107TH CONGRESS
1ST SESSION

S. 1008

To amend the Energy Policy Act of 1992 to develop the United States Climate Change Response Strategy with the goal of stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system, while minimizing adverse short-term and long-term economic and social impacts, aligning the Strategy with United States energy policy, and promoting a sound national environmental policy, to establish a research and development program that focuses on bold technological breakthroughs that make significant progress toward the goal of stabilization of greenhouse gas concentrations, to establish the National Office of Climate Change Response within the Executive Office of the President, and for other purposes.

IN THE SENATE OF THE UNITED STATES

JUNE 8, 2001

Mr. BYRD (for himself and Mr. STEVENS) introduced the following bill; which was read twice and referred to the Committee on Governmental Affairs

---

A BILL

To amend the Energy Policy Act of 1992 to develop the United States Climate Change Response Strategy with the goal of stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system, while minimizing adverse short-term and long-term economic and social impacts, aligning the Strategy with United States energy policy, and promoting a sound national environmental policy, to establish a research and

development program that focuses on bold technological breakthroughs that make significant progress toward the goal of stabilization of greenhouse gas concentrations, to establish the National Office of Climate Change Response within the Executive Office of the President, and for other purposes.

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

SECTION 1. SHORT TITLE.

This Act may be cited as the ''Climate Change Strategy and Technology Innovation Act of 2001''.

SEC. 2. FINDINGS.

Congress finds that—

(1) evidence continues to build that increases in atmospheric concentrations of greenhouse gases are contributing to global climate change;

(2) in 1992, the Senate ratified the United Nations Framework Convention on Climate Change, done at New York on May 9, 1992, the ultimate objective of which is the ''stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system'';

(3) although science currently cannot determine precisely what atmospheric concentrations are ''dangerous'', the current trajectory of greenhouse gas

emissions will lead to a continued rise in greenhouse gas concentrations in the atmosphere, not stabilization;

(4) the remaining scientific uncertainties call for temperance of human actions, but not inaction;

(5) greenhouse gases are associated with a wide range of human activities, including energy production, transportation, agriculture, forestry, manufacturing, buildings, and other activities;

(6) the economic consequences of poorly designed climate change response strategies, or of inaction, may cost the global economy trillions of dollars;

(7) a large share of this economic burden would be borne by the United States;

(8) stabilization of greenhouse gas concentrations in the atmosphere will require transformational change in the global energy system and other emitting sectors at an almost unimaginable level—a veritable industrial revolution is required;

(9) such a revolution can occur only if the revolution is preceded by research and development that leads to bold technological breakthroughs;

(10) over the decade preceding the date of enactment of this Act—

(A) energy research and development budgets in the public and private sectors have declined precipitously and have not been focused on the climate change response challenge; and

(B) the investments that have been made have not been guided by a comprehensive strategy;

(11) the negative trends in research and development funding described in paragraph (10) must be reversed with a focus on not only traditional energy research and development, but also bolder, breakthrough research;

(12) much more progress could be made on the issue of climate change if the United States were to adopt a new approach for addressing climate change that included, as an ultimate long-term goal—

(A) stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system; and

(B) a response strategy with 4 key elements consisting of—

(i) definition of interim emission mitigation targets coupled with specific mitiga-

tion approaches that cumulatively yield stabilized atmospheric greenhouse gas concentrations;

(ii) a national commitment—

(I) to double energy research and development by the United States public and private sectors; and

(II) in carrying out such research and development, to provide a high degree of emphasis on bold, breakthrough technologies that will make possible a profound transformation of the energy, transportation, industrial, agricultural, and building sectors of the United States;

(iii) climate adaptation research that focuses on response actions necessary to adapt to climate change that may have occurred or may occur under any future climate change scenario; and

(iv) continued research, building on the substantial scientific understanding of climate change that exists as of the date of enactment of this Act, that focuses on resolving the remaining scientific, technical,

and economic uncertainties, to aid in the development of sound response strategies; and

(13) inherent in each of the 4 key elements of the response strategy is consideration of the international nature of the challenge, which will require—

(A) establishment of joint climate response strategies and joint research programs;

(B) assistance to developing countries and countries in transition for building technical and institutional capacities and incentives for addressing the challenge; and

(C) promotion of public awareness of the issue.

SEC. 3. PURPOSE.

The purpose of this Act is to implement the new approach described in section 2(12) by developing a national focal point for climate change response through—

(1) the establishment of the National Office of Climate Change Response within the Executive Office of the President (referred to in this section as the ''White House Office'') to develop the United States Climate Change Response Strategy (referred to in this section as the ''Strategy'') that—

(A) incorporates the 4 key elements of that new approach;

(B) is supportive of and integrated in the overall energy, transportation, industrial, agricultural, forestry, and environmental policies of the United States;

(C) takes into account—

(i) the diversity of energy sources and technologies;

(ii) supply-side and demand-side solutions; and

(iii) national infrastructure, energy distribution, and transportation systems;

(D) provides for the inclusion and equitable participation of Federal, State, tribal, and local government agencies, nongovernmental organizations, academia, scientific bodies, industry, the public, and other interested parties;

(E) incorporates new models of Federal-State cooperation;

(F) defines a comprehensive energy technology research and development program that—

(i) recognizes the important contributions that research and development pro-

grams in existence on the date of enactment of this Act make toward addressing the climate change response challenge; and

(ii) includes an additional research and development agenda that focuses on the bold, breakthrough technologies that are critical to the long-term stabilization of greenhouse gas concentrations in the atmosphere;

(G) includes consideration of other efforts to address critical environmental and health concerns, including clean air, clean water, and responsible land use policies; and

(H) incorporates initiatives to promote the deployment of clean energy technologies developed in the United States and abroad;

(2) the establishment of the Interagency Task Force, chaired by the Director of the White House Office, to serve as the primary mechanism through which the heads of Federal agencies work together to develop and implement the Strategy;

(3) the establishment of the Office of Carbon Management and the Center for Strategic Climate Change Response within the Department of Energy—

(A) to manage, as their primary responsibility, an innovative research and development program that focuses on the bold, breakthrough technologies that are critical to the long-term stabilization of greenhouse gas concentrations in the atmosphere; and

(B) to provide analytical support and data to the White House Office, other agencies, and the public;

(4) the establishment of an independent review board—

(A) to review the Strategy and annually assess United States and international progress toward the goal of stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system; and

(B) to assess—

(i) the performance of each Federal agency that has responsibilities under the Strategy; and

(ii) the adequacy of the budget of each such Federal agency to fulfill the responsibilities of the Federal agency under the Strategy; and

(5) the establishment of offices in, or the carrying out of activities by, the Department of Agriculture, the Department of Transportation, the Environmental Protection Agency, and other Federal agencies as necessary to carry out the amendment made by section 4.

SEC. 4. UNITED STATES CLIMATE CHANGE STRATEGY AND TECHNOLOGY INNOVATION.

Title XVI of the Energy Policy Act of 1992 (42 U.S.C. 13381 et seq.) is amended—

(1) by inserting after the title heading the following:

"Subtitle A—General Provisions";

and

(2) by adding at the end the following:

"Subtitle B—United States Climate Change Strategy and Technology Innovation

"SEC. 1621. DEFINITIONS.

''In this subtitle:

''(1) CENTER.—The term 'Center' means the Center for Strategic Climate Change Response established by section 1624(e).

''(2) CLIMATE-FRIENDLY TECHNOLOGY.—The term 'climate-friendly technology' means any energy

supply or end-use technology that, over the life of the technology and compared to similar technology in commercial use as of the date of enactment of this subtitle—

"(A) results in reduced emissions of greenhouse gases;

"(B) may substantially lower emissions of other pollutants; and

"(C) may generate substantially smaller or less hazardous quantities of solid or liquid waste.

"(3) DEPARTMENT.—The term 'Department' means the Department of Energy.

"(4) DEPARTMENT OFFICE.—The term 'Department Office' means the Office of Carbon Management of the Department established by section 1624(a).

"(5) FEDERAL AGENCY.—The term 'Federal agency' has the meaning given the term 'agency' in section 551 of title 5, United States Code.

"(6) GREENHOUSE GAS.—The term 'greenhouse gas' means an anthropogenic gaseous constituent of the atmosphere that absorbs and re-emits infrared radiation.

''(7) INTERAGENCY TASK FORCE.—The term 'Interagency Task Force' means the United States Climate Change Response Interagency Task Force established under section 1623(d).

''(8) KEY ELEMENT.—The term 'key element', with respect to the Strategy, means—

''(A) definition of interim emission mitigation targets coupled with specific mitigation approaches that cumulatively result in stabilization of greenhouse gas concentrations;

''(B) a national commitment—

''(i) to double energy research and development by the United States public and private sectors; and

''(ii) in carrying out such research and development, to provide a high degree of emphasis on bold, breakthrough technologies that will make possible a profound transformation of the energy, transportation, industrial, agricultural, and building sectors of the United States;

''(C) climate adaptation research that focuses on response actions necessary to adapt to climate change that may have occurred or may

occur under any future climate change scenario; and

''(D) research that focuses on resolving the remaining scientific, technical, and economic uncertainties associated with climate change to the extent that those uncertainties bear on strategies to achieve the long-term goal of stabilization of greenhouse gas concentrations.

''(9) QUALIFIED INDIVIDUAL.—

''(A) IN GENERAL.—The term 'qualified individual' means an individual who has demonstrated expertise and leadership skills to draw on other experts in diverse fields of knowledge that are relevant to addressing the climate change response challenge.

''(B) FIELDS OF KNOWLEDGE.—The fields of knowledge referred to in subparagraph (A) are—

''(i) the science of primary and secondary climate change impacts;

''(ii) energy and environmental economics;

''(iii) technology transfer and diffusion;

''(iv) the social dimensions of climate change;

''(v) climate change adaptation strategies;

''(vi) fossil, nuclear, and renewable energy technology;

''(vii) energy efficiency and energy conservation;

''(viii) energy systems integration;

''(ix) engineered and terrestrial carbon sequestration;

''(x) transportation, industrial, and building sector concerns;

''(xi) regulatory and market-based mechanisms for addressing climate change;

''(xii) risk and decision analysis;

''(xiii) strategic planning; and

''(xiv) the international implications of climate change response strategies.

''(10) REVIEW BOARD.—The term 'Review Board' means the United States Climate Change Response Strategy Review Board established by section 1626.

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

''(12) STABILIZATION OF GREENHOUSE GAS CONCENTRATIONS.—The term 'stabilization of greenhouse gas concentrations' means the stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system, as contemplated by the United Nations Framework Convention on Climate Change, done at New York on May 9, 1992.

''(13) STRATEGY.—The term 'Strategy' means the United States Climate Change Response Strategy developed under section 1622.

''(14) WHITE HOUSE OFFICE.—The term 'White House Office' means the National Office of Climate Change Response of the Executive Office of the President established by section 1623(a).

''SEC. 1622. UNITED STATES CLIMATE CHANGE RESPONSE STRATEGY.

''(a) IN GENERAL.—The Director of the White House Office shall develop the United States Climate Change Response Strategy, which shall—

''(1) have the long-term goal of stabilization of greenhouse gas concentrations;

''(2) build on the 4 key elements;

''(3) be developed on the basis of an examination of a broad range of emission reduction targets and implementation dates (including those contemplated by the United Nations Framework Convention on Climate Change, done at New York on May 9, 1992) that culminate in the stabilization of greenhouse gas concentrations;

''(4) incorporate mitigation approaches to reduce, avoid, and sequester greenhouse gas emissions;

''(5) include an evaluation of whether and how each emission reduction target and implementation date achieves the emission reductions in an economically and environmentally sound manner;

''(6) be consistent with the goals of energy, transportation, industrial, agricultural, forestry, environmental, and other relevant policies of the United States;

''(7) have a scope that considers the totality of United States public, private, and public-private sector actions that bear on the long-term goal;

''(8) be based on an evaluation of a wide range of approaches for achieving the long-term goal, including evaluation of—

"(A) a variety of cost-effective Federal and State policies, programs, standards, and incentives;

"(B) policies that integrate and promote innovative, market-based solutions in the United States and in foreign countries; and

"(C) participation in other international institutions, or in the support of international activities, that are established or conducted to facilitate stabilization of greenhouse gas concentrations;

"(9) in the final recommendations of the Strategy, emphasize response strategies that achieve the long-term goal and provide specific recommendations concerning—

"(A) measures determined to be appropriate for short-term implementation, giving preference to cost-effective and technologically feasible measures that will—

"(i) produce measurable net reductions in United States emissions that lead toward achievement of the long-term goal; and

''(ii) minimize any adverse short-term and long-term economic and social impacts on the United States;

''(B) the development of technologies that have the potential for long-term implementation—

''(i) giving preference to technologies that have the potential to reduce significantly the overall cost of stabilization of greenhouse gas concentrations; and

''(ii) considering a full range of energy sources, energy conversion and use technologies, and efficiency options;

''(C) such changes in institutional and technology systems as are necessary to adapt to climate change in the short term and the long term;

''(D) such review, modification, and enhancement of the scientific, technical, and economic research efforts of the United States, and improvements to the data resulting from research, as are appropriate to improve the accuracy of predictions concerning climate change and the economic and social costs and opportunities relating to climate change; and

''(E) changes that should be made to project and grant evaluation criteria under other Federal research and development programs so that those criteria do not inhibit development of climate-friendly technologies;

''(10) be developed in a manner that provides for meaningful participation by, and consultation among, Federal, State, tribal, and local government agencies, nongovernmental organizations, academia, scientific bodies, industry, the public, and other interested parties in accordance with subsections (b)(4)(C)(iv)(II) and (d)(3)(B)(iii) of section 1623;

''(11) address how the United States should engage State, tribal, and local governments in developing and carrying out a response to climate change;

''(12) promote, to the maximum extent practicable, public awareness, outreach, and information-sharing to further the understanding of the full range of climate change-related issues;

''(13) include recommendations for legislative and administrative actions necessary to implement the Strategy;

''(14) serve as a framework for climate change response actions by all Federal agencies;

''(15) recommend which Federal agencies are, or should be, responsible for the various aspects of implementation of the Strategy and any budgetary implications;

''(16) address how the United States should engage foreign governments in developing an international response to climate change; and

''(17) be subject to review by an independent review board in accordance with section 1626.

''(b) SUBMISSION TO CONGRESS.—Not later than 1 year after the date of enactment of this subtitle, the President shall submit to Congress the Strategy.

''(c) UPDATING.—Not later than 2 years after the date of submission of the Strategy to Congress under subsection (b), and at the end of each 2-year period thereafter, the President shall submit to Congress an updated version of the Strategy.

''(d) PROGRESS REPORTS.—Not later than 1 year after the date of submission of the Strategy to Congress under subsection (b), and at the end of each 1-year period thereafter, the President shall submit to Congress a report that—

''(1) describes the progress on implementation of the Strategy; and

''(2) provides recommendations for improvement of the Strategy and the implementation of the Strategy.

''(e) ALIGNMENT WITH ENERGY, TRANSPORTATION, INDUSTRIAL, AGRICULTURAL, FORESTRY, AND OTHER POLICIES.—The President, the Director of the White House Office, the Secretary, and the other members of the Interagency Task Force shall work together to align the actions carried out under the Strategy and actions associated with the energy, transportation, industrial, agricultural, forestry, and other relevant policies of the United States so that the objectives of both the Strategy and the policies are met without compromising the climate change-related goals of the Strategy or the goals of the policies.

''(f) NATIONAL LABORATORY CERTIFICATION.—

''(1) IN GENERAL.—The directors of the major national laboratories of the Department specified in paragraph (3) shall annually meet with the President and individually and simultaneously certify whether the energy technology research and development programs of the United States collectively are technically and financially on a trajectory that is consistent with—

''(A) the directions and progress outlined in the Strategy; and

''(B) the long-term goal of stabilization of greenhouse gas concentrations.

''(2) EFFECT OF NEGATIVE CERTIFICATION.—If the certification described in paragraph (1) is in the negative, the directors shall submit to the President a report that—

''(A) specifies the reasons why the certification is in the negative; and

''(B) describes corrective actions that must be taken so that the certification can be made in the affirmative.

''(3) DIRECTORS OF MAJOR NATIONAL LABORATORIES AFFILIATED WITH SCIENCE AND ENERGY PROGRAMS.—The directors of the national laboratories that shall participate in the certification under this subsection are the director of each of—

''(A) the Argonne National Laboratory;

''(B) the Lawrence Berkeley National Laboratory;

''(C) the National Energy Technology Laboratory;

''(D) the National Renewable Energy Laboratory;

''(E) the Oak Ridge National Laboratory; and

''(F) the Pacific Northwest National Laboratory.

''(4) COORDINATION.—The director of the National Energy Technology Laboratory shall serve as coordinator of the group of the directors of the national laboratories specified in paragraph (3).

"SEC. 1623. NATIONAL OFFICE OF CLIMATE CHANGE RESPONSE OF THE EXECUTIVE OFFICE OF THE PRESIDENT.

''(a) ESTABLISHMENT.—

''(1) IN GENERAL.—There is established, within the Executive Office of the President, the National Office of Climate Change Response.

''(2) FOCUS.—The White House Office shall have the focus of achieving the long-term goal of stabilization of greenhouse gas concentrations while minimizing adverse short-term and long-term economic and social impacts.

''(3) DUTIES.—Consistent with paragraph (2), the White House Office shall—

''(A) establish policies, objectives, and priorities for the Strategy;

''(B) in accordance with subsection (d), establish the Interagency Task Force to serve as the primary mechanism through which the

heads of Federal agencies shall assist the Director of the White House Office in developing and implementing the Strategy;

''(C) to the maximum extent practicable, ensure that the Strategy is based on objective, quantitative analysis, drawing on the analytical capabilities of Federal and State agencies, especially the Center;

''(D) advise the President concerning necessary changes in organization, management, budgeting, and personnel allocation of Federal agencies involved in climate change response activities; and

''(E) notify a Federal agency if the policies and discretionary programs of the agency are not well aligned with, or are not contributing effectively to, the long-term goal of stabilization of greenhouse gas concentrations.

''(b) DIRECTOR OF THE WHITE HOUSE OFFICE.—

''(1) IN GENERAL.—The White House Office shall be headed by a Director, who shall report directly to the President.

''(2) APPOINTMENT.—The Director of the White House Office shall be a qualified individual

appointed by the President, by and with the advice and consent of the Senate.

''(3) TERM; VACANCIES.—

''(A) TERM.—The Director of the White House Office shall be appointed for a term of 4 years.

''(B) VACANCIES.—A vacancy in the position of Director of the White House Office shall be filled in the same manner as the original appointment was made.

''(4) DUTIES OF THE DIRECTOR OF THE WHITE HOUSE OFFICE.—

''(A) STRATEGY.—In accordance with section 1622, the Director of the White House Office shall coordinate the development and updating of the Strategy.

''(B) INTERAGENCY TASK FORCE.—The Director of the White House Office shall serve as Chairperson of the Interagency Task Force.

''(C) ADVISORY DUTIES.—

''(i) CLIMATE, ENERGY, TRANSPORTATION, INDUSTRIAL, AGRICULTURAL, BUILDING, FORESTRY, AND OTHER PROGRAMS.—The Director of the White House Office, using an integrated perspective con-

sidering the totality of actions in the United States, shall advise the President and the heads of Federal agencies on—

''(I) the extent to which United States energy, transportation, industrial, agricultural, forestry, building, and other relevant programs are capable of producing progress on the long-term goal of stabilization of greenhouse gas concentrations; and

''(II) the extent to which proposed or newly created energy, transportation, industrial, agricultural, forestry, building, and other relevant programs positively or negatively affect the ability of the United States to achieve the long-term goal of stabilization of greenhouse gas concentrations.

''(ii) TAX, TRADE, AND FOREIGN POLICIES.—The Director of the White House Office, using an integrated perspective considering the totality of actions in the United States, shall advise the President and the heads of Federal agencies on—

''(I) the extent to which the United States tax policy, trade policy, and foreign policy are capable of producing progress on the long-term goal of stabilization of greenhouse gas concentrations; and

''(II) the extent to which proposed or newly created tax policy, trade policy, and foreign policy positively or negatively affect the ability of the United States to achieve the long-term goal of stabilization of greenhouse gas concentrations.

''(iii) INTERNATIONAL TREATIES.—The Secretary of State, acting in conjunction with the Interagency Task Force and using the analytical tools available to the White House Office, shall provide to the Director of the White House Office an opinion that—

''(I) specifies the economic and environmental costs and benefits of any proposed international treaties or components of treaties that have an

influence on greenhouse gas management; and

''(II) assesses the extent to which the treaties advance the long-term goal of stabilization of greenhouse gas concentrations, while minimizing adverse short-term and long-term economic and social impacts and considering other impacts.

''(iv) CONSULTATION.—

''(I) WITH MEMBERS OF INTERAGENCY TASK FORCE.—To the extent practicable and appropriate, the Director of the White House Office shall consult with all members of the Interagency Task Force and other interested parties before providing advice to the President.

''(II) WITH OTHER INTERESTED PARTIES.—The Director of the White House Office shall establish a process for obtaining the meaningful participation of Federal, State, tribal, and local government agencies, nongovernmental organizations, academia, sci-

entific bodies, industry, the public, and other interested parties in the formulation of advice to be provided to the President.

''(D) PUBLIC EDUCATION, AWARENESS, OUTREACH, AND INFORMATION-SHARING.—The Director of the White House Office, to the maximum extent practicable, shall promote public awareness, outreach, and information-sharing to further the understanding of the full range of climate change-related issues.

''(5) ANNUAL REPORTS.—The Director of the White House Office, in consultation with the Interagency Task Force and other interested parties, shall prepare an annual report for submission by the President to Congress that—

''(A) assesses progress in implementation of the Strategy;

''(B) assesses progress, in the United States and in foreign countries, toward the long-term goal of stabilization of greenhouse gas concentrations;

''(C) assesses progress toward meeting climate change-related international obligations;

''(D) makes recommendations for actions by the Federal Government designed to close any gap between progress-to-date and the measures that are necessary to achieve the long-term goal of stabilization of greenhouse gas concentrations; and

''(E) addresses the totality of actions in the United States that relate to the 4 key elements.

''(6) ANALYSIS.—During development of the Strategy, preparation of the annual reports submitted under paragraph (5), and provision of advice to the President and the heads of Federal agencies, the Director of the White House Office shall place significant emphasis on the use of objective, quantitative analysis, taking into consideration any uncertainties associated with the analysis.

''(c) STAFF.—

''(1) IN GENERAL.—The Director of the White House Office shall employ a professional staff of not more than 25 individuals to carry out the duties of the White House Office.

''(2) INTERGOVERNMENTAL PERSONNEL AND FELLOWSHIPS.—The Director of the White House Office may use the authority provided by the Inter-

governmental Personnel Act of 1970 (42 U.S.C. 4701 et seq.) and subchapter VI of chapter 33 of title 5, United States Code, and fellowships, to obtain staff from academia, scientific bodies, private industry, nongovernmental organizations, other Department programs, other Federal agencies, and national laboratories, for appointments of a limited term.

''(d) INTERAGENCY TASK FORCE.—

''(1) IN GENERAL.—The Director of the White House Office shall establish the United States Climate Change Response Interagency Task Force.

''(2) COMPOSITION.—The Interagency Task Force shall be composed of—

''(A) the Director of the White House Office, who shall serve as Chairperson;

''(B) the Secretary of State;

''(C) the Secretary;

''(D) the Secretary of Commerce;

''(E) the Secretary of the Treasury;

''(F) the Secretary of Transportation;

''(G) the Secretary of Agriculture;

''(H) the Administrator of the Environmental Protection Agency;

"(I) the Administrator of the Agency for International Development;

"(J) the United States Trade Representative;

"(K) the National Security Advisor;

"(L) the Director of the National Economic Council;

"(M) the Chairman of the Council on Environmental Quality;

"(N) the Director of the Office of Science and Technology Policy;

"(O) the Chairperson of the Subcommittee on Global Change Research (which performs the functions of the Committee on Earth and Environmental Sciences established by section 102 of the Global Change Research Act of 1990 (15 U.S.C. 2932)); and

"(P) the heads of such other Federal agencies as the Chairperson determines should be members of the Interagency Task Force.

"(3) STRATEGY.—

"(A) IN GENERAL.—The Interagency Task Force shall serve as the primary forum through which the Federal agencies represented on the Interagency Task Force jointly—

''(i) assist the Director of the White House Office in developing and updating the Strategy; and

''(ii) assist the Director of the White House Office in preparing annual reports under subsection (b)(5).

''(B) REQUIRED ELEMENTS.—In carrying out subparagraph (A), the Interagency Task Force shall—

''(i) take into account the long-term goal and other requirements of the Strategy specified in section 1622(a);

''(ii) give full consideration to the facts and opinions presented by the members of the Interagency Task Force;

''(iii) consult with State, tribal, and local government agencies, nongovernmental organizations, academia, scientific bodies, industry, the public, and other interested parties; and

''(iv) build consensus around a Strategy that is based on strong scientific, technical, and economic analyses.

''(4) WORKING GROUPS.—The Chairperson of the Interagency Task Force may establish such top-

ical working groups as are necessary to carry out the duties of the Interagency Task Force.

''(e) PROVISION OF SUPPORT STAFF.—In accordance with procedures established by the Chairperson of the Interagency Task Force, the Federal agencies represented on the Interagency Task Force shall provide staff from the agencies to support information, data collection, and analyses required by the Interagency Task Force.

''(f) HEARINGS.—On request of the Chairperson, the Interagency Task Force may hold such hearings, meet and act at such times and places, take such testimony, and receive such evidence as the Interagency Task Force considers to be appropriate.

"SEC. 1624. TECHNOLOGY INNOVATION PROGRAM IMPLEMENTED THROUGH THE OFFICE OF CARBON MANAGEMENT OF THE DEPARTMENT OF ENERGY AND THE CENTER FOR STRATEGIC CLIMATE CHANGE RESPONSE.

''(a) ESTABLISHMENT OF OFFICE OF CARBON MANAGEMENT OF THE DEPARTMENT OF ENERGY.—

''(1) IN GENERAL.—There is established, within the Department, the Office of Carbon Management.

''(2) DUTIES.—The Department Office shall—

"(A) manage an energy technology research and development program that directly supports the Strategy by—

"(i) focusing on high-risk, bold, breakthrough technologies that—

"(I) are critical to the long-term stabilization of greenhouse gas concentrations;

"(II) are not significantly addressed by other Federal programs; and

"(III) move technology substantially beyond the state of usual innovation;

"(ii) forging fundamentally new research and development partnerships among various Departments, other Federal, and State programs, particularly between basic science and energy technology programs, in cases in which such partnerships have significant potential to affect the ability of the United States to achieve stabilization of greenhouse gas concentrations at the lowest possible cost;

''(iii) forging international research and development partnerships that are in the interests of the United States and make progress on stabilization of greenhouse gas concentrations;

''(iv) making available, through monitoring, experimentation, and analysis, data that are essential to proving the technical and economic viability of technology central to addressing climate change; and

''(v) transitioning research and development programs to other program offices of the Department once such a research and development program crosses the threshold of high-risk research and moves into the realm of more conventional technology development;

''(B) in accordance with subsection (b)(5)(C), prepare a 10-year program plan for the activities of the Department Office and update the plan biennially;

''(C) prepare annual reports in accordance with subsection (b)(6);

''(D) identify the total contribution of all Department programs to climate change response;

''(E) provide substantial analytical support to the White House Office, particularly support in the development of the Strategy and associated progress reporting; and

''(F) advise the Secretary on climate change-related issues, including necessary changes in Department organization, management, budgeting, and personnel allocation in the programs involved in climate change response-related activities.

''(b) DIRECTOR OF THE DEPARTMENT OFFICE.—

''(1) IN GENERAL.—The Department Office shall be headed by a Director, who shall report directly to the Secretary.

''(2) APPOINTMENT.—The Director of the Department Office shall be an employee of the Federal Government who is a qualified individual appointed by the President.

''(3) TERM.—The Director of the Department Office shall be appointed for a term of 4 years.

''(4) VACANCIES.—A vacancy in the position of the Director of the Department Office shall be filled

in the same manner as the original appointment was made.

''(5) DUTIES OF THE DIRECTOR OF THE DEPARTMENT OFFICE.—

''(A) STRATEGY.—The Director of the Department Office shall support development of the Strategy through the provision of staff and analytical support.

''(B) INTERAGENCY TASK FORCE.—Through active participation in the Interagency Task Force, the Director of the Department Office shall—

''(i) based on the analytical capabilities of the Department Office and the Center, share analyses of alternative climate change response strategies with other members of the Interagency Task Force to assist all members in understanding—

''(I) the scale of the climate change response challenge; and

''(II) how the actions of the Federal agencies of the members positively or negatively contribute to climate change solutions; and

''(ii) determine how the energy technology research and development program described in subsection (a)(2)(A) can be designed for maximum impact on the long-term goal of stabilization of greenhouse gas concentrations.

''(C) 10-YEAR PROGRAM PLAN.—

''(i) IN GENERAL.—Not later than 1 year after the date of enactment of this subtitle, the Director of the Department Office shall prepare a 10-year program plan.

''(ii) REQUIRED ELEMENTS.—The plan shall—

''(I) consider all elements of the Strategy that relate to technology research and development;

''(II) become an integral component of the Strategy;

''(III) focus the activities of the Department Office on gaps identified by the Strategy;

''(IV) emphasize the funding of activities that meet the goals de-

scribed in clauses (i) through (iv) of subsection (a)(2)(A);

''(V) identify creative and innovative approaches for building partnerships and managing research and development that have the potential to result in significant advances of technologies and other innovative actions; and

''(VI) place a high level of emphasis on bold, breakthrough research and development programs that can—

''(aa) be created with the involvement of 1 or more Federal research and development programs; and

''(bb) upon reaching a sufficient level of technological maturity, be transitioned to other program offices of the Department without loss of the creative management approaches and partnerships of the innovative research and development programs.

"(iii) SUBMISSION OF PLAN.—The Secretary shall submit the 10-year program plan to Congress and the Director of the White House Office.

"(iv) UPDATING.—

"(I) IN GENERAL.—The Director of the Department Office shall update the 10-year program plan biennially.

"(II) SUBMISSION.—The Secretary shall submit each updated 10-year program plan to Congress and the Director of the White House Office.

"(D) CENTER.—

"(i) OPERATING MODEL.—The Director of the Department Office shall establish an operating model for the Center.

"(ii) DELEGATION OF DEPARTMENT OFFICE FUNCTIONS.—The Director of the Department Office may choose to delegate selected program management and research and development functions of the Department Office to the Center.

"(iii) FOCUS.—

''(I) IN GENERAL.—Funds for the Center should be used to build a Center with focused capability that has a limited number of focused off-site locations.

''(II) INVOLVEMENT OF ORGANIZATIONS.—Notwithstanding subclause (I), the Director of the Department Office may involve any number of organizations in the operation of the Center.

''(iv) TOOLS, DATA, AND CAPABILITIES.—The Director of the Department Office shall foster the development of tools, data, and capabilities at the Center to ensure that—

''(I) the United States has a robust capability for evaluating alternative climate change response scenarios; and

''(II) the Center provides long-term analytical continuity during the terms of service of successive Presidents.

''(E) ADVISORY DUTIES.—The Director of the Department Office shall advise the Secretary on all aspects of climate change response.

''(6) ANNUAL REPORTS.—The Director of the Department Office shall prepare an annual report for submission by the Secretary to Congress and the White House Office that—

''(A) assesses progress toward meeting the goals of the energy technology research and development program described in subsection (a)(2)(A);

''(B) assesses the activities of the Center;

''(C) assesses the contributions of all energy technology research and development programs of the Department (including science programs) to the long-term goal and other requirements of the Strategy specified in section 1622(a); and

''(D) makes recommendations for actions by the Department and other Federal agencies to address the components of technology development that are necessary to support the Strategy.

''(7) ANALYSIS.—During development of the Strategy, the 10-year program plan submitted under paragraph (5)(C), annual reports submitted under paragraph (6), and advice to the Secretary, the Director of the Department Office shall place significant emphasis on the use of objective, quantitative analysis, taking into consideration any associated uncertainties.

''(c) STAFF.—The Director of the Department Office shall employ a professional staff of not more than 25 individuals to carry out the duties of the Department Office.

''(d) INTERGOVERNMENTAL PERSONNEL AND FELLOWSHIPS.—The Department Office may use the authority provided by the Intergovernmental Personnel Act of 1970 (42 U.S.C. 4701 et seq.) and subchapter VI of chapter 33 of title 5, United States Code, and fellowships, to obtain staff from academia, scientific bodies, private industry, nongovernmental organizations, other Department programs, other Federal agencies, and national laboratories, for appointments of a limited term.

''(e) CENTER FOR STRATEGIC CLIMATE CHANGE RESPONSE.—

''(1) IN GENERAL.—

''(A) ESTABLISHMENT.—There is established the Center for Strategic Climate Change

Response, which shall report to the Director of the Department Office.

''(B) LOCATIONS.—The Center shall maintain 1 headquarters location and such additional temporary or permanent locations as are necessary to carry out the duties of the Center.

''(C) CENTER DIRECTOR.—The Center shall be headed by a Director, who shall be selected by the Director of the Department Office.

''(2) DUTIES.—

''(A) IN GENERAL.—

''(i) GOAL.—The Center shall foster the development and application of advanced computational tools, data, and capabilities that support integrated assessment of alternative climate change response scenarios and implementation of the Strategy.

''(ii) PARTICIPATION AND SUPPORT.—The Center may include participation of, and be supported by, each other Federal agency that has a direct or indirect role in the development, commercialization, or transfer of energy, transportation, indus-

trial, agricultural, forestry, or other climate change-related technology.

''(B) PROGRAMS.—

''(i) IN GENERAL.—The Center shall—

''(I) develop and maintain core analytical competencies and complex, integrated computational modeling capabilities that are necessary to support the design and implementation of the Strategy;

''(II) track United States and international progress toward the long-term goal of stabilization of greenhouse gas concentrations; and

''(III) in support of the Department Office, support the management and implementation of research and development programs.

''(ii) INTERNATIONAL CARBON DIOXIDE SEQUESTRATION MONITORING AND DATA PROGRAM.—In consultation with Federal, State, academic, scientific, private sector, nongovernmental, tribal, and international carbon capture and sequestration

technology programs, the Center shall design and carry out an international carbon dioxide sequestration monitoring and data program to collect, analyze, and make available the technical and economic data to ascertain—

''(I) whether engineered sequestration and terrestrial sequestration will be acceptable technologies from regulatory, economic, and international perspectives;

''(II) whether carbon dioxide sequestered in geological formations or ocean systems is stable and has inconsequential leakage rates on a geologic time-scale; and

''(III) the extent to which forest, agricultural, and other terrestrial systems are suitable carbon sinks.

''(C) AREAS OF EXPERTISE.—

''(i) IN GENERAL.—The Center shall develop and maintain expertise in integrated assessment, modeling, and related capabilities necessary—

''(I) to understand the relationship between natural, agricultural, industrial, energy, and economic systems;

''(II) to design effective research and development programs; and

''(III) to develop and implement the Strategy.

''(ii) TECHNOLOGY TRANSFER AND DIFFUSION.—The expertise described in clause (i) shall include knowledge of technology transfer and technology diffusion in United States markets and foreign markets.

''(D) DISSEMINATION OF INFORMATION.—The Center shall ensure, to the maximum extent practicable, that technical and scientific knowledge relating to greenhouse gas emission reduction, avoidance, and sequestration is broadly disseminated through publications, fellowships, and training programs.

''(E) ASSESSMENTS.—In a manner consistent with the Strategy, the Center shall conduct assessments of deployment of climate-friendly technology.

''(F) USE OF PRIVATE SECTOR FUNDING.—

''(i) IN GENERAL.—The Center shall create an operating model that allows for collaboration, division of effort, and cost sharing with industry on individual climate change response projects.

''(ii) REQUIREMENTS.—Although cost sharing in some cases may be appropriate, the Center shall focus on long-term high-risk research and development and should not make industrial partnerships or cost sharing a requirement, if such a requirement would bias the activities of the Center toward incremental innovations.

''(iii) REEVALUATION ON TRANSITION.—At such time as any bold, breakthrough research and development program reaches a sufficient level of technological maturity such that the program is transitioned to a program office of the Department other than the Department Office, the cost-sharing requirements and criteria applicable to the program should be reevaluated.

"(iv) PUBLICATION IN FEDERAL REGISTER.—Each cost-sharing agreement entered into under this subparagraph shall be published in the Federal Register.

"(G) INTERGOVERNMENTAL PERSONNEL AND FELLOWSHIPS.—The Director of the Center may use the authority provided by the Intergovernmental Personnel Act of 1970 (42 U.S.C. 4701 et seq.) and subchapter VI of chapter 33 of title 5, United States Code, and fellowships, to obtain staff from academia, scientific bodies, private industry, nongovernmental organizations, other Department programs, other Federal agencies, and national laboratories, for appointments of a limited term.

"SEC. 1625. ADDITIONAL OFFICES AND ACTIVITIES.

"The Secretary of Agriculture, the Secretary of Transportation, the Administrator of the Environmental Protection Agency, and the heads of other Federal agencies may establish such offices and carry out such activities, in addition to those established or authorized by this subtitle, as are necessary to carry out this subtitle.

"SEC. 1626. UNITED STATES CLIMATE CHANGE RESPONSE STRATEGY REVIEW BOARD.

"(a) ESTABLISHMENT.—There is established as an independent establishment within the executive branch the United States Climate Change Response Strategy Review Board.

"(b) MEMBERSHIP.—

"(1) COMPOSITION.—The Review Board shall consist of 11 members who shall be appointed, not later than 90 days after the date of enactment of this subtitle, by the President by and with the advice and consent of the Senate, from among qualified individuals nominated by the National Academy of Sciences in accordance with paragraph (2).

"(2) NOMINATIONS.—Not later than 60 days after the date of enactment of this subtitle, after taking into strong consideration the guidance and recommendations of a broad range of scientific and technical societies that have the capability of recommending qualified individuals, the National Academy of Sciences shall nominate for appointment to the Review Board not fewer than 22 individuals who—

"(A) are—

"(i) qualified individuals; or

"(ii) experts in a field of knowledge specified in section 1621(9)(B); and

''(B) as a group represent broad, balanced expertise.

''(3) PROHIBITION ON FEDERAL GOVERNMENT EMPLOYMENT.—A member of the Review Board shall not be an employee of the Federal Government.

''(4) TERMS; VACANCIES.—

''(A) TERMS.—

''(i) IN GENERAL.—Subject to clause (ii), each member of the Review Board shall be appointed for a term of 4 years.

''(ii) INITIAL TERMS.—

''(I) COMMENCEMENT DATE.—The term of each member initially appointed to the Review Board shall commence 120 days after the date of enactment of this subtitle.

''(II) TERMINATION DATE.—Of the 11 members initially appointed to the Review Board, 5 members shall be appointed for a term of 2 years and 6 members shall be appointed for a term of 4 years, to be designated by the President at the time of appointment.

''(B) VACANCIES.—

"(i) IN GENERAL.—A vacancy on the Review Board shall be filled in the manner described in this subparagraph.

"(ii) NOMINATIONS BY THE NATIONAL ACADEMY OF SCIENCES.—Not later than 60 days after the date on which a vacancy commences, the National Academy of Sciences shall—

"(I) after taking into strong consideration the guidance and recommendations of a broad range of scientific and technical societies that have the capability of recommending qualified individuals, nominate, from among qualified individuals, not fewer than 2 individuals to fill the vacancy; and

"(II) submit the names of the nominees to the President.

"(iii) SELECTION.—Not later than 30 days after the date on which the nominations under clause (ii) are submitted to the President, the President shall select from among the nominees an individual to fill the vacancy.

''(iv) SENATE CONFIRMATION.—An individual appointed to fill a vacancy on the Review Board shall be appointed by and with the advice and consent of the Senate.

''(5) DISCLOSURE OF POTENTIAL CONFLICTS OF INTEREST.—

''(A) EMPLOYMENT OF NOMINEES.—If a nominee to the Review Board is employed by an entity that receives any funding from the Department or any other Federal agency, the fact of the employment shall be—

''(i) disclosed to the President by the National Academy of Sciences at the time of the nomination; and

''(ii) publicly disclosed by the nominee as part of the Senate confirmation process of the nominee.

''(B) EMPLOYMENT OF MEMBERS.—If, during the period of service of a member on the Review Board, the member is employed by an entity that receives any funding from the Department or any other Federal agency, the fact of the employment shall be publicly disclosed by

the Chairperson of the Review Board on a semi-annual basis.

''(C) FINANCIAL BENEFIT TO MEMBERS.—If, during the period of service of a member on the Review Board, the Review Board makes any written recommendation that may financially benefit a member or an entity that employs the member, the fact of that financial benefit shall be publicly disclosed by the Chairperson of the Review Board at the time of the recommendation.

''(D) APPLICABILITY OF ETHICS IN GOVERNMENT ACT OF 1978.—A member of the Review Board shall be deemed to be an individual subject to the Ethics in Government Act of 1978 (5 U.S.C. App.).

''(6) CHAIRPERSON; VICE CHAIRPERSON.—The members of the Review Board shall select a Chairperson and a Vice Chairperson of the Review Board from among the members of the Review Board.

''(c) DUTIES.—

''(1) IN GENERAL.—Not later than 180 days after the date of submission of the initial Strategy under section 1622(b), each updated version of the Strategy under section 1622(c), each progress report

under section 1622(d), and each national laboratory certification under section 1622(f), the Review Board shall submit to the President, Congress, and the heads of Federal agencies as appropriate a report assessing the adequacy of the Strategy, report, or certification.

''(2) COMMENTS.—In reviewing the Strategy, or a report or certification, under paragraph (1), the Review Board shall consider and comment on—

''(A) the adequacy of effort and the appropriateness of focus of the totality of all public, private, and public-private sector actions of the United States with respect to the 4 key elements;

''(B) the extent to which actions of the United States, with respect to climate change, complement or leverage international research and other efforts designed to manage global emissions of greenhouse gases, to further the long-term goal of stabilization of greenhouse gas concentrations;

''(C) the funding implications of any recommendations made by the Review Board; and

''(D)(i) the effectiveness with which each Federal agency is carrying out the responsibil-

ities of the Federal agency with respect to the short-term and long-term greenhouse gas management goals; and

"(ii) the adequacy of the budget of each such Federal agency to carry out those responsibilities.

"(3) ADDITIONAL RECOMMENDATIONS.—

"(A) IN GENERAL.—Subject to subparagraph (B), the Review Board, at the request of the President or Congress, may provide recommendations on additional climate change-related topics.

"(B) SECONDARY DUTY.—The provision of recommendations under subparagraph (A) shall be a secondary duty to the primary duty of the Review Board of providing independent review of the Strategy and the reports and certifications under paragraphs (1) and (2).

"(d) POWERS.—

"(1) HEARINGS.—

"(A) IN GENERAL.—On request of the Chairperson or a majority of the members of the Review Board, the Review Board may hold such hearings, meet and act at such times and places, take such testimony, and receive such

evidence as the Review Board considers to be appropriate.

''(B) ADMINISTRATION OF OATHS.—Any member of the Review Board may administer an oath or affirmation to any witness that appears before the Review Board.

''(2) PRODUCTION OF DOCUMENTS.—

''(A) IN GENERAL.—On request of the Chairperson or a majority of the members of the Review Board, and subject to applicable law, the Secretary or head of a Federal agency represented on the Interagency Task Force, or a contractor of such an agency, shall provide the Review Board with such records, files, papers, data, and information as are necessary to respond to any inquiry of the Review Board under this subtitle.

''(B) INCLUSION OF WORK IN PROGRESS.—Subject to applicable law, information obtainable under subparagraph (A)—

''(i) shall not be limited to final work products; but

''(ii) shall include draft work products and documentation of work in progress.

''(3) POSTAL SERVICES.—The Review Board may use the United States mails in the same manner and under the same conditions as other agencies of the Federal Government.

''(e) COMPENSATION OF MEMBERS.—A member of the Review Board shall be compensated at a rate equal to the daily equivalent of the annual rate of basic pay prescribed for level IV of the Executive Schedule under section 5315 of title 5, United States Code, for each day (including travel time) during which the member is engaged in the performance of the duties of the Review Board.

''(f) TRAVEL EXPENSES.—A member of the Review Board shall be allowed travel expenses, including per diem in lieu of subsistence, at rates authorized for an employee of an agency under subchapter I of chapter 57 of title 5, United States Code, while away from the home or regular place of business of the member in the performance of the duties of the Review Board.

''(g) STAFF.—

''(1) IN GENERAL.—The Chairperson of the Review Board may, without regard to the civil service laws (including regulations), appoint and terminate an executive director and such other additional personnel as are necessary to enable the Review Board to perform the duties of the Review Board.

''(2) CONFIRMATION OF EXECUTIVE DIRECTOR.—The employment of an executive director shall be subject to confirmation by the Review Board.

''(3) COMPENSATION.—

''(A) IN GENERAL.—Except as provided in subparagraph (B), the Chairperson of the Review Board may fix the compensation of the executive director and other personnel without regard to the provisions of chapter 51 and subchapter III of chapter 53 of title 5, United States Code, relating to classification of positions and General Schedule pay rates.

''(B) MAXIMUM RATE OF PAY.—The rate of pay for the executive director and other personnel shall not exceed the rate payable for level V of the Executive Schedule under section 5316 of title 5, United States Code.

''(h) PROCUREMENT OF TEMPORARY AND INTERMITTENT SERVICES.—The Chairperson of the Review Board may procure temporary and intermittent services in accordance with section 3109(b) of title 5, United States Code, at rates for individuals that do not exceed the daily equivalent of the annual rate of basic pay prescribed for level V of the Executive Schedule under section 5316 of that title.

"SEC. 1627. AUTHORIZATION OF APPROPRIATIONS.

''(a) WHITE HOUSE OFFICE.—

''(1) USE OF AVAILABLE APPROPRIATIONS.—From funds made available to Federal agencies for the fiscal year in which this subtitle is enacted, the President shall provide such sums as are necessary to carry out the duties of the White House Office under this subtitle until the date on which funds are made available under paragraph (2).

''(2) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to the White House Office to carry out the duties of the White House Office under this subtitle $5,000,000 for each of fiscal years 2002 through 2011, to remain available through September 30, 2011.

''(b) DEPARTMENT OFFICE.—

''(1) USE OF AVAILABLE APPROPRIATIONS.—From funds made available to Federal agencies for the fiscal year in which this subtitle is enacted, the President shall provide such sums as are necessary to carry out the duties of the Department Office under this subtitle until the date on which funds are made available under paragraph (2).

''(2) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to the Department Office to carry out the duties of the De-

partment Office under this subtitle $4,000,000,000 for the period of fiscal years 2002 through 2011, to remain available through September 30, 2011.

''(c) CENTER.—

''(1) USE OF AVAILABLE APPROPRIATIONS.—From funds made available to Federal agencies for the fiscal year in which this subtitle is enacted, the President shall provide such sums as are necessary to carry out the duties of the Center under this subtitle until the date on which funds are made available under paragraph (2).

''(2) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to the Center to carry out the duties of the Center under this subtitle $75,000,000 for each of fiscal years 2002 through 2011, to remain available through September 30, 2011.

''(d) REVIEW BOARD.—

''(1) USE OF AVAILABLE APPROPRIATIONS.—From funds made available to Federal agencies for the fiscal year in which this subtitle is enacted, the President shall provide such sums as are necessary to carry out the duties of the Review Board under this subtitle until the date on which funds are made available under paragraph (2).

''(2) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to the Review Board to carry out the duties of the Review Board under this subtitle $3,000,000 for each of fiscal years 2002 through 2011, to remain available until expended.

''(e) ADDITIONAL AMOUNTS.—Amounts authorized to be appropriated under this section shall be in addition to—

''(1) amounts made available to carry out the United States Global Change Research Program under the Global Change Research Act of 1990 (15 U.S.C. 2921 et seq.); and

''(2) amounts made available under other provisions of law for energy research and development.''.

○