

universities may apply for and receive 4-year grants for—

(A) salary and startup costs for newly designated faculty positions in an integrated geologic carbon sequestration science program; and

(B) internships for graduate students in geologic sequestration science.

(2) Renewal

Grants under this subsection shall be renewable for up to 2 additional 3-year terms, based on performance criteria, established by the National Academy of Sciences study conducted under subsection (a), that include the number of graduates of such programs.

(3) Interface with regional geologic carbon sequestration partnerships

To the greatest extent possible, geologic carbon sequestration science programs supported under this subsection shall interface with the research of the Regional Carbon Sequestration Partnerships operated by the Department to provide internships and practical training in carbon capture and geologic sequestration.

(4) Authorization of appropriations

There are authorized to be appropriated to the Secretary for carrying out this subsection such sums as may be necessary.

(Pub. L. 110–140, title VII, §705, Dec. 19, 2007, 121 Stat. 1709.)

Statutory Notes and Related Subsidiaries

EFFECTIVE DATE

Section effective on the date that is 1 day after Dec. 19, 2007, see section 1601 of Pub. L. 110–140, set out as a note under section 1824 of Title 2, The Congress.

§ 17254. Relation to Safe Drinking Water Act

The injection and geologic sequestration of carbon dioxide pursuant to this subtitle and the amendments made by this subtitle shall be subject to the requirements of the Safe Drinking Water Act (42 U.S.C. 300f et seq.), including the provisions of part C of such Act (42 U.S.C. 300h et seq.; relating to protection of underground sources of drinking water). Nothing in this subtitle and the amendments made by this subtitle imposes or authorizes the promulgation of any requirement that is inconsistent or in conflict with the requirements of the Safe Drinking Water Act (42 U.S.C. 300f et seq.) or regulations thereunder.

(Pub. L. 110–140, title VII, §706, Dec. 19, 2007, 121 Stat. 1710.)

Editorial Notes

REFERENCES IN TEXT

This subtitle, referred to in text, is subtitle A (§§701–708) of title VII of Pub. L. 110–140, which enacted this part, amended section 16293 of this title, and enacted provisions set out as a note under section 17001 of this title. For complete classification of subtitle A to the Code, see Short Title note set out under section 17001 of this title and Tables.

The Safe Drinking Water Act, referred to in text, is title XIV of act July 1, 1944, as added Dec. 16, 1974, Pub. L. 93–523, §2(a), 88 Stat. 1660, which is classified gen-

erally to subchapter XII (§300f et seq.) of chapter 6A of this title. Part C of the Act is classified generally to part C (§300h et seq.) of subchapter XII of chapter 6A of this title. For complete classification of this Act to the Code, see Short Title note set out under section 201 of this title and Tables.

Statutory Notes and Related Subsidiaries

EFFECTIVE DATE

Section effective on the date that is 1 day after Dec. 19, 2007, see section 1601 of Pub. L. 110–140, set out as a note under section 1824 of Title 2, The Congress.

§ 17255. Safety research

(a) Program

The Administrator of the Environmental Protection Agency shall conduct a research program to address public health, safety, and environmental impacts that may be associated with capture, injection, and sequestration of greenhouse gases in geologic reservoirs.

(b) Authorization of appropriations

There are authorized to be appropriated for carrying out this section \$5,000,000 for each fiscal year.

(Pub. L. 110–140, title VII, §707, Dec. 19, 2007, 121 Stat. 1710.)

Statutory Notes and Related Subsidiaries

EFFECTIVE DATE

Section effective on the date that is 1 day after Dec. 19, 2007, see section 1601 of Pub. L. 110–140, set out as a note under section 1824 of Title 2, The Congress.

§ 17256. University based research and development grant program

(a) Establishment

The Secretary, in consultation with other appropriate agencies, shall establish a university based research and development program to study carbon capture and sequestration using the various types of coal.

(b) Rural and agricultural institutions

The Secretary shall give special consideration to rural or agricultural based institutions in areas that have regional sources of coal and that offer interdisciplinary programs in the area of environmental science to study carbon capture and sequestration.

(c) Authorization of appropriations

There are to be authorized to be appropriated \$10,000,000 to carry out this section.

(Pub. L. 110–140, title VII, §708, Dec. 19, 2007, 121 Stat. 1710.)

Statutory Notes and Related Subsidiaries

EFFECTIVE DATE

Section effective on the date that is 1 day after Dec. 19, 2007, see section 1601 of Pub. L. 110–140, set out as a note under section 1824 of Title 2, The Congress.

PART B—CARBON CAPTURE AND SEQUESTRATION ASSESSMENT AND FRAMEWORK

§ 17271. Carbon dioxide sequestration capacity assessment

(a) Definitions

In this section—

(1) Assessment

The term “assessment” means the national assessment of onshore capacity for carbon dioxide completed under subsection (f).

(2) Capacity

The term “capacity” means the portion of a sequestration formation that can retain carbon dioxide in accordance with the requirements (including physical, geological, and economic requirements) established under the methodology developed under subsection (b).

(3) Engineered hazard

The term “engineered hazard” includes the location and completion history of any well that could affect potential sequestration.

(4) Risk

The term “risk” includes any risk posed by geomechanical, geochemical, hydrogeological, structural, and engineered hazards.

(5) Secretary

The term “Secretary” means the Secretary of the Interior, acting through the Director of the United States Geological Survey.

(6) Sequestration formation

The term “sequestration formation” means a deep saline formation, unmineable coal seam, or oil or gas reservoir that is capable of accommodating a volume of industrial carbon dioxide.

(b) Methodology

Not later than 1 year after December 19, 2007, the Secretary shall develop a methodology for conducting an assessment under subsection (f), taking into consideration—

- (1) the geographical extent of all potential sequestration formations in all States;
- (2) the capacity of the potential sequestration formations;
- (3) the injectivity of the potential sequestration formations;
- (4) an estimate of potential volumes of oil and gas recoverable by injection and sequestration of industrial carbon dioxide in potential sequestration formations;
- (5) the risk associated with the potential sequestration formations; and
- (6) the work done to develop the Carbon Sequestration Atlas of the United States and Canada that was completed by the Department.

(c) Coordination**(1) Federal coordination****(A) Consultation**

The Secretary shall consult with the Secretary of Energy and the Administrator of the Environmental Protection Agency on issues of data sharing, format, development of the methodology, and content of the assessment required under this section to ensure the maximum usefulness and success of the assessment.

(B) Cooperation

The Secretary of Energy and the Administrator shall cooperate with the Secretary to ensure, to the maximum extent practicable, the usefulness and success of the assessment.

(2) State coordination

The Secretary shall consult with State geological surveys and other relevant entities to ensure, to the maximum extent practicable, the usefulness and success of the assessment.

(d) External review and publication

On completion of the methodology under subsection (b), the Secretary shall—

- (1) publish the methodology and solicit comments from the public and the heads of affected Federal and State agencies;
- (2) establish a panel of individuals with expertise in the matters described in paragraphs (1) through (5) of subsection (b) composed, as appropriate, of representatives of Federal agencies, institutions of higher education, nongovernmental organizations, State organizations, industry, and international geoscience organizations to review the methodology and comments received under paragraph (1); and
- (3) on completion of the review under paragraph (2), publish in the Federal Register the revised final methodology.

(e) Periodic updates

The methodology developed under this section shall be updated periodically (including at least once every 5 years) to incorporate new data as the data becomes available.

(f) National assessment**(1) In general**

Not later than 2 years after the date of publication of the methodology under subsection (d)(1), the Secretary, in consultation with the Secretary of Energy and State geological surveys, shall complete a national assessment of capacity for carbon dioxide in accordance with the methodology.

(2) Geological verification

As part of the assessment under this subsection, the Secretary shall carry out a drilling program to supplement the geological data relevant to determining sequestration capacity of carbon dioxide in geological sequestration formations, including—

- (A) well log data;
- (B) core data; and
- (C) fluid sample data.

(3) Partnership with other drilling programs

As part of the drilling program under paragraph (2), the Secretary shall enter, as appropriate, into partnerships with other entities to collect and integrate data from other drilling programs relevant to the sequestration of carbon dioxide in geological formations.

(4) Incorporation into NatCarb**(A) In general**

On completion of the assessment, the Secretary of Energy and the Secretary of the Interior shall incorporate the results of the assessment using—

- (i) the NatCarb database, to the maximum extent practicable; or
- (ii) a new database developed by the Secretary of Energy, as the Secretary of Energy determines to be necessary.

(B) Ranking

The database shall include the data necessary to rank potential sequestration sites for capacity and risk, across the United States, within each State, by formation, and within each basin.

(5) Report

Not later than 180 days after the date on which the assessment is completed, the Secretary shall submit to the Committee on Energy and Natural Resources of the Senate and the Committee on Natural Resources of the House of Representatives a report describing the findings under the assessment.

(6) Periodic updates

The national assessment developed under this section shall be updated periodically (including at least once every 5 years) to support public and private sector decisionmaking.

(g) Authorization of appropriations

There is authorized to be appropriated to carry out this section \$30,000,000 for the period of fiscal years 2008 through 2012.

(Pub. L. 110–140, title VII, §711, Dec. 19, 2007, 121 Stat. 1710.)

Statutory Notes and Related Subsidiaries**EFFECTIVE DATE**

Section effective on the date that is 1 day after Dec. 19, 2007, see section 1601 of Pub. L. 110–140, set out as a note under section 1824 of Title 2, The Congress.

§ 17272. Assessment of carbon sequestration and methane and nitrous oxide emissions from ecosystems**(a) Definitions**

In this section:

(1) Adaptation strategy

The term “adaptation strategy” means a land use and management strategy that can be used—

(A) to increase the sequestration capabilities of covered greenhouse gases of any ecosystem; or

(B) to reduce the emissions of covered greenhouse gases from any ecosystem.

(2) Assessment

The term “assessment” means the national assessment authorized under subsection (b).

(3) Covered greenhouse gas

The term “covered greenhouse gas” means carbon dioxide, nitrous oxide, and methane gas.

(4) Ecosystem

The term “ecosystem” means any terrestrial, freshwater aquatic, or coastal ecosystem, including an estuary.

(5) Native plant species

The term “native plant species” means any noninvasive, naturally occurring plant species within an ecosystem.

(6) Secretary

The term “Secretary” means the Secretary of the Interior.

(b) Authorization of assessment

Not later than 2 years after the date on which the final methodology is published under subsection (f)(3)(D), the Secretary shall complete a national assessment of—

(1) the quantity of carbon stored in and released from ecosystems, including from man-caused and natural fires; and

(2) the annual flux of covered greenhouse gases in and out of ecosystems.

(c) Components

In conducting the assessment under subsection (b), the Secretary shall—

(1) determine the processes that control the flux of covered greenhouse gases in and out of each ecosystem;

(2) estimate the potential for increasing carbon sequestration in natural and managed ecosystems through management activities or restoration activities in each ecosystem;

(3) develop near-term and long-term adaptation strategies or mitigation strategies that can be employed—

(A) to enhance the sequestration of carbon in each ecosystem;

(B) to reduce emissions of covered greenhouse gases from ecosystems; and

(C) to adapt to climate change; and

(4) estimate the annual carbon sequestration capacity of ecosystems under a range of policies in support of management activities to optimize sequestration.

(d) Use of native plant species

In developing restoration activities under subsection (c)(2) and management strategies and adaptation strategies under subsection (c)(3), the Secretary shall emphasize the use of native plant species (including mixtures of many native plant species) for sequestering covered greenhouse gas in each ecosystem.

(e) Consultation**(1) In general**

In conducting the assessment under subsection (b) and developing the methodology under subsection (f), the Secretary shall consult with—

(A) the Secretary of Energy;

(B) the Secretary of Agriculture;

(C) the Administrator of the Environmental Protection Agency;

(D) the Secretary of Commerce, acting through the Under Secretary for Oceans and Atmosphere; and

(E) the heads of other relevant agencies.

(2) Ocean and coastal ecosystems

In carrying out this section with respect to ocean and coastal ecosystems (including estuaries), the Secretary shall work jointly with the Secretary of Commerce, acting through the Under Secretary for Oceans and Atmosphere.

(f) Methodology**(1) In general**

Not later than 1 year after December 19, 2007, the Secretary shall develop a methodology for conducting the assessment.