Subtitle B—Carbon Capture and Storage

SEC. 111. NATIONAL STRATEGY.

(a) In general.—Not later than 1 year after the date of enactment of this Act, the Administrator, in consultation with the Secretary of Energy, the Secretary of the Interior, and the heads of such other relevant Federal agencies as the President may designate, shall submit to Congress a report establishing a unified and comprehensive strategy to address the key legal, regulatory, and other barriers to the commercial-scale deployment of carbon capture and storage.

(b) Barriers.—The report under this section shall—

(1) identify the regulatory, legal, and other gaps and barriers that—

(A) could be addressed by a Federal agency using existing statutory authority;

(B) require Federal legislation, if any; or

(C) would be best addressed at the State, tribal, or regional level;

(2) identify regulatory implementation challenges, including challenges relating to approval of
State and tribal programs and delegation of authority for permitting; and

(3) recommend rulemakings, Federal legislation, or other actions that should be taken to further evaluate and address those barriers.

(c) FINDING.—Congress finds that it is in the public interest to achieve widespread, commercial-scale deployment of carbon capture and storage in the United States and throughout Asia before January 1, 2030.

SEC. 112. COMMERCIAL DEPLOYMENT OF CARBON CAPTURE AND STORAGE TECHNOLOGIES.

Part H of title VII of the Clean Air Act (as added by [section 321]) is amended by inserting after section 785 the following:

“SEC. 786. COMMERCIAL DEPLOYMENT OF CARBON CAPTURE AND STORAGE TECHNOLOGIES.

“(a) DEFINITIONS.—In this section:

“(1) CARBON Capture and Storage.—The term ‘carbon capture and storage’ shall—

“(A) have such term as Administrator shall determine by regulation; and

“(B) include—

“(i) geological sequestration; and

“(ii) alternative uses of captured carbon dioxide.
“(2) Qualifying Electric Generating Unit.—The term ‘qualifying electric generating unit’ means an electric utility unit that—

“(A) derives at least 50 percent of the annual fuel input of the unit from—

“(i) coal;

“(ii) petroleum coke; or

“(iii) any combination of those 2 fuels; and

“(B)(i) has a nameplate capacity of 200 megawatts or more; or

“(ii) in the case of retrofit applications, the carbon capture and storage technology is applied to the flue gas or fuel gas stream from at least 200 megawatts of the total nameplate generating capacity of the unit.

“(3) Qualifying Industrial Source.—The term ‘qualifying industrial source’ means a source that—

“(A) is not a qualifying electric generating unit; and

“(B) absent carbon capture and storage, would emit greater than 50,000 tons per year of carbon dioxide.

“(4) Treated Generating Capacity.—
“(A) IN GENERAL.—The term ‘treated generating capacity’ means the portion of the total generating capacity of an electric generating unit (or industrial source, measured by such method as the Administrator may designate to be equivalent to the calculation under subparagraph (B)) for which the flue gas or fuel gas is treated by the carbon capture and storage technology.

“(B) CALCULATION.—In determining the treated portion of flue gas or fuel gas of an electric generating unit under subparagraph (A), the Administrator shall multiply the name-plate capacity of the unit by the ratio that—

“(i) the mass of flue gas or fuel gas that is treated by the carbon capture and storage technology; bears to

“(ii) the total mass of the flue gas or fuel gas that is produced when the unit is operating at maximum capacity.

“(b) REGULATIONS.—Not later than 2 years after the date of enactment of this title, the Administrator shall promulgate regulations providing for the distribution of emission allowances allocated under section 782(f), pursuant to the requirements of this section, to support the
commercial deployment of carbon capture and storage
technologies in electric power generation and industrial
operations.

“(c) Eligibility Criteria and Method of Dis-
tribution.—

“(1) Eligibility.—For an owner or operator
of a project to be eligible to receive emission allow-
ances under this section, the project shall—

“(A) implement carbon capture and stor-
age technology—

“(i) at a qualifying electric generating
unit that, upon implementation of the car-
bon capture and storage technology, will
achieve an emission limitation that is at
least a 50-percent reduction in emissions
of the carbon dioxide produced by—

“(I) the unit, measured on an
annual basis, determined in accord-
ance with section 812(b)(2); or

“(II) in the case of retrofit appli-
cations described in subsection
(a)(2)(B)(ii), the treated portion of
flue gas from the unit, measured on
an annual basis, determined in ac-
cordance with section 812(b)(2); or
“(ii) at a qualifying industrial source that, upon implementation, will achieve an emission limitation that is at least a 50-percent reduction in emissions of the carbon dioxide produced by the emission point, measured on an annual basis, determined in accordance with section 812(b)(2);

“(B)(i) geologically sequester carbon dioxide at a site that meets all applicable permitting and certification requirements for geological storage; or

“(ii) pursuant to such requirements as the Administrator may prescribe by regulation, convert captured carbon dioxide to a stable form that will safely and permanently sequester the carbon dioxide;

“(C) meet all other applicable State, tribal, and Federal permitting requirements; and

“(D) be located in the United States.

“(2) METHOD OF DISTRIBUTION.—

“(A) PERIOD.—The Administrator shall distribute emission allowances allocated under section 782(f) to eligible projects for each of the
first 10 calendar years for which each eligible project is in commercial operation.

“(B) Formula for electric generating units.—

“(i) Phase I distribution.—For each project that is eligible under subsection (h), the quantity of emission allowances that the Administrator shall distribute for a calendar year to the owner or operator of the eligible project shall be equal to the quotient obtained by dividing—

“(I) the product obtained by multiplying—

“(aa) the number of metric tons of carbon dioxide emissions avoided through capture and storage of emissions by the project for a particular year, as determined pursuant to such methodology as the Administrator shall prescribe by regulation; and

“(bb) a bonus allowance value that is assigned to the
project under subsection (d)(2); by

“(II) the average fair market value of an emission allowance during the calendar year preceding the earlier of—

“(aa) the year during which the project captured and stored the carbon dioxide emissions; or

“(bb) the year for which the project receives an advanced distribution of emissions allowances under subsection (h)(3)(B).

“(ii) PHASE II DISTRIBUTION.—For each project that qualifies under subsection (e), the quantity of emission allowances that the Administrator shall distribute for a calendar year to the owner or operator of the eligible project shall be determined through—

“(I) reverse auction, as prescribed by regulation under subsection (e)(3); or

“(II) if the Administrator decides not to distribute allowances through a
reverse auction, an alternate distribution method established by regulation under subsection (e)(4).

“(C) Formula for industrial sources.—For each project that qualifies under subsection (g), the quantity of emission allowances that the Administrator shall distribute for a calendar year to the owner or operator of the eligible project shall be determined in accordance with subsection (g)(2).

“(D) Consistency.—The Administrator shall develop a method of distribution for each category of eligible projects under this paragraph in a manner that is consistent with the certification and distribution requirements under subsection (h).

“(d) Phase I Distribution to Electric Generating Units.—

“(1) applicability.—

“(A) In general.—Subject to subparagraph (B), this subsection shall apply to projects that are undertaken at qualifying electric generating units that the Administrator determines to be eligible to receive emission allowances under this section.
“(B) Capacity.—The total cumulative generating capacity of the projects described in subparagraph (A) shall be equal to approximately 20 gigawatts of the treated generating capacity.

“(2) Bonus allowance values.—

“(A) First tranche.—

“(i) In general.—The first tranche shall include the first 10 gigawatts of treated generating capacity undertaken at qualifying electric generating units that receive emission allowances under this section.

“(ii) Certain units.—For an eligible project achieving capture and storage of 90 percent or more of the carbon dioxide that otherwise would be emitted by the unit, the bonus allowance value shall be $96 per ton of carbon dioxide emitted by the unit.

“(iii) Bonus allowance value.—The Administrator shall establish, by regulation, a bonus allowance value for each rate of capture and storage achieved by an eligible project—
“(I) beginning at a minimum of $50 per ton for a 50-percent rate; and
“(II) varying in direct proportion with increasing rates of capture and storage up to $96 per ton for an 90-percent rate.

“(B) SECOND TRANCHE.—

“(i) IN GENERAL.—The second tranche shall include the second 10 gigawatts of treated generating capacity undertaken at qualifying electric generating units that receive emission allowances under this section.

“(ii) CERTAIN UNITS.—For an eligible project achieving the capture and storage of 90 percent or more of the carbon dioxide that otherwise would be emitted by the eligible project, the bonus allowance value shall be $85 per ton [of carbon dioxide emitted by the eligible project].

“(iii) BONUS ALLOWANCE VALUE.—The Administrator shall establish, by regulation, a bonus allowance value for each rate of capture and storage achieved by an eligible project—
“(I) beginning at a minimum of $50 per ton for a 50-percent rate; and
“(II) varying in direct proportion with increasing rates of capture and storage up to $85 per ton for a 90-percent rate.

“(C) INCREASE IN BONUS ALLOWANCE VALUE.—For an eligible project that commences commercial operation by not later than January 1, 2017, and that meets the eligibility criteria under subsection (c), the otherwise-applicable bonus allowance value under this paragraph shall be increased by $10, if the owner or operator of the eligible project submits to the Administrator by not later than January 1, 2012, a notification of the intent to implement carbon capture and storage technology at a qualifying electric generating unit in accordance with subsection (c).

“(D) REDUCTION.—
“(i) IN GENERAL.—For a carbon capture and storage project sequestering in a geological formation for purposes of enhanced hydrocarbon recovery, the Administrator, by regulation, shall reduce the ap-
applicable bonus allowance value under this paragraph to reflect the lower net cost of the project, as compared to storage into geological formations solely for purposes of storage.

“(ii) ASSESSMENT OF NET COST.—

For the purpose of this subparagraph, an assessment of net cost of a project shall account for the cost of the injection of carbon dioxide, or other method of enhanced hydrocarbon recovery, that would have otherwise been undertaken in the absence of the carbon capture and storage project under consideration.

“(E) ADJUSTMENTS.—The Administrator shall annually adjust for inflation the bonus allowance values established under this paragraph.

“(F) MEASUREMENT.—The Administrator shall measure the tranches and capture levels for assigning the bonus allowance values under this subsection based on the treated of generating capacity of the qualifying electric generating units that receive emission allowances under this subsection.
“(G) AVERAGE FAIR MARKET VALUE.—

“(i) IN GENERAL.—The Administrator and the Secretary of Energy may jointly determine that the average fair market value for emission allowances or the bonus allowances have been too low or too high to achieve efficient and cost-effective commercial deployment of carbon capture and storage technology in a given calendar year.

“(ii) ACTION ON DETERMINATION.—
On making a determination under clause (i), the Administrator may—

“(I) promulgate regulations to adjust the bonus allowance value under this paragraph; or

“(II) distribute an appropriate quantity of emission allowances allocated under section 782(f) from any future vintage year.

“(e) PHASE II DISTRIBUTION TO ELECTRIC GENERATING UNITS.—

“(1) APPLICATION.—This subsection shall apply only to the distribution of emission allowances for carbon capture and storage projects undertaken
at qualifying electric generating units and qualifying industrial sources after the treated generating capacity threshold identified under subsection (d)(1) is reached.

“(2) Regulations.—Not later than 2 years before the date on which the capacity threshold identified in subsection (d)(1) is projected to be reached, the Administrator shall promulgate regulations to govern the distribution of emission allowances to the owners or operators of eligible projects under this subsection.

“(3) Reverse auctions.—

“(A) In general.—Except as provided in paragraph (4), the regulations promulgated pursuant to paragraph (2) shall provide for the distribution of emission allowances to the owners or operators of eligible projects under this subsection through at least 2 reverse auctions, each of which shall be held not less frequently than once each calendar year.

“(B) Requirements.—

“(i) Projects at industrial sources.—The Administrator shall annually establish a reverse auction for projects
at industrial sources, which may not participate in other auctions.

“(ii) OTHER AUCTIONS.—The Administrator may establish a separate auction for each of not more than 5 different project categories, as defined based on—

“(I) coal type;

“(II) capture technology;

“(III) geological formation type;

“(IV) new unit versus retrofit application;

“(V) such other factors as the Administrator may prescribe; or

“(VI) any combination of the factors described in subclauses (I) through (V).

“(iii) EFFICIENT DISTRIBUTION.—The Administrator shall establish procedures for the auction of emission allowances under this subparagraph to ensure that the establishment of separate auctions for different project categories will not unduly impede the efficient and expeditious distribution of emission allowances to eligible projects under this subsection.
“(iv) MINIMUM RATES.—The Administrator may establish appropriate minimum rates of capture and storage for the treated generating capacity of a project in implementing this subparagraph.

“(C) AUCTION PROCESS.—At each reverse auction under this paragraph—

“(i) the Administrator shall solicit bids from eligible projects;

“(ii) owners or operators of eligible projects participating in the auction shall submit a bid, including the desired level of carbon dioxide storage incentive per ton and the estimated quantity of carbon dioxide that the project will permanently sequester during a 10-year period; and

“(iii) the Administrator shall select bids within each auction for the storage quantity submitted, beginning with the eligible project for which the bid is submitted for the lowest level of storage incentive on a per-ton basis and meeting such other requirements as the Administrator may specify, until the amounts available for the reverse auction are committed.
“(D) FORM OF DISTRIBUTION.—The Administrator shall distribute emission allowances to the owners or operators of eligible projects selected through a reverse auction under this paragraph pursuant to a formula equivalent to the formula contained in subsection (c)(2)(B), except that the bonus allowance value that is bid by the applicable entity shall be substituted for the bonus allowance values described in subsection (c)(2).

“(4) ALTERNATIVE DISTRIBUTION METHOD.—

“(A) IN GENERAL.—If the Administrator determines that a reverse auction will not result in efficient and cost-effective commercial deployment of carbon capture and storage technologies, the Administrator, pursuant to regulations under paragraph (2) or (5), shall prescribe a schedule for the provision of bonus allowances to the owners or operators of eligible projects under this subsection, in accordance with the requirements of this paragraph.

“(B) MULTIPLE TRANCHES.—The Administrator shall divide emission allowances available for distribution to the owners or operators
of eligible projects into a series of tranches, each of which—

“(i) shall support the deployment of a specified quantity of cumulative electric generating capacity using carbon capture and storage technology; and

“(ii) shall not be greater than 10 gigawatts of treated generating capacity.

“(C) METHOD OF DISTRIBUTION.—The Administrator shall distribute emission allowances within each tranche, on a first-come, first-served basis—

“(i) based on the date of full-scale operation of capture and storage technology; and

“(ii) pursuant to a formula that—

“(I) is similar to the formula contained in subsection (c)(2)(C), except that the Administrator may prescribe bonus allowance values different than those described in subsection (c)(2) based on the criteria established under subparagraph (E); and
“(II) establishes the number of emission allowances to be distributed per ton of carbon dioxide sequestered by the project.

“(D) REQUIREMENTS.—For each tranche established pursuant to subparagraph (B), the Administrator shall establish a schedule for distributing emission allowances that—

“(i) is based on a sliding scale that provides higher bonus allowance values for projects achieving higher rates of capture and storage for the treated generation capacity at the unit;

“(ii) for each capture and storage rate, establishes a bonus allowance value that is lower than that established for the applicable rate for the previous tranche (or, in the case of the first tranche, than that established for the applicable rate under subsection (d)(2)); and

“(iii) may establish different bonus allowance levels for not more than 5 different project categories, as defined based on—

“(I) coal type;
“(II) capture and transportation technology;
“(III) geological formation type;
“(IV) new unit versus retrofit application;
“(V) such other factors as the Administrator may prescribe; or
“(VI) any combination of the factors described in subclauses (I) through (V).

“(E) CRITERIA FOR ESTABLISHING BONUS ALLOWANCE VALUES.—In establishing bonus allowance values under this paragraph, the Administrator shall seek to cover not more than the reasonable incremental capital and operating costs of a project that are attributable to implementation of carbon capture, transportation, and storage technologies, taking into account—
“(i) the reduced cost of compliance with section 722;
“(ii) the reduced cost associated with sequestering in a geological formation for purposes of enhanced hydrocarbon recov-
ery, as compared to storage into geological formations solely for purposes of storage;

“(iii) the relevant factors defining the project category; and

“(iv) such other factors as the Administrator determines to be appropriate.

“(5) Revision of regulations.—The Administrator shall review and, as appropriate, revise the applicable regulations under this subsection not less frequently than once every 8 years.

“(f) Limits for certain electric generating units.—

“(1) Definitions.—In this subsection, the terms ‘covered EGU’ and ‘initially permitted’ have the meanings given those terms in section 812.

“(2) Covered EGUs initially permitted from 2009 through 2014.—For a covered EGU that is initially permitted during the period beginning on January 1, 2009, and ending on December 31, 2014, the Administrator shall reduce the quantity of emission allowances that the owner or operator of the covered EGU would otherwise be eligible to receive under this section as follows:

“(A) In the case of a covered EGU commencing operation on or before January 1,
2019, if the date in clause (ii)(I) is earlier than the date in clause (ii)(II), by the product obtained by multiplying—

“(i) 20 percent; and

“(ii) the number of years, if any, that have elapsed between—

“(I) the earlier of—

“(aa) January 1, 2020; and

“(bb) the date that is 5 years after the commencement of operation of the covered EGU;

and

“(II) the first year that the covered EGU achieves (and thereafter maintains) an emission limitation that is at least a 50-percent reduction in emissions of carbon dioxide produced by the unit, measured on an annual basis, as determined in accordance with section 812(b)(2).

“(B) In the case of a covered EGU commencing operation after January 1, 2019, by the product obtained by multiplying—

“(i) 20 percent; and
“(ii) the number of years, if any, that have elapsed between—

“(I) the commencement of operation of the covered EGU; and

“(II) the first year that the covered EGU achieves (and thereafter maintains) an emission limitation that is at least a 50-percent reduction in emissions of carbon dioxide produced by the unit, measured on an annual basis, as determined in accordance with section 812(b)(2).

“(3) COVERED EGUS INITIALLY PERMITTED FROM 2015 THROUGH 2019.—The owner or operator of a covered EGU that is initially permitted during the period beginning on January 1, 2015, and ending on December 31, 2019, shall be ineligible to receive emission allowances under this section if the covered EGU, on commencement of operations (and thereafter), does not achieve and maintain an emission limitation that is at least a 50-percent reduction in emissions of carbon dioxide produced by the covered EGU, measured on an annual basis, as determined in accordance with section 812(b)(2).

“(g) INDUSTRIAL SOURCES.—
“(1) EMISSION ALLOWANCES.—The Administrator—

“(A) may distribute not more than 15 percent of the emission allowances allocated under section 782(f) for any vintage year to the owners or operators of eligible industrial sources to support the commercial-scale deployment of carbon capture and storage technologies at those sources; and

“(B) notwithstanding any other provision of law—

“(i) may distribute to eligible industrial sources not more than 15 percent of the emission allowances allocated under section 782(f) for any vintage year in the second tranche of phase I; but

“(ii) may not distribute those allowances for any vintage year in the first tranche of phase I.

“(2) DISTRIBUTION.—

“(A) IN GENERAL.—The Administrator shall prescribe, by regulation, requirements for the distribution of emission allowances to the owners or operators of industrial sources under this subsection, based on a bonus allowance for-
mula that awards emission allowances to qualifying projects on the basis of tons of carbon dioxide captured and permanently sequestered.

“(B) Method.—The Administrator may provide for the distribution of emission allowances pursuant to—

“(i) a reverse auction method similar to the method described in subsection (e)(3), including the use of separate auctions for different project categories; or

“(ii) an incentive schedule similar to the schedule described in subsection (e)(4), which shall ensure that incentives are established so as to satisfy the requirement described in subsection (e)(4)(E).

“(3) Revision of regulations.—The Administrator shall review and, as appropriate, revise the regulations under this subsection not less frequently than once every 8 years.

“(h) Certification and Distribution.—

“(1) Certification.—

“(A) Request.—

“(i) Phase I; Alternative distribution method.—In the case of a qualifying project that is eligible to receive
allowances under phase I or under subsection (e)(4), at any time prior to placing a carbon capture and storage project into commercial operation, the owner or operator of the planned project may request from the Administrator a certification that the project is eligible to receive emission allowances under this section.

“(ii) REVERSE AUCTIONS.—In the case of a qualifying project that wins a reverse auction under subsection (e) or (g), within a reasonably brief period following completion of the auction (as specified by the Administrator), the owner or operator of the qualifying project shall request from the Administrator a certification that the project is eligible to receive emission allowances under this section.

“(iii) ELIGIBLE PROJECTS.—Eligible projects in phase I and phase II may receive certification under this paragraph.

“(iv) ISSUANCE.—The Administrator shall issue a certification described in this subparagraph if the owner or operator
demonstrates a commitment to construct and operate a project that satisfies—

“(I) the eligibility criteria of subsection (c); and

“(II) the requirements of this paragraph.

“(B) DOCUMENTATION.—The Administrator shall prescribe, by regulation, the documentation necessary for making a determination of project eligibility for the certification under subparagraph (A), including—

“(i) technical information regarding the capture and storage technology, coal type, geological formation type (if applicable), and other relevant design features that are planned for the project;

“(ii) the annual reductions in carbon dioxide emissions that the capture and storage technology is projected to achieve during each of the first 10 years that the project achieves commercial operation; and

“(iii) a demonstration that the owner or operator is committed to constructing and operating the planned project through
the completion of 1 of the actions specified in subparagraph (C)(iii).

“(C) COMMITMENT.—

“(i) IN GENERAL.—Subject to clause (ii), the completion of any 1 of the qualifying actions specified under clause (iii) shall constitute a commitment to construct and operate a planned carbon capture and storage project.

“(ii) CONDITION.—In the case of a qualifying action specified in subclause (I) or (II) of clause (iii), the completion of such an action may be subject to a condition that the Administrator will issue a certification under this paragraph for the distribution of emission allowances to the project.

“(iii) QUALIFYING ACTIONS.—Qualifying actions under this subparagraph shall include—

“(I) the execution of—

“(aa) a commitment by lenders or other appropriate entities to finance the project, which may be subject to customary
closing conditions that are associated with the execution of the commitment; and

“(bb) a commitment by the owner or operator of the project to execute a surety bond in sufficient amounts by not later than 2 years after the date on which the Administrator issues the certification for the project; or

“(II) an authorization by a State regulatory authority to allow recovery, from the retail customers of such electric utility, of the costs of the project by a State-regulated electric utility that plans to construct the project.

“(D) FAILURE TO REQUEST CERTIFICATION.—

“(i) IN GENERAL.—An owner or operator may elect not to request a certification on the eligibility of a planned project under subparagraph (A) prior to the commercial operation of the project.

“(ii) DETERMINATION BY ADMINISTRATOR.—If an owner or operator elects
not to request a certification under clause (i), the Administrator shall make a determination regarding whether the project satisfies the eligibility requirements of subsection (c) at the time that the Administrator makes a determination regarding the annual distribution of emission allowances under paragraph (3)(A).

“(2) Reservation of emission allowances.—

“(A) Amount.—

“(i) In general.—For each project that receives a certification of eligibility under paragraph (1), the Administrator shall reserve on a first-come, first-served basis a portion of the emission allowances that are allocated for the deployment of carbon capture and storage technology under section 782(f).

“(ii) Determination.—The reservation of emission allowances for a particular eligible project under this paragraph shall be equal to the number of emission allowances that the project is entitled to receive under the applicable distribution method.
under this section upon commercial operation of the carbon capture and storage technology, as determined by the Administrator based on—

“(I) the applicable bonus allowance value; and

“(II) an estimation of—

“(aa) the tons of carbon dioxide that the project will capture and sequester during the first 10 years of commercial operation; and

“(bb) the average fair market value of emission allowances during each of the relevant 10 calendar years, as determined by the Administrator.

“(B) TERMINATION OF RESERVATION.—

“(i) IN GENERAL.—A reservation of emission allowances for a particular project under subparagraph (A) shall terminate if the owner or operator fails to achieve reasonable milestones for commencing construction or commercial operation of the project.
“(ii) Reduced quantity of carbon dioxide captured and stored.—If the quantity of carbon dioxide captured and stored by a project on average over 3 consecutive vintage years is less than the quantity estimated for those vintage years under subparagraph (A), the reservation of emission allowances for the project under subparagraph (A) shall be reduced in future years by the difference between—

“(I) the quantity of carbon dioxide captured and stored on average over the applicable 3 consecutive years; and

“(II) the quantity estimated under subparagraph (A) for the applicable years.

“(iii) Availability.—The Administrator shall immediately make available to other eligible projects emission allowances for which the Administrator has terminated an emission allowance reservation for a particular project under this subparagraph.

“(3) Distribution process.—
“(A) ANNUAL DISTRIBUTION.—

“(i) IN GENERAL.—The Administrator shall distribute the emission allowances to eligible projects on an annual basis.

“(ii) BASIS.—The annual distribution of emission allowances shall be based on the total tons of carbon dioxide that the project annually captures and sequesters during each of the first 10 years of commercial operation, in accordance with subsection (c)(2).

“(iii) TOTAL DISTRIBUTION AMOUNT.—The total amount of emission allowances distributed to an eligible project for each of the first 10 years of commercial operation may be greater than, or less than, the quantity of emissions allowances that the Administrator has reserved for the eligible project under paragraph (2).

“(iv) REPORTS.—

“(I) IN GENERAL.—Except as provided in subparagraph (B), the Administrator shall make each annual distribution of emission allowances by not later than 90 days after the date
on which the owner or operator of a project submits to the Administrator a report regarding the carbon dioxide emissions captured and sequestered for a particular year by the project.

“(II) REQUIREMENT.—A report under subclause (I) shall be verified in accordance with regulations to be promulgated by the Administrator.

“(B) ADVANCED DISTRIBUTION.—

“(i) IN GENERAL.—The Administrator may provide an advanced distribution of emission allowances to the projects—

“(I) that receive emission allowances under the phase I distributions authorized by subsection (d); and

“(II) for which the Administrator has issued a certification of eligibility under paragraph (1).

“(ii) REQUIREMENTS.—An advanced distribution of emission allowances for a particular project shall be provided—

“(I) prior to the operational phase of the project, at an appropriate milestone that best ensures the
expeditious deployment of the carbon
capture and storage technology;

“(II) in a quantity that equals a
percentage, as specified in subpara-
graph (C), of the total number of
emission allowances that the Adminis-
trator has reserved for that project
during the 10-year period of commer-
cial operation; and

“(III) using allowances that are
drawn—

“(aa) from the current vin-
tage year; or

“(bb) if the allowances are
exhausted from the current vin-
tage year, in order from succes-
sive vintage years, beginning with
the most proximate future vin-
tage year.

“(C) PERCENTAGES.—The Administrator
shall apply the following percentages for deter-
mining the advanced distribution of emission al-
lowances for a project under subparagraph (B):
“(i) 70 percent of the emission allowance reservation for the first tranche under subsection (d)(2)(A).

“(ii) 50 percent of the emission allowance reservation for the second tranche under subsection (d)(2)(B).

“(D) RECONCILIATION.—

“(i) IN GENERAL.—In the case of a project that receives an advanced distribution of emission allowances under this paragraph, the Administrator shall distribute annually the remainder of emission allowances reserved under subsection (g)(6) once the project begins commercial operation.

“(ii) DISTRIBUTION.—The distribution of emission allowances under clause (i) shall be based on an annual reconciliation that accounts for, on an annual basis, the difference between—

“(I) the actual tons of carbon dioxide emissions captured and sequestered by each project; and

“(II) the number of emission allowances distributed to each project.
“(iii) Repayment.—

“(I) In general.—At the end of the tenth year for which a project receives allowances under this section, if the project has received a cumulative number of allowances that exceeds the cumulative tonnage of carbon dioxide that was captured and stored by the project, the project developer shall repay to the Administrator an amount equal to that difference, as calculated under subclause (II).

“(II) Calculation.—At the election of the owner or operator of the project and in accordance with requirements established by the Administrator, the amount repaid under subclause (I) shall be equal to—

“(aa) the quantity of allowances initially distributed to the project developer for the portion of treated generating capacity that is equal to the portion of tons that the project failed to capture and store; or
“(bb) a cash payment in an amount equal to the product obtained by multiplying—

“(AA) the relevant bonus allowance value under subsection (d); by

“(BB) the difference between the cumulative number of tons of carbon dioxide captured and sequestered by the project during the 10-year period that the project received allowances under this section and the cumulative number of allowances distributed to the project in advance under this paragraph.

“(III) USE OF REPaid AMOUNTS.—The Administrator shall use amounts received as repayments under this clause to support the deployment of carbon capture and storage.

“(i) LIMITATIONS.—
“(1) IN GENERAL.—Emission allowances shall be distributed under this section only for tons of carbon dioxide emissions that are captured and sequestered in accordance with this section.

“(2) PERIOD.—A qualifying project may receive annual emission allowances under this section only for the first 10 years of operation.

“(3) CAPACITY.—

“(A) IN GENERAL.—Approximately 72 gigawatts of total cumulative treated generating capacity may receive emission allowances under this section.

“(B) ALLOWANCE SURPLUS.—On reaching the cumulative capacity described in subparagraph (A), any emission allowances that are allocated for carbon capture and storage deployment under section 782(f) and are not yet obligated under this section shall be treated as emission allowances not designated for distribution for purposes of section 782(r).

“(j) EXHAUSTION OF ACCOUNT AND ANNUAL ROLL-OVER OF SURPLUS EMISSION ALLOWANCES.—

“(1) IN GENERAL.—In distributing emission allowances under this section, the Administrator shall ensure that eligible projects receive distributions of
emission allowances for the first 10 years of commercial operation.

“(2) **Different Vintage Years.**—

“(A) **Determination.**—If the Administrator determines that the emission allowances allocated under section 782(f) with a vintage year that matches the year of distribution will be exhausted once the estimated full 10-year distributions will be provided to current eligible participants, the Administrator shall provide to new eligible projects emission allowances from vintage years after the year of the distribution.

“(B) **Diversity Factors.**—If the Administrator provides allowances to new eligible projects under subparagraph (A), the Administrator shall promulgate regulations to prioritize new eligible projects that are distinguished from prior recipients of allowances by 1 or more of the following diversity factors (without regard to order):

“(i) Location in a coal-producing region that provides a majority of coal to the project.

“(ii) Coal type, including waste coal.
“(iii) Capture and transportation technologies.

“(iv) Geological formations.

“(v) New units and retrofit applications.

“(k) Allocation of allowances for deployment of carbon capture and storage technology.—

“(1) Annual allocation.—The Administrator shall allocate emission allowances for the deployment of carbon capture and storage technology in accordance with this section in the following quantities:

“(A) For [each of] vintage years 2014 through 2017, 1.75 percent of the emission allowances established for each year under section 721(a).

“(B) For [each of] vintage years 2018 and 2019, 4.75 percent of the emission allowances established for each year under section 721(a).

“(C) For [each of] vintage years 2020 through 2050, 5 percent of the emission allowances established for each year under section 721(a).
“(2) Carryover.—If the Administrator has not distributed all of the allowances allocated pursuant to this subsection for a given vintage year by the end of that year, the Administrator shall—

“(A) auction those emission allowances in accordance with section 791 by not later than March 31 of the year following that vintage year; and

“(B) increase the allocation under this subsection for the vintage year after the vintage year for which emission allowances were undisbursed by the quantity of undisbursed emission allowances, but only to the extent that allowances for that later year are to be auctioned.

“(l) Davis-Bacon Compliance.—

“(1) In general.—All laborers and mechanics employed on projects funded directly by or assisted in whole or in part by this section through the use of emission allowances shall be paid wages at rates not less than those prevailing on projects of a character similar in the locality as determined by the Secretary of Labor in accordance with subchapter IV of chapter 31 of title 40, United States Code.
“(2) AUTHORITY.—With respect to the labor standards specified in this subsection, the Secretary of Labor shall have the authority and functions set forth in Reorganization Plan Numbered 14 of 1950 (64 Stat. 1267; 5 U.S.C. App.) and section 3145 of title 40, United States Code.”.

SEC. 113. PERFORMANCE STANDARDS FOR COAL-FUELED POWER PLANTS.

Title VIII of the Clean Air Act (as added by section 331) is amended by inserting after section 811 the following:

“SEC. 812. PERFORMANCE STANDARDS FOR NEW COAL-FIRED POWER PLANTS.

“(a) DEFINITIONS.—In this section:

“(1) COVERED EGU.—The term ‘covered EGU’ means a utility unit that is—

“(A) required to have a permit under section 503(a); and

“(B) authorized under State or Federal law to derive at least 30 percent of the annual heat input of the unit from—

“(i) coal;

“(ii) petroleum coke; or

“(iii) any combination of those fuels.

“(2) INITIALLY PERMITTED.—
“(A) IN GENERAL.—The term ‘initially permitted’, with respect to a covered EGU, means that—

“(i) the owner or operator of the covered EGU has received a preconstruction approval or permit under this Act as a new (not modified) source; but

“(ii) administrative review or appeal of the approval or permit has not been exhausted.

“(B) CALCULATION.—A subsequent modification of any approval or permit described in subparagraph (A), ongoing administrative or court review, appeals, challenges, or the existence or tolling of any time to pursue additional review, appeals, or challenges shall not affect the date on which a covered EGU is considered to be initially permitted for purposes of this paragraph.

“(b) STANDARDS.—

“(1) IN GENERAL.—A covered EGU that is initially permitted on or after January 1, 2020, shall—

“(A) achieve an emission limitation that represents a 65-percent reduction in emissions
of the carbon dioxide produced by the covered EGU, as measured on an annual basis; or

“(B) meet such more-stringent standard as the Administrator may establish pursuant to subsection (c).

“(2) CERTAIN COVERED EGUS.—

“(A) IN GENERAL.—A covered EGU that is initially permitted during the period beginning on January 1, 2009, and ending on December 31, 2019, shall achieve, by the applicable compliance date established under this paragraph, an emission limitation that represents a 50-percent reduction in emissions of the carbon dioxide produced by the covered EGU, as measured on an annual basis.

“(B) DATE OF REQUIREMENT.—Compliance with the requirement described in subparagraph (A) shall be required by the earlier of—

“(i) the date that is 4 years after the date on which the Administrator has published pursuant to subsection (d) a report that there are in commercial operation in the United States electric generating units or other stationary sources equipped with
carbon capture and storage technology that, in the aggregate—

“(I) have a total of at least 10 gigawatts of treated generating capacity (as defined in section 112), of which—

“(aa) at least 8 gigawatts must be electric generating units;

and

“(bb) up to 2 gigawatts may be industrial applications, for which capture and storage of 3,000,000 tons of carbon dioxide per year on an aggregate annualized basis shall be considered equivalent to 1 gigawatt;

“(II) include at least 2 electric generating units, each of which shall—

“(aa) have a nameplate generating capacity of 250 megawatts or greater; and

“(bb) capture, inject, and sequester carbon dioxide into ge-
logical formations other than oil and gas fields; and

“(III) are capturing and sequestering in the aggregate at least 12,000,000 tons of carbon dioxide per year, calculated on an aggregate annualized basis; and

“(ii) January 1, 2025.

“(3) EXTENSION.—

“(A) IN GENERAL.—If the deadline for compliance with paragraph (2) is the date specified in paragraph (2)(B), the Administrator may extend the deadline for compliance by a covered EGU by not more than 18 months if the Administrator makes a determination, based on a showing by the owner or operator of the unit, that it will be technically infeasible for the covered EGU to meet the standard by the deadline.

“(B) REQUEST.—The owner or operator shall submit to the Administrator a request for an extension under subparagraph (A) by not later than January 1, 2022.

“(C) PUBLIC COMMENT.—The Administrator shall provide for public notice and com-
ment on each extension request submitted under subparagraph (B).

“(c) Review and Revision of Standards.—Not later than January 1, 2025, and not less frequently than once every 5 years thereafter, the Administrator shall—

“(1) review the standards for new covered EGUs under this section; and

“(2) by rule, reduce the maximum carbon dioxide emission rate for new covered EGUs to a rate that reflects the degree of emission limitation achievable through the application of the best system of emission reduction that (taking into account the cost of achieving the reduction and any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated.

“(d) Reports.—Not later than the date 18 months after the date of enactment of this title and semiannually thereafter, the Administrator shall publish a report on the nameplate capacity of units (determined pursuant to subsection (b)(2)(A)) in commercial operation in the United States equipped with carbon capture and storage technology, including the information described in subsection (b)(2)(A) (including the cumulative generating capacity to which carbon capture and storage retrofit projects meeting
the criteria described in clauses (ii) and (iv)(II) of section 786(b)(1)(A) has been applied and the quantities of carbon dioxide captured and sequestered by those projects).

“(e) REGULATIONS.—Not later than 2 years after the date of enactment of this title, the Administrator shall promulgate regulations to carry out the requirements of this section.”.

SEC. 114. REGULATIONS FOR GEOLOGICAL STORAGE SITES.

(a) COORDINATED CERTIFICATION AND PERMITTING PROCESS.—Title VIII of the Clean Air Act (as added by section 331) is amended by inserting after section 812 (as added by section 113) the following:

“SEC. 813. GEOLOGICAL STORAGE SITES.

“(a) COORDINATED PROCESS.—

“(1) IN GENERAL.—The Administrator shall establish a coordinated approach to certifying and permitting geological storage, taking into consideration all relevant statutory authorities.

“(2) REQUIREMENTS.—In establishing such approach, the Administrator shall—

“(A) take into account, and reduce redundancy with, the requirements of section 1421 of the Safe Drinking Water Act (42 U.S.C. 300h), including the rulemaking for geological storage wells described in the proposed rule entitled...
‘Federal Requirements Under the Underground Injection Control (UIC) Program for Carbon Dioxide (CO2) Geologic Sequestration (GS) Wells’ (73 Fed. Reg. 43492 (July 25, 2008)); and

“(B) to the maximum extent practicable, reduce the burden on certified entities and implementing authorities.

“(b) REGULATIONS.—Not later than 2 years after the date of enactment of this title, the Administrator shall promulgate regulations to protect human health and the environment by minimizing the risk of escape to the atmosphere of carbon dioxide injected for purposes of geological storage.

“(c) REQUIREMENTS.—The regulations under subsection (b) shall include—

“(1) a process to obtain certification for geological storage under this section; and

“(2) requirements for—

“(A) monitoring, recordkeeping, and reporting for emissions associated with injection into, and escape from, geological storage sites, taking into account any requirements or protocols developed under section 713;
“(B) public participation in the certification process that maximizes transparency;

“(C) the sharing of data among States, Indian tribes, and the Environmental Protection Agency; and

“(D) other elements or safeguards necessary to achieve the purpose described in subsection (b).

“(d) REPORT.—

“(1) IN GENERAL.—Not later than 2 years after the date of promulgation of regulations pursuant to subsection (b), and not less frequently than once every 3 years thereafter, the Administrator shall submit to the Committee on Energy and Commerce of the House of Representatives and the Committee on Environment and Public Works of the Senate a report describing geological storage in the United States, and, to the extent relevant, other countries in North America.

“(2) INCLUSIONS.—Each report under paragraph (1) shall include—

“(A) data regarding injection, emissions to the atmosphere, if any, and performance of active and closed geological storage sites, includ-
ing those at which enhanced hydrocarbon recovery operations occur;

“(B) an evaluation of the performance of relevant Federal environmental regulations and programs in ensuring environmentally protective geological storage practices;

“(C) recommendations on how those programs and regulations should be improved or made more effective; and

“(D) other relevant information.”.

(b) SAFE DRINKING WATER ACT STANDARDS.—Section 1421 of the Safe Drinking Water Act (42 U.S.C. 300h) is amended by adding at the end the following:

“(e) CARBON DIOXIDE GEOLOGICAL STORAGE WELLS.—

“(1) IN GENERAL.—Not later than 1 year after the date of enactment of this subsection, the Administrator shall promulgate regulations under subsection (a) for carbon dioxide geological storage wells.

“(2) FINANCIAL RESPONSIBILITY.—

“(A) IN GENERAL.—The regulations under paragraph (1) shall include requirements for maintaining evidence of financial responsibility, including financial responsibility for emergency
and remedial response, well plugging, site closure, and post-injection site care.

“(B) REGULATIONS.—Financial responsibility may be established for carbon dioxide geological wells in accordance with regulations promulgated by the Administrator by any 1, or any combination, of the following:

“(i) Insurance.
“(ii) Guarantee.
“(iii) Trust.
“(iv) Standby trust.
“(v) Surety bond.
“(vi) Letter of credit.
“(vii) Qualification as a self-insurer.
“(viii) Any other method satisfactory to the Administrator.”.

SEC. 115. STUDIES AND REPORTS.

(a) Study of Legal Framework for Geological Storage Sites.—

(1) Establishment of Task Force.—

(A) In General.—As soon as practicable, but not later than 180 days after the date of enactment of this Act, the Administrator shall establish a task force, to be composed of an equal number of—
(i) subject matter experts;

(ii) nongovernmental organizations with expertise regarding environmental policy;

(iii) academic experts with expertise in environmental law;

(iv) State and tribal officials with environmental expertise;

(v) representatives of State and tribal attorneys general;

(vi) representatives of the Environmental Protection Agency, the Department of the Interior, the Department of Energy, the Department of Transportation, and other relevant Federal agencies; and

(vii) members of the private sector.

(B) STUDY.—The task force established under subparagraph (A) shall conduct a study of—

(i) existing Federal environmental statutes, State environmental statutes, and State common law that apply to geological storage sites for carbon dioxide, including the ability of those laws to serve as risk management tools;
(ii) the existing statutory framework, including Federal and State laws, that apply to harm and damage to the environment or public health at closed sites at which carbon dioxide injection has been used for enhanced hydrocarbon recovery;

(iii) the statutory framework, environmental health and safety considerations, implementation issues, and financial implications of potential models for Federal, State, or private sector assumption of liabilities and financial responsibilities with respect to closed geological storage sites;

(iv) private sector mechanisms, including insurance and bonding, that may be available to manage environmental, health, and safety risks from closed geological storage sites; and

(v) the subsurface mineral rights, water rights, and property rights issues associated with geological storage of carbon dioxide, including issues specific to Federal land.

(2) REPORT.—Not later than 18 months after the date of enactment of this Act, the task force es-
established under paragraph (1)(A) shall submit to Congress a report describing the results of the study conducted under that paragraph, including any consensus recommendations of the task force.

(b) **Environmental Statutes.**—

(1) **Study.**—The Administrator shall conduct a study of the means by which, and under what circumstances, the environmental statutes for which the Environmental Protection Agency has responsibility would apply to carbon dioxide injection and geological storage activities.

(2) **Report.**—Not later than 1 year after the date of enactment of this Act, the Administrator shall submit to Congress a report describing the results of the study conducted under paragraph (1).

**SEC. 116. Carbon Capture and Sequestration Demonstration and Early Deployment Program.**

To be supplied—Program providing at least $1 billion annually, for 10 years, to achieve early deployment of carbon capture and storage technology

**SEC. 117. Liability.**

[To be supplied.]
SEC. 118. PERFORMANCE STANDARD FOR STATIONARY SOURCES.

Notwithstanding any other provision of law, methane collection and combustion projects at landfills and coal mines—

[(1) shall be not be listed by the Administrator in an inventory of categories of stationary sources required by section 811; but]

[(2) shall be listed as eligible project types for the purpose of the issuance of offset credits. [NOTE from SLC: This section really should become an amendment to section 811 of the Clean Air Act, as added by the overall climate bill, if that addition is contained in the Senate bill and when that text becomes available.]]