



## **WRI Summary of the Carbon Dioxide Capture and Storage and Related Provisions of the American Power Act (Kerry-Lieberman Discussion Draft)**

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This summary provides a concise overview of the carbon dioxide capture and storage (CCS) and related provisions in the American Power Act, released as a discussion draft by Senators John Kerry and Joseph Lieberman on May 12, 2010 (hereinafter APA).<sup>2</sup> This summary generally follows the structure of the relevant provisions. For more detail, please refer to the legislative language as referenced by section and page number.

For a summary of the full discussion draft, see the WRI Summary of The American Power Act (Kerry-Lieberman Discussion Draft).<sup>3</sup>

### **DOMESTIC CLEAN ENERGY DEVELOPMENT**

#### **SUBTITLE C—Coal (Title I, pg. 76-187)**

##### **Part I—National Strategy for Carbon Capture and Sequestration**

- **Federal Strategy on Barriers to CCS.** Directs federal agencies to establish and report to Congress a unified, comprehensive strategy to address key legal, regulatory and other barriers to commercial-scale CCS deployment. Factors include barriers, gaps, and implementation challenges, who would best address them, and recommended actions. Authorizes relying on a pre-existing interagency effort (Sec. 1401, pg. 77).
- **Legal Framework for Geological Storage Sites.** Establishes an interagency, multi-stakeholder task force to study and report to Congress on existing laws and statutory frameworks that apply to carbon dioxide injection and storage (geologically or for enhanced hydrocarbon recovery (EHR)); models for assuming liability and financial responsibility and for managing risks from closed geological storage sites; private sector mechanisms, including insurance and bonding; and relevant mineral, water and property rights issues (Sec. 1402, pg. 78-9).
- **Existing Environmental Authority.** Directs the Environmental Protection Agency (EPA) to study and report on environmental laws for which they are responsible that would apply to CO<sub>2</sub> injection and geological storage (Sec. 1402, pg. 79-80).

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<sup>2</sup> This summary applies only to the APA as released on May 12, 2010 and not subsequent iterations. The draft used is available here: <http://kerry.senate.gov/work/issues/issue/?id=7F6B4D4A-DA4A-409E-A5E7-15567CC9E95C>.

<sup>3</sup> WRI's summary of the entire discussion draft is available here: <http://www.wri.org/stories/2010/06/wri-summary-american-power-act-kerry-lieberman>.

## Part II—Carbon Capture and Sequestration Deployment

### Special Funding Program for CCS Development and Deployment

- **Special Funding Program for CCS Development and Deployment.** Contingent on the approval of at least 30 State regulatory authorities, directs the Department of Energy (DOE) to establish a program to support development and deployment of CCS and carbon conversion technologies (Sec. 1412, pg. 83-5). The program shall:
  - Support mostly large-scale (>300 MW) projects to accelerate the commercial availability of CCS technologies and methods (Sec. 1414, pg. 96-7, 100).
  - Ensure that funded projects support a variety of commercial-scale demonstration of technologies that, among other requirements, could result in a capture of emissions from the generation of at least 10 gigawatts (Sec. 1414, pg. 97-8).
  - Have the option to organize funding into tranches with decreasing payments in successive tranches, utilizing sliding scales to encourage higher capture rates and accounting for various costs (Sec. 1414, pg. 98-100).
  - Be subject to midcourse review by the Comptroller General (Sec. 1414, pg. 110).
- **Carbon Capture and Sequestration Program Partnership Council to Advise the Special Funding Program.** Directs the DOE to establish a multi-stakeholder council to advise, assist, consult with, review, and provide recommendations on the special funding program’s activities, funding applications, intellectual property policies, and annual plans. A majority of the council’s voting members shall be representatives of fossil fuel-based electric utilities subject to assessment under section 1416<sup>4</sup> (Sec. 1413, pg. 85-92).
- **Technical Advisory Committee to Review Funding Transactions of the Special Funding Program.** The committee shall provide independent assessments, technical evaluations, and approval recommendations of funding applications to the program and also provide an assessment of and recommendations on the general program’s technical matters. The committee’s members would be from academia, national labs, and other research institutions (Sec. 1413, pg. 93-5).
- **Assessment on Fossil Fuel-based Electricity to Fund the Special Funding Program.** Charges an assessment on electric utilities, reflecting the differing carbon intensity of fossil-fuel based electricity, and adjusted to generate between 2 billion and 2.1 trillion dollars per year (Sec. 1415, pg. 100-102).
  - To inform the assessments, directs the DOE, EPA, and the Energy Information Administration (EIA) to develop a methodology to determine the quantities and types of fossil fuel-based electricity delivered by utilities; and directs the DOE use the methodology to annually determine the data upon which the assessments are based. Utilities may appeal the final determinations (Sec. 1417, pg. 106-9).
  - The DOE may bring legal action to compel compliance with the assessment (Sec. 1418, pg. 109).
  - Electric utilities subjected to rate regulation may recover compliance costs if there are enough unused funds (Sec. 1420, pg. 110-1).

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<sup>4</sup> We believe the section number might be a typo. Currently, the ‘assessment under section 1416’ refers to the assessment required by section 1415 as it specifically applies to the Electric Reliability Council of Texas (ERCOT). If this is not a typo, then a majority of the council’s voting members would be representatives of fossil fuel-based electric utilities within ERCOT.

- **Five Years of Information Protection** to demonstration-related information that would be a trade secret or privileged or confidential and was obtained from and produced by a non-federal participant (Sec. 1415, pg. 102-3).

## Part III—Commercial Deployment of Carbon Capture and Sequestration Technologies

### Incentives for Commercial Deployment of CCS

- **Distributes Emission Allowances to Support Commercial Deployment of CCS Technologies on the Equivalent of 72 GW of Cumulative Capacity.** EPA must promulgate regulations distributing emissions allowances allocated under amendments to the Clean Air Act (CAA) Sec. 781(c)(1) to support commercial deployment of CCS for electricity generation and industrial operations (Part G of Title VII) (Sec. 1431 [new sec. 794 of the CAA], pg. 111-4). The emission allowances shall be distributed to projects annually during their first 10 years of commercial operation (Sec. 1431 [new sec. 794 of the CAA], pg. 116).
  - **Eligible electricity generating units (EGUs)** must be fueled by coal or petroleum coke at least 50% annually and apply CCS to the equivalent of a 200 MW of capacity or greater.
  - **Eligible industrial sources** must otherwise emit more than 50,000 tons of CO<sub>2</sub> per year and cannot produce liquid fuels from solid fossil-based fuels (Sec. 1431 [new sec. 794 of the CAA], pg. 112-3).
  - **Eligible projects** must (1) implement CCS at a qualifying EGU or industrial source and achieve a 50% reduction in CO<sub>2</sub> emissions annually, or for EGU retrofits reduce emissions by 50% of the treated portion of flue gas; and (2) sequester the CO<sub>2</sub> geologically or otherwise; (3) meet permitting requirements; (4) be located in the US (Sec. 1431 [new sec. 794 of the CAA], pg. 114-6).
  - **Bonus Allowance Distribution Methods.** Bonus allowances are provided for CO<sub>2</sub> emissions avoided for electricity generators in two phases. Phase II begins after 20 GW of generating capacity are treated by CCS under Phase I (Sec. 1431 [new sec. 794 of the CAA], pg. 116-9).
    - **In Phase 1**, bonus allowances are provided in two 10 GW tranches and are based on the rate of carbon capture and storage (Sec. 1431 [new sec. 794 of the CAA], pg. 116-9).
      - The **first tranche** of allowances (for the first 10 GW of capacity treated by CCS) provides \$50 for a 50% rate, increasing proportionally to a cap of \$96 for a 90% or greater rate (Sec. 1431 [new sec. 794 of the CAA], pg. 120-1).
      - The **second tranche** (for the second 10 GW of capacity treated by CCS) provides \$50 for a 50% rate, increasing proportionally to a cap of \$85 for a 90% or greater rate (Sec. 1431 [new sec. 794 of the CAA], pg. 121-2).
      - Projects operating commercially before 2017 can receive **an extra \$10 per tonne bonus allowance**, if they notify the EPA by 2012 of their intent to implement CCS (Sec. 1431 [new sec. 794 of the CAA], pg. 122).
      - Bonuses for CCS projects employing enhanced hydrocarbon recovery (EHR) are reduced to reflect their net lower cost of sequestration (Sec. 1431 [new sec. 794 of the CAA], pg. 122-3).

- Bonus values are to be adjusted for inflation; and upon determination of the EPA and DOE, bonus allowance values or amounts can be adjusted to achieve efficient and cost-effective commercial CCS deployment (Sec. 1431 [new sec. 794 of the CAA], pg. 123-4).
- **In Phase 2**, bonus emission allowances are distributed by a reverse auction or alternative distribution method, as determined by the EPA and governed by EPA promulgated regulations (Sec. 1431 [new sec. 794 of the CAA], pg. 118, 124-5).
  - **Reverse auctions for electricity generators:** If EPA determines in favor of a reverse auction, the EPA will establish up to 5 separate auctions for different electricity generating project categories, defined by coal type, capture technology, geological formation type, retrofit vs. new unit, and other factors (Sec. 1431 [new sec. 794 of the CAA], pg. 125-6).
  - Industrial source projects will participate in their own annual reverse auctions (Sec. 1431 [new sec. 794 of the CAA], pg. 126).
  - **Auction Process.** The reverse auctions will solicit bids including desired incentive per tonne of CO<sub>2</sub> sequestered and estimated quantity sequestered during a 10-year period. Selected bids will begin with the lowest level of incentive per tonne (Sec. 1431 [new sec. 794 of the CAA], pg. 127-8).
  - **Distribution.** Emission allowances will be distributed using the same formula as applied in Phase I, but the bonus allowance value will be determined by the projects' auction bids (Sec. 1431 [new sec. 794 of the CAA], pg. 128).
  - The EPA must ensure efficient and expeditious distribution of allowances and may establish minimum rates of CCS (Sec. 1431 [new sec. 794 of the CAA], pg. 126-7).
  - **Alternative Distribution Method.** If the EPA determines a reverse auction will not efficiently and effectively deploy CCS technologies, it can create an incentive schedule to distribute bonus allowances through tranches. Each tranche must support a specific quantity of electric generating capacity with CCS that is cumulatively no greater than 10 GW. The allowances shall seek to cover not more than the reasonable incremental costs attributable to CCS, considering reduced costs of compliance and EHR (Sec. 1431 [new sec. 794 of the CAA], pg. 128-9, 131-2).
    - Within each tranche, allowances are first-come, first-served and distributed using a formula similar to that utilized for industrial sources but with EPA-prescribed bonus allowances (Sec. 1431 [new sec. 794 of the CAA], pg. 129-30).
    - Within a tranche, distributions should be based on a sliding scale to provide higher bonuses to projects with higher CCS rates (Sec. 1431 [new sec. 794 of the CAA], pg. 130).
    - Between tranches, bonus allowances should be lower than those established for the same rate in the previous tranche (Sec. 1431 [new sec. 794 of the CAA], pg. 131).

- Different allowance levels can be established for up to 5 project categories, as allowed for reverse auctions (Sec. 1431 [new sec. 794 of the CAA], pg. 131).
    - These regulations shall be reviewed and revised at least every 8 years (Sec. 1431 [new sec. 794 of the CAA], pg. 132).
- **Limits to Allowances.** Limits allowances provided to certain electricity generating units (EGUs) that derive at least 30% of heat input from coal and/or petroleum coke (Sec. 1431 [new sec. 794 of the CAA], pg. 132-4).
  - **For EGUs initially permitted between 2009 and 2014**, the EPA shall reduce their emission allowances by a factor dependent on the time between the year they commence operations and their achievement of at least a 50% reduction in CO<sub>2</sub> emissions annually, with some leeway for plants operating before 2019 (Sec. 1431 [new sec. 794 of the CAA], pg. 134-5).
  - **For EGUs initially permitted between 2015 and 2019**, no allowances can be granted if the EGU does not achieve and maintain an at least a 50% CO<sub>2</sub> emission reduction upon commencement of operations (Sec. 1431 [new sec. 794 of the CAA], pg. 135-6).
  - **For EGUs receiving advanced distribution**, the EPA shall reduce (and recover) allowances generally based on the number of years (plus 18 months) between the date of operation commencement and achievement and maintenance of at least 50% emission reductions. (For EGUs permitted earlier, the operation commencement date is replaced by the date 3 years after the owner began receiving allowance distributions.) Extensions may be granted (Sec. 1431 [new sec. 794 of the CAA], pg. 136-8).
- **Distribution to Industrial Source Projects.** The EPA may distribute allowances to projects supporting commercial-scale deployment of CCS at industrial sources (Sec. 1431 [new sec. 794 of the CAA], pg. 138-9).
  - The number of allowances distributed to industrial sources may not exceed 15% of the allowances allocated under 781(c)(1) for a vintage year (Sec. 1431 [new sec. 794 of the CAA], pg. 139).
  - Allowances cannot be distributed before Phase I's second tranche (Sec. 1431 [new sec. 794 of the CAA], pg. 139).
  - The EPA shall prescribe regulations to govern allowance distribution, providing bonus allowances on the basis of tonnes of CO<sub>2</sub> captured and sequestered (Sec. 1431 [new sec. 794 of the CAA], pg. 139-40).
    - The EPA may either use a either a reverse auction or incentive schedule, similar to those defined for electricity generator allowance distribution (Sec. 1431 [new sec. 794 of the CAA], pg. 140).
  - These regulations shall be reviewed and revised at least every 8 years (Sec. 1431 [new sec. 794 of the CAA], pg. 140).
- **Certification and Distribution Issues.**
  - **Certification.** Projects must be eligible to receive emission allowances and can request to be certified as such before commercial operation (Sec. 1431 [new sec. 794 of the CAA], pg. 140-1).
  - Project owners may request the EPA certify that their projects are eligible to receive emission allowances (Sec. 1431 [new sec. 794 of the CAA], pg. 140-1):

- Any time before commencing operation, for projects eligible under phase I or phase II's alternative distribution method; or (Sec. 1431 [new sec. 794 of the CAA], pg. 140-1)
- Within a “reasonably brief period” of time following an auction, as specified by the EPA, for projects that win a reverse auction (Sec. 1431 [new sec. 794 of the CAA], pg. 141).
- **Documentation for Certification.** The EPA shall issue a certification if the owner demonstrates a commitment to construct and operate an eligible project and provides complete documentation required for determining eligibility, including (Sec. 1431 [new sec. 794 of the CAA], pg. 142-3):
  - For a project receiving advanced distributions, a commitment to implement an eligible level of CCS no later than 18 months after operation commencement (Sec. 1431 [new sec. 794 of the CAA], pg. 143).
  - Technical information on the CCS technology, coal type, geological formation (if applicable) and other relevant features (Sec.1431 [new sec. 794 of the CAA], pg. 143).
  - Annual CO<sub>2</sub> emission reductions projected for the first 10 years of operation (Sec. 1431 [new sec. 794 of the CAA], pg. 143-4).
  - A demonstration of commitment to construction and operation on a timeline marked by designated milestones (Sec.1431 [new sec. 794 of the CAA], pg. 144).
  - The amount of federal funding received (Sec.1431 [new sec. 794 of the CAA], pg. 144).
  - An assessment of project construction costs, including the costs of the base electric generating unit for non-retrofit projects (Sec.1431 [new sec. 794 of the CAA], pg. 145).
- Commitment to construct and operate a CCS project can be demonstrated by: (Sec. 1431 [new sec. 794 of the CAA], pg. 145).
  - A commitment of financing (Sec. 1431 [new sec. 794 of the CAA], pg. 145-6).
  - A State regulatory or legislative authorization to allow cost recovery from the relevant electric utilities' customers (Sec. 1431 [new sec. 794 of the CAA], pg. 146-7).
  - A commitment to execute a surety bond in sufficient amounts (Sec. 1431 [new sec. 794 of the CAA], pg. 147).
- EPA to establish by regulation the **required contents** for a certification, including (Sec. 1431 [new sec. 794 of the CAA], pg. 147-8):
  - Annual CO<sub>2</sub> emissions reductions committed to during the first 10 years of commercial operation (Sec. 1431 [new sec. 794 of the CAA], pg. 147).
  - Construction and operation milestones committed to (Sec. 1431 [new sec. 794 of the CAA], pg. 147).
  - Certification of truth and accuracy (Sec. 1431 [new sec. 794 of the CAA], pg. 147).
  - For recipients of advanced distribution, specified repayment periods (Sec. 1431 [new sec. 794 of the CAA], pg. 148).

- Other requirements necessary to govern advanced distribution of emission allowances (Sec. 1431 [new sec. 794 of the CAA], pg. 148).
  - Failure to request certification prior to operation allows the EPA to determine eligibility when determining annual emission allowance distribution (Sec. 1431 [new sec. 794 of the CAA], pg. 148-9).
- **Reservation of Emission Allowances.** EPA shall reserve a portion of the allocated emission allowances for certified projects. The portion shall be based on the applicable bonus allowance, the projected number of tonnes of CO<sub>2</sub> avoided through CCS, and a discount rate to account for inflation. Reservations can be terminated if the EPA determines the project is not progressing sufficiently or if the CO<sub>2</sub> emissions avoided are less than projected. Unreserved emission allowances are immediately made available to other eligible projects (Sec. 1431 [new sec. 794 of the CAA], pg. 149-52).
- **Distribution process.**
  - **Annual Distribution.** The EPA shall distribute emission allowances annually, based on the total tonnes of CO<sub>2</sub> emissions avoided through CCS during the first 10 years of commercial operation, in accordance with aforementioned distribution methods and contingent on verified reports from project owners/operators (Sec. 1431 [new sec. 794 of the CAA], pg. 152-3).
  - **Advanced Distribution.** Certified projects receiving Phase I distributions can receive advanced distribution of emission allowances. These distributions should be limited to covering CCS-specific costs (less the amount of Federal funding) and not exceed designated percentages of reserved allowances (70% of tranche 1, 50% of tranche 2). The distributions shall be (Sec. 1431 [new sec. 794 of the CAA], pg. 153-4, 156-9):
    - Provided prior to operation, at an appropriate milestone that ensures expeditious CCS deployment (Sec. 1431 [new sec. 794 of the CAA], pg. 154).
    - Equal to a percent of the allowances reserved for the project's 10-year period of commercial operation (Sec. 1431 [new sec. 794 of the CAA], pg. 154).
    - Drawn from the current vintage year, or if exhausted, subsequent years (Sec. 1431 [new sec. 794 of the CAA], pg. 154-5).
    - Project owners/operators must report yearly to the EPA on the tons of CO<sub>2</sub> avoided compared to those generated (Sec. 1431 [new sec. 794 of the CAA], pg. 155).
  - **For advanced distribution projects, the remainder of reserved emission allowances will be distributed after commercial operation begins.**
    - The remainder is defined as the difference between allowances reserved for projected avoided emissions and the bonus allowances the project would be eligible to receive under Phase I (Sec. 1431 [new sec. 794 of the CAA], pg. 159-61).
  - **Advanced payments can be reconciled** if emission reductions are less than projected or if the project fails to achieve a milestone. Repaid amounts shall be used to support CCS deployment (Sec. 1431 [new sec. 794 of the CAA], pg. 159-65).
- **Limitations** include (Sec. 1431 [new sec. 794 of the CAA], pg. 165):

- Emission allowances can only be distributed for tonnes of CO<sub>2</sub> captured and stored in accordance with the section (Sec. 1431 [new sec. 794 of the CAA], pg. 165).
  - Approximately 72 GW of total cumulative treated generating capacity may receive emission allowances under this section (Sec. 1431 [new sec. 794 of the CAA], pg. 165).
  - If there is an allowance surplus after 72 GW, allowances shall be treated as not designated for distribution for purposes of section 781 (Sec. 1431 [new sec. 794 of the CAA], pg. 165).
- If auctions end and in the subsequent years the allocated (under 781(c)(1)) emission allowances for a given vintage year will be exhausted meeting the estimated full 10-year ensured distributions, the EPA shall provide new eligible projects with emission allowances from subsequent vintage years. If this occurs, new eligible projects shall be prioritized based on their diversity from prior recipients (Sec. 1431 [new sec. 794 of the CAA], pg. 166-8).

### Review of CCS Technology Deployment

- **Review of CCS Technology Deployment.** Amends the Clean Air Act to require the Comptroller General to study and report on the state of CCS technology and barriers to its deployment if allowances allocated for commercial CCS deployment are becoming insufficient and 72 GW of CCS-equipped capacity have not been installed, or by 2033. Based on the results (Sec. 1432 [new sec. 789 of the CAA], pg. 168-70):
  - The DOE may direct the EPA to increase the quantity of allowances allocated to CCS deployment by up to 2.5% of the total quantity established for the year, reducing the number available in the universal trust fund (Sec. 1432 [new sec. 789 of the CAA], pg. 169-70).
  - If Congress overrides or revises the allowance adjustment, the DOE shall rescind or revise its direction to the EPA (Sec. 1432 [new sec. 789 of the CAA], pg. 171).
  - If the allocation is increased, the Comptroller General must re-study before the last vintage year for which allowances have been increased. The DOE may then direct the EPA to further increase allowances for another five years, but not past 2050 (Sec. 1432 [new sec. 789 of the CAA], pg. 171-2).

### Part IV—Performance Standards

- **Performance Standards for New Coal-Fired Power Plants.** Amends the Clean Air Act to require that covered electric generating units (EGU) that derive 30% of their heat input from coal or petroleum coke meet performance standards based on their initial permitting date (Sec. 1441 [new sec. 801 of the CAA], pg. 172-3).
  - EGUs initially permitted during or after 2020 must achieve at least a 65% reduction in CO<sub>2</sub> emissions annually, or a more-stringent standard as set by the EPA (Sec. 1441 [new sec. 801 of the CAA], pg. 173).
  - EGUs initially permitted between 2009 and 2019 (inclusive) must achieve at least a 50% reduction in CO<sub>2</sub> emissions annually by a compliance date, which is either (Sec. 1441 [new sec. 801 of the CAA], pg. 173-4):
    - Four years after the EPA reports that there is at least the equivalent of 10 GW of CCS-applied capacity in the US, including three or more 250MW electric



generating units sequestering CO<sub>2</sub> without EHR, and 12 million tonnes of CO<sub>2</sub> are being captured and sequestered annually (Sec. 1441 [new sec. 801 of the CAA], pg. 174-5); or

- Jan. 1<sup>st</sup> 2020. This fallback date must be reviewed by the EPA and DOE by June 2017. If the EPA and DOE jointly find that, in light of the status of commercial CCS deployment, the date should be extended, it can be extended to Jan. 1<sup>st</sup> 2022 if Congress approves the joint finding by 2018 (Sec. 1441 [new sec. 801 of the CAA], pg. 175-7).
- If the fallback date is used, units may apply for specific extensions if meeting the standard would be technically infeasible (Sec. 1441 [new sec. 801 of the CAA], pg. 177-8).
- The EPA must review these standards for new covered EGUs at least every five years, starting no later than the compliance date, and by rule reduce the maximum CO<sub>2</sub> emission rate reflecting emission limitations achievable through the “application of the best system of emission reduction” adequately demonstrated, taking into account cost and nonair quality health and environmental impact and energy requirements (Sec. 1441 [new sec. 801 of the CAA], pg. 178).

## **OTHER CCS RELATED PASSAGES**

- **CCS Incorporated into a Federal Greenhouse Gas Registry.** Directs EPA to revise greenhouse gas (GHG) reporting regulations to ensure that a federal greenhouse gas registry (Sec. 2001 [new sec. 713 of the CAA], pg. 294-8):
  - Requires reporting entities to submit data to the EPA on capture and sequestration of GHGs (Sec. 2001 [new sec. 713 of the CAA], pg. 294).
  - Establishes measurement protocols for CCS systems (Sec. 2001 [new sec. 713 of the CAA], pg. 298).
- **Geologic Sequestration Sites Must Hold Allowances**
  - Defines geological sequestration sites as ‘covered entities.’ (Sec. 2002 [new sec. 700 of the CAA], pg. 473-4).
  - Requires geologic sequestration sites to hold emissions allowances equivalent to the entity’s emissions in the previous calendar year (Sec. 2001 [new sec. 722 of the CAA], pg. 324-7).
- **Allocates Emission Allowances** to provide for commercial deployment of CCS (Sec. 2101 [new sec. 781(c)(1) of the CAA], pg. 500).
- **Geological Storage Projects Eligible to Generate Domestic Offset Credits.** (Sec. 2001 [new sec. 734 of the CAA], pg. 383-5).
- **Definitions:**
  - Amends the Energy Policy Act of 2005:
    - Carbon capture: “The term ‘carbon capture’ means the process of capturing anthropogenic carbon dioxide from a stationary source.” (Sec. 1411, pg. 83).

- Carbon sequestration: “The term ‘carbon sequestration’ means the act of storing carbon dioxide through physical, chemical, or biological processes that can prevent the carbon dioxide from reaching the atmosphere.” (Sec. 1411, pg. 83).
  - Amends Clean Air Act:
    - Carbon capture and permanent sequestration: “The term ‘carbon capture and permanent sequestration’ shall— (A) have such meaning as the Administrator shall determine, by regulation; and (B) include— (i) permanent geological sequestration; and (ii) conversion of captured carbon dioxide to a stable form that will safely and permanently sequester the carbon dioxide.” (Sec. 1431 [new sec. 794 of the CAA], pg. 111-2).
    - Enhanced hydrocarbon recovery: “The term ‘enhanced hydrocarbon recovery’ means a process by which oil, methane, or another natural gas is recovered by the injection of carbon dioxide into a geological formation. (B) EXCLUSION.— The term ‘enhanced hydrocarbon recovery’ does not include the in situ generation of a new hydrocarbon.” (Sec. 1431 [new sec. 794 of the CAA], pg. 112).
    - Geologic sequestration; geologically sequestered: “The terms ‘geologic sequestration’ and ‘geologically sequestered’ mean the sequestration of greenhouse gases in subsurface geological formations for purposes of permanent storage.” (Sec. 2002 [new sec. 700 of the CAA], pg. 480).
    - Geologic sequestration site: “The term ‘geologic sequestration site’ means a site at which carbon dioxide is geologically sequestered.” Sec. 2002 [new sec. 700 of the CAA], pg. 480).
    - Leakage: “The term ‘leakage’ means a significant increase in greenhouse gas emissions, or significant decrease in sequestration, that—(A) is caused by an offset project; and (B) occurs outside the boundaries of the offset project.” (Sec. 2002 [new sec. 700 of the CAA], pg. 482).
    - Mineral sequestration: “The term ‘mineral sequestration’ means sequestration of carbon dioxide from the atmosphere by capturing carbon dioxide into a permanent mineral, such as the aqueous precipitation of carbonate minerals that results in the storage of carbon dioxide in a mineral form.” (Sec. 2002 [new sec. 700 of the CAA], pg. 482).
    - Sequestered; sequestration: “(A) IN GENERAL.—The terms ‘sequestered’ and ‘sequestration’ mean the separation, isolation, or removal of greenhouse gases from the atmosphere, as determined by the Administrator. (B) INCLUSIONS.— The terms ‘sequestered’ and ‘sequestration’ include— (i) biological sequestration; (ii) geological sequestration; and (iii) mineral sequestration. (C) EXCLUSIONS.—The terms ‘sequestered’ and ‘sequestration’ does not include ocean fertilization techniques.” (Sec. 2002 [new sec. 700 of the CAA], pg. 489).