) Removal Requirement.—

(1) Amounts.—The Secretary shall, if economically feasible as determined under paragraph (2), remove—

(A) 50,000 net metric tons of carbon dioxide, calculated on a lifecycle basis, for each of fiscal years 2024 and 2025;

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

(C) 5,000,000 net metric tons of carbon dioxide, calculated on a lifecycle basis, for each of fiscal years 2029 through 2034; and
(D) 10,000,000 net metric tons of carbon dioxide, calculated on a lifecycle basis, for fiscal year 2035 and each fiscal year thereafter.

(2) ECONOMIC FEASIBILITY.—

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

(i) for each of fiscal years 2024 and 2025, at a price per metric ton of carbon dioxide of not more than $550;

(ii) for each of fiscal years 2026 through 2028, at a price per metric ton of carbon dioxide of not more than $400;

(iii) for each of fiscal years 2029 through 2031, at a price per metric ton of carbon dioxide of not more than $300;

(iv) for each of fiscal years 2032 through 2034, at a price per metric ton of carbon dioxide of not more than $200; and

(v) for fiscal year 2035 and each fiscal year thereafter, at a price per metric ton of carbon dioxide of not more than $150.
(B) INCLUSION OF MONITORING, REPORTING, AND VERIFICATION COSTS.—For purposes of subparagraph (A), the price per metric ton of carbon dioxide shall include any costs associated with the monitoring, reporting, and verification required under subsection (d).

(C) MULTIYEAR CONTRACTS.—The removal of carbon dioxide carried out pursuant to a multiyear contract entered into under subsection (c) shall be considered economically feasible if such removal can be accomplished at the applicable dollar amount for the first fiscal year of the contract, as provided in subparagraph (A), through the entire length of the contract.

(3) TIMING.—For each fiscal year, the Secretary shall remove the amount of carbon dioxide required under paragraph (1) for that fiscal year not later than 3 years after the beginning of that fiscal year.

(4) 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 paragraph (1) for each of fiscal years 2024 through 2034 shall be removed through small removal projects.
(c) Contracts for Projects to Remove Carbon Dioxide.—

(1) In general.—To meet the requirements of subsection (b), the Secretary may enter into contracts to carry out projects for the removal of carbon dioxide, including small removal projects.

(2) Duration.—A contract entered into under paragraph (1) shall be for a term of not more than 15 years.

(3) Priorities.—In entering into contracts under paragraph (1), the Secretary shall give priority to contracts for projects that—

(A) minimize the amount of greenhouse gas emissions released by carrying out the project;

(B) support the commercialization of innovative removal technologies;

(C) increase the diversity of commercially available eligible technologies;

(D) provide the greatest potential for domestic job creation;

(E) result in economic development or economic diversification in regions or localities that have historically generated significant economic activity from the production, processing, trans-
portation, or combustion of fossil fuels, including through the use of coal mines, fossil fuel-fired electricity generating units, and petroleum refining facilities;

(F) quantify and mitigate the effect of removing carbon dioxide on environmental justice, the environment, and public health; and

(G) include robust public engagement and community benefits.

(d) Monitoring, Reporting, and Verification.—

(1) In general.—The Secretary, or an entity with which the Secretary enters into a contract under subsection (c), shall 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) Best practices.—The Secretary shall ensure that any project carried out under a contract entered into under subsection (c) shall follow the best available practices, as determined by the Secretary, for monitoring, reporting, and verifying the net metric tons of carbon dioxide removed under the project, including best practices that—
(A) are used by similar carbon dioxide removal projects; and

(B) are necessary to ensure safe, effective, and efficient removal of carbon dioxide.

(3) 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.

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

(f) REPORT.—Not later than January 1, 2027, 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—
(1) the amounts of carbon dioxide removed during the period covered by the report, as verified pursuant to subsection (d);

(2) the total price, and price per metric ton, of removing carbon dioxide for each applicable fiscal year during the period covered by the report;

(3) the methods of monitoring, reporting, and verification required under subsection (d);

(4) an assessment, to the extent practicable, of how the amounts of carbon dioxide removed during the period covered by the report have affected environmental justice, the environment, and public health; and

(5) information on any labor impact or job creation resulting from carrying out the requirements of this section during the period covered by the report.

(g) Authorization of Appropriations.—There are authorized to be appropriated such sums as are necessary to carry out this section.